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The Potential of Reference Pricing to Generate Health Care Savings: Lessons from a California Pioneer

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In the context of high health care costs and wide variation in hospital prices, purchasers are seeking ways to encourage consumers to make more price-conscious choices of providers. The California Public Employees' Retirement System (CalPERS) in 2011 adopted a strategy—known as reference pricing—to guide enrollees to hospitals that provide hip and knee replacements below a certain price threshold. Previous research indicates the CalPERS reference pricing initiative saved money without shifting significant costs to enrollees or sacrificing quality. To date, however, little is known about how CalPERS implemented the program and whether other purchasers could successfully replicate the approach.

According to a qualitative study by the Center for Studying Health System Change (HSC), the CalPERS reference pricing program involved intensive communication with enrollees and met little resistance from them. Along with steering patients to lower-price hospitals, the reference pricing initiative affected market dynamics by motivating some hospitals to reduce prices for joint replacements. While respondents believed other California purchasers could replicate the CalPERS program, they identified challenges to adopting reference pricing, including lack of price transparency, which makes it difficult for purchasers to determine an appropriate reference price and for enrollees to determine their estimated total out-of-pocket costs; lack of enthusiasm from health plans that are leery of disrupting relationships with providers; and some difficulty communicating clearly with enrollees. Respondents also noted key limitations—namely, a limited emphasis on quality and limited potential for cost savings since reference pricing is suitable only for a narrow range of services and does not address whether utilization is appropriate.

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Combating Hospital Market Power

Since the late 1990s, some hospitals have gained significant market power to command high prices from private insurers for a variety of reasons, including hospital consolidation, unique specialty services and in some cases reputations for superior clinical quality. Emerging payer strategies to counter hospital market power include developing limited-provider networks that either exclude high-price providers or require greater patient cost sharing.

Another approach is reference pricing where a purchaser sets a maximum allowed amount—the reference price—for a specific medical service or procedure in a specific market. If enrollees receive care at a facility that has an allowed amount above the reference price, the enrollee must pay the additional amount out of pocket. The goal of reference pricing is to save money by directing enrollees toward low-price providers, while also motivating high-price providers to lower prices to retain market share.[1]

What is Reference Pricing?

Reference pricing has long been used in other countries for prescription drugs with generic alternatives or therapeutic equivalents.[2] In recent years, a handful of U.S. purchasers have adopted reference pricing not only for prescription drugs but for a variety of other medical services, including inpatient orthopedic surgery, outpatient arthroscopy and

cataract removal surgery, and imaging and laboratory services. In general, purchasers have pursued reference pricing for nonurgent standardized services. They also have focused on services where there appears to be little variation in quality to avoid the perception and potential reality of steering patients to lower-quality providers.

Reference pricing is potentially an appealing cost-saving strategy for purchasers. Rather than limiting a provider network, reference pricing maintains access to a broad network. The enrollee decides whether to be treated at a lower-price provider with no out-of-pocket expense beyond typical cost sharing or a higher-price facility with additional cost above the reference price.

The CalPERS Experiment

CalPERS's use of reference pricing for inpatient hip and knee replacements is among the most prominent examples in the United States. After reviewing quality and cost information, CalPERS set a threshold of $30,000 for hospital payments for both procedures and designated certain hospitals where enrollees could get care at or below that price. If enrollees have surgery at designated hospitals, they pay their plans' typical deductible and coinsurance up to the out-of-pocket maximum. Patients can go to other in-network hospitals for care but are responsible for both the typical cost sharing and all allowed amounts exceeding the $30,000 threshold, which are not subject to an out-of-pocket maximum.

Quantitative analyses indicate the CalPERS's program saved money—$2.8 million for CalPERS and $300,000 in cost sharing for enrollees in 2011 without sacrificing quality, according to one recent study (see page 3 for more detail).[3] In contrast to previous quantitative studies, this analysis examines how the program was implemented and what challenges arose (see Data Source).

Establishing the Price Threshold

As the second largest purchaser of employer health benefits in the nation, CalPERS covers more than 1.3 million employees, retirees and dependents with annual health costs of nearly $7 billion.[8] CalPERS's membership is comprised of current and retired employees of the state of California and some local governments throughout the state. Enrollees can choose among a wide array of health plan options, including preferred provider organization (PPO) plans through Anthem Blue Cross and health maintenance organization (HMO) plans through Blue Shield of California and Kaiser Permanente.

In 2011, CalPERS partnered with Anthem to incorporate reference pricing for routine hip and knee replacements into the carrier's PPOs. Upon examination of claims data, CalPERS found that joint and muscle conditions comprised a significant portion—about 7.5 percent—of total health care spending and approached Anthem for help controlling those costs. Through its own analysis, Anthem determined that reference pricing could generate cost savings on routine hip and knee replacements, which accounted for about 10 percent of CalPERS's total costs for joint and muscle conditions. Anthem's data showed substantial variation in negotiated hospital prices for hip and knee replacements, from a low of $15,000 to a high of $110,000.[9] Anthem also found that this price variation was not related to differences in quality; even when hospitals' quality scores—based on readmission rates, infection rates and the rate of revision of the original surgery—were held constant, the price variation remained.

Anthem determined that $30,000 would be an appropriate upper limit to pay for hip and knee replacements based on claims analysis showing that cap would give members sufficient access to hospitals and save money for CalPERS. Members using a designated hospital pay coinsurance for the cost of the procedure, up to an out-of-pocket maximum of $3,000, and members who select a facility with a negotiated price of more than $30,000 pay both typical cost sharing and the full amount above the $30,000 cap. For example, a member in a plan with 10 percent coinsurance who has the procedure at a facility charging $30,000 would pay $3,000 out of pocket, while a member who has the procedure at a facility charging $50,000 would pay $3,000 in coinsurance plus $20,000 for the additional cost above the $30,000 reference price.

The reference price does not apply to emergency or complicated procedures because they might require additional services or longer hospital stays and appropriately cost more. Also, emergency replace-

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Data Source

This Research Brief draws on HSC researchers' interviews with eight market observers and individuals involved in implementing CalPERS's or other purchasers' reference pricing initiatives. The interviews were conducted by a two-person research team between May and August 2013, and notes were transcribed and jointly reviewed for quality and validation purposes.

ments cannot be scheduled, so patients would not have the opportunity to select a designated provider. The reference price applies to the hospital facility fee only—not payments for the surgeon or other providers, such as physical therapists.

Anthem provided members with a list of 45 hospitals, called designated hospitals, meeting the reference price. In 2010, the year before the reference price program was adopted, these 45 hospitals performed almost half of CalPERS members' hip and knee replacements.[10] Designated hospitals also met quality criteria, such as low complication and readmission rates. And they met volume standards for joint replacements, since high volume is an indicator of better outcomes. Many prestigious hospitals, including the University of California San Francisco Medical Center, Stanford University Hospital and Cedars-Sinai Medical Center, are designated hospitals.

Anthem excluded hospitals from the designated list if they met the reference price but had insufficient hip-and-knee-replacement volume for CalPERS members to determine if their prices would consistently meet the reference price. However, enrollees can opt to have the surgery at non-designated hospitals and, in cases where non-designated hospitals' prices are $30,000 or less, bear no costs beyond the standard deductible and coinsurance.

By the Numbers: CalPERS Reference Pricing for Hip and Knee Replacements

An Anthem evaluation of the CalPERS reference pricing program found that CalPERS paid 30 percent less per surgery on average in 2011 compared to 2010.[4] Another study found that CalPERS saved $2.8 million, or approximately $7,000 per patient, in the first year of the program.[5] The same study found that patient cost sharing also decreased by about $300,000, or almost $700 per patient on average. This is likely because the reference price provided enrollees with a stronger incentive to go to low-price hospitals, and using low-price facilities decreased the out-of-pocket costs associated with their plans' coinsurance rate.

The reference pricing program does not appear to have harmed quality outcomes. HealthCore, an independent research subsidiary of WellPoint, Anthem's parent company, compared 30-day general complication and infection rates and 90-day follow-up admission rates for CalPERS patients who had hip and knee replacements in 2010 with those who had those procedures in 2011—the first year of the reference pricing program. The analysis found no significant difference in quality outcomes between the two years.[6] In addition, a study by Anthem found that CalPERS patients who had their procedure at a designated hospital had nearly equal or better outcomes on these same measures when compared with members who used non-designated hospitals.[7]

Reference Pricing Spurs Hospital Competition

Through reference pricing, purchasers seek to exert market leverage by steering patients away from high-price hospitals. According to study respondents, CalPERS's reference pricing program was successful in meeting this goal. In 2011, the first year of the program, the share of CalPERS patients going to designated hospitals increased to 63 percent (280 of 447 total), up from 47 percent (231 of 485 total) in 2010.[11]

Soon after CalPERS rolled out the reference pricing program, several non-designated hospitals renegotiated their contracted price with Anthem—for all Anthem-covered patients not just CalPERS members—to become designated hospitals and retain CalPERS patients. Indeed, Anthem's list of designated hospitals grew from 45 to 54 hospitals by September 2012. Also, while 37 percent of CalPERS patients went to non-designated hospitals in 2011, some respondents suggested that these were typically hospitals with prices in the $31,000-$35,000 range, rather than the $90,000-$100,000 range. Patients may have selected these hospitals because they were closer or more convenient, and they were willing to pay the additional cost. Also, some non-designated hospitals that were unwilling to renegotiate their contracted price with Anthem agreed to waive amounts above $30,000 for CalPERS members to retain their business.

Respondents attributed hospitals' interest in renegotiating prices with Anthem or waiving amounts above $30,000 for CalPERS patients partially to CalPERS's leverage in the California market and its status as a state agency. "If a small employer in Sacramento had gone to a hospital and said, 'I will only give you $30,000 for hip and knee replacements,' the hospital would have [fought back]. But no hospital wants to [fight back against] CalPERS because they are so big and powerful," one respondent said.

Also, orthopedic surgeons, who command significant deference from hospitals because they admit profitable patients, reportedly did not want to operate exclusively at designated hospitals and convinced some non-designated hospitals to reduce their prices to accommodate CalPERS patients. One respondent explained, "Next to cardiologists, orthopedists are the most powerful physician group in terms of the relationships that they form with hospitals. So orthopedists' concerns about where to admit their CalPERS patients for hip and knee replacements were reflected in hospital contract negotiations."

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Patients on Board

Overall, CalPERS enrollees appear to have understood and adapted to the reference pricing approach. Respondents from Anthem and CalPERS reported that the list of designated hospitals appeared to be satisfactory to patients. They heard few concerns about the list of hospitals being too restrictive, speculating this was because many prestigious hospitals were included. Also, according to respondents, unions representing CalPERS members accepted the program because they did not perceive it to be taking away any benefits and believed members had sufficient choice of hospitals without facing higher cost sharing.

According to respondents, there were only a handful of instances where, because of lack of awareness of the reference price, patients had surgeries at non-designated hospitals and received substantial bills for their procedures. Reportedly, all of these disputes occurred in January 2011, the first month of the program, and in each case, the dispute was reconciled between the hospital and the patient. Respondents also mentioned that a few enrollees reported concerns about the reference price because they did not initially understand that it only applies to routine replacements and not to emergency or complicated procedures.

CalPERS and Anthem reportedly made strategic decisions about the design of the reference pricing program to facilitate sufficient access to hospitals and reduce the potential for member confusion. For example, although hospital prices for hip and knee replacements tend to be higher in northern California than in southern California, Anthem opted to use the $30,000 reference price statewide rather than establish separate regional reference prices. This was done to keep communication about the program more straightforward. CalPERS and Anthem also considered the geographic distribution of the designated hospitals, so that in general, members would not have to travel more than 50 miles for surgery. For members who have to travel farther, travel costs are covered for the member. According to respondents, the need for travel arrangements appears to have come up in only a handful of counties, such as Santa Barbara, where the sole hospital was charging more than $30,000, though patients could travel about 45 minutes to neighboring Ventura County.

Respondents emphasized the importance of clear and persistent communication with CalPERS enrollees in rolling out the reference pricing program. Anthem engaged in both broad-based and targeted communications. Broad communication strategies included mailing announcements about reference pricing, providing information in open-enrollment meetings and informational packets, and sending notices to all physicians and hospitals in Anthem's network. Targeted communication strategies included sending letters to all members who had seen an orthopedic surgeon in the past year for any knee or hip issue—and who could therefore be a candidate for joint-replacement surgery. Finally, with preauthorizations for hip and knee replacements required, Anthem explained the program to patients as part of this process.

Raising Cost Awareness

The reference pricing program educated consumers about wide variation in hospital prices. Enrollees were made aware that only a subset of Anthem's contracted hospitals charged a price that CalPERS and Anthem determined to be appropriate for these procedures. Many respondents explained that this program put "the onus on the member" to select a hospital with a price below the reference price. Patients' shifting to designated facilities suggests that awareness of price variation, coupled with cost-sharing incentives, was sufficient to influence provider choice.

The Self-Insured Schools of California, a large purchaser that replicated CalPERS's reference pricing program in 2012, had a similar experience. As a respondent explained, "Before this program went into place, most members just knew how much their copays were and how much their deductible was. Some members will look at the EOB [explanation of benefits], and they are shocked [at the prices hospitals charge], but most people don't pay attention to that information. This initiative brought to light the fact that there are huge differences in prices for procedures, and you can get most procedures done affordably without sacrificing quality."

Expansion to Other Services

CalPERS expanded reference pricing to facility payments for outpatient colonoscopies, cataract surgeries and arthroscopy in 2012. These services were selected because, like hip and knee replacements, they are routine and can be scheduled, and there is wide price variation, especially based on whether the procedures are done in a hospital outpatient department or a freestanding (nonhospital) facility. CalPERS set reference prices, using the same process of claims analysis used to determine the reference price for hip and knee replacements, at $1,500 for colonoscopy, $2,000 for cataract surgery and $6,000 for arthroscopy.

Even before CalPERS's move to reference pricing, Safeway Inc., a large California-based supermarket chain, had incorporated reference pricing for pharmaceuticals in 2008 into benefit designs for non-union employees. The reference price is equal to the price for a generic form of a drug—the patient is responsible for any costs above that reference price for equivalent brand-name drugs. Safeway also incorporated reference pricing for imaging, labs and diagnostic colonoscopies into its benefit design in 2009, with a reference price of $1,500 for colonoscopies, and various reference prices for approximately 450 laboratory procedures targeted at the 60th percentile of prices for each laboratory test. Safeway is also interested in pursuing reference pricing for inpatient procedures.

In another recent example, Cincinnati-based Kroger Co., the nation's largest grocery store chain, collaborated with WellPoint to implement an $800 reference price for certain imaging scans in 10 of the 31 states where Kroger operates.[12]

One market observer speculated that reference pricing is easier to implement for outpatient and diagnostic procedures because they tend to represent discrete services rather than complex procedures with multiple components, such as hip and knee replacements. This makes implementation of reference pricing easier from a billing perspective. For example, imaging and lab services typically have a bill for only one service—for example, an MRI scan—while a facility bill for joint replacement has numerous services.

Besides the discrete nature of outpatient services, another factor that can draw purchaser interest is the potential for cost savings. For outpatient services, the much larger volume of services, relative to inpatient procedures, as well as the ample supply of lower-price freestanding labs, imaging centers and surgical centers as alternatives to hospitals could increase the savings potential. Also, certain outpatient procedures, such as imaging or lab services, might have less variation in quality, possibly making them less controversial if incorporated into a reference pricing framework.

Potential for Replication and Common Challenges

Respondents agreed that CalPERS' size and leverage in California health care markets were important to carrying out the reference pricing program, but some believed other California purchasers with less leverage still have an opportunity to

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do this by closely following CalPERS's lead and directing their enrollees to CalPERS-designated hospitals.

As one health plan respondent explained, "Small employers shouldn't expect that hospitals not on the [designated] list would be motivated to modify their prices [to accommodate that employer's reference pricing program] since their employees represent such a small fraction of [the hospital's] book of business. But, the employers will benefit from savings if they can steer their members to the lower-price hospitals." Similarly, in markets outside of California, purchasers could likely establish a reference pricing program by steering members to low-price providers through cost-sharing incentives. However, without a large number of enrollees in a concentrated geographic area, other purchasers would be unlikely to see non-designated facilities reduce prices.

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Engaging Health Plans

Launching a reference pricing initiative can disrupt the status quo of health plan-provider contract negotiations if plans identify high-price hospitals and steer patients away from them, according to respondents. Indeed, health plans have an incentive to maintain harmonious contracting relationships with providers, especially "must-have" hospitals whose absence from a plan's provider network would diminish the attractiveness of the plan's products to purchasers and consumers. Respondents explained that some health plans, such as Anthem, are more open to implementing reference pricing, so purchasers may choose to contract with those plans to pursue this strategy.

Lack of Price and Quality Information

Adoption of reference pricing for hip and knee replacements requires that both purchasers and consumers have information on hospital prices. Purchasers need access to enough claims data to identify services with significant price variation and then determine appropriate reference prices for such services. A single purchaser's access to enough claims data to make meaningful judgments can be a challenge, and some health plans' reluctance to help purchasers implement reference pricing makes them unlikely partners in performing this data analysis. As one respondent explained, "You need more data than one purchaser can typically generate for its own population to understand patterns in pricing," especially when enrollees live across a large geographic area.

Access to prices is also important once a reference price has been established so that patients can determine how their out-of-pocket costs might vary across hospitals. For example, even at designated hospitals, patients' coinsurance costs will vary depending on the exact facility fee.

Another challenge for purchasers is communicating with members about the relationship, if any, between price and quality. With little price and quality transparency in place, respondents noted that enrollees may assume that high-price providers render higher-quality care. As one respondent said, "So reference pricing, as a blunt instrument, says to the public, patients and enrollees that certain hospitals are charging exorbitant prices, so it would be crazy to go there for a procedure. The paradox is that when some people see hospitals charging high prices, it makes them want to go to those hospitals because they think that price is correlated with quality and value. So that is a problem that we haven't yet solved." While this did not appear to be a big issue for CalPERS, respondents raised the issue as a challenging aspect of reference pricing in general.

In recent years, the availability of price and quality information has improved, according to respondents. For example, Safeway worked with Castlight Health, a

company that provides employers and their enrollees with customized provider price and quality information, to set up its reference pricing program for certain outpatient services.

Communicating with Enrollees

Another challenge is communicating clearly with members about reference pricing and making clear distinctions between designated and non-designated facilities. Because reference pricing can expose members to substantial out-of-pocket costs depending on the provider selected, respondents emphasized the importance of making sure CalPERS members were aware of the reference price for hip and knee replacements and knew about the list of designated hospitals.

Respondents reported that while the communication process for hip and knee replacements has worked well, communication with members about reference pricing for the recently added outpatient arthroscopies, colonoscopies and cataract procedures has been more challenging. Prices for these services typically are much higher when the care is delivered in a hospital outpatient department vs. a freestanding center, such as an independently owned ambulatory surgery center (ASC). CalPERS established reference prices for the services when provided in a hospital outpatient department, and enrollees face additional cost sharing if the hospital facility price exceeds the reference price. However, if enrollees obtain these services at an ASC or other freestanding setting, the reference price comparison is waived and patients do not face additional cost sharing. Unlike with hip and knee replacements, CalPERS did not provide members with a list of designated freestanding centers and ASCs. As a result, enrollees reportedly have experienced confusion about where to go because an ASC and hospital outpatient department may be outwardly indistinguishable to patients. In addition, these services, unlike hip and knee replacements, do not require preauthorization, so CalPERS does not have the opportunity to make sure that each patient who is planning to have the procedure is aware of the reference pricing design. In a few cases, members were under the impression they had gone to an ASC but instead were charged the hospital outpatient rate with 100 percent cost sharing above the reference price.

Uncertainty About Out-of-Pocket Maximums

According to respondents, some purchasers are reluctant to pursue reference pricing because they believe that the enrollee incentives—and cost savings—will be dulled by the Affordable Care Act's annual out-of-pocket maximums of $6,350 for single coverage and $12,700 for family coverage beginning in 2014.[13] So for single coverage, the additional amount paid in a non-designated hospital would be limited to $3,250—or less if the person had cost sharing from other medical expenses. However, there is some uncertainty regarding whether this provision will apply to reference pricing or centers of excellence (COE) programs (see page 8 for more about COEs). While CalPERS awaits a decision from the federal government, a few respondents speculated that out-of-pocket costs above a reference price likely would not be subject to the out-of-pocket maximum because members have the option to avoid those costs by selecting a designated facility.

Limitations of Reference Pricing

Respondents identified two key limitations of reference pricing: weak quality measures and potentially small overall cost savings.

Limited Quality Focus

While evaluations of the CalPERS reference pricing program have not identified diminished quality outcomes based on complication, infection and readmission

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Centers of Excellence

Purchasers and payers have long employed centers of excellence—also sometimes referred to as domestic medical travel or tourism—for low-prevalence, high-cost, high-risk procedures, such as organ transplants, and more recently, bariatric surgery. In some cases, coverage for an organ transplant, for example, would only be available if done at a designated COE.

However, there is growing interest in wider application of the COE approach to more common but still costly procedures, including cardiac procedures, hip and knee replacements, and spine surgery. A handful of large, self-insured employers—Lowe's, PepsiCo and Walmart, for example—have developed programs that designate well-known hospitals as COEs for certain procedures. The firms waive all patient cost sharing and pay travel expenses—for the patient and a companion—if enrollees choose treatment at a COE.

The centers of excellence approach also may be attractive by avoiding the perception of steering patients to lower-quality providers, a concern that respondents raised with reference pricing because the approach eliminates the highest-price hospitals. On the downside, enrollees may be unwilling to travel long distances to receive treatment.

Through either a reference pricing or centers of excellence approach, purchasers may face trade-offs among low unit prices, high-quality standards and convenient access to providers. If a purchaser imposes more stringent quality criteria on providers, it may end up with a small number of low-price, high-quality designated facilities within a geographic area, which could pose a greater inconvenience for patients. Alternatively, a purchaser may have to pay a higher unit price to ensure patients have sufficient access to high-quality providers.

rates, some respondents suggested that more comprehensive quality information should be gathered when using reference pricing. However, respondents acknowledged barriers to better quality measurement, including providers' reluctance to provide more detailed quality information. Anthem has not evaluated certain outcome measures because many designated hospitals do not have joint-replacement registries that include outcomes. However, one respondent said major purchasers creating a reference pricing program could insist on more complete quality data reporting from designated providers.

Some respondents suggested that there are sufficient quality standards in place for future reference pricing programs to impose "a higher-quality floor" for designated hospitals. For example, the national Blue Cross and Blue Shield Association has developed comprehensive quality standards for joint replacements through the Blue Distinction program. Under the program, hospitals must meet a range of protocols for hip and knee replacements, including functional assessments, medical management, and use of anesthesia and prophylactic antibiotics, and perform a certain volume of these procedures. About half of the designated hospitals in CalPERS's reference pricing program are Blue Distinction centers. This would expand the scope of reference pricing initiatives beyond cost reduction to quality improvement.

Small Savings Potential

While CalPERS's reference pricing program led to nontrivial cost savings for hip and knee replacements, initial savings from the program relative to CalPERS total health care spending were small. For example in 2011, CalPERS through reference pricing saved an estimated $2.8 million, or 0.26 percent of its total health care spending of approximately $1.1 billion for its Anthem enrollees. The main reason for the limited savings is that only a small fraction of CalPERS enrollees has hip or knee replacements each year—about 450-500 CalPERS enrollees in Anthem PPOs—and these procedures account for approximately 0.75 percent of CalPERS's total spending.

A number of other services, such as imaging, outpatient procedures and labs, are good candidates for reference pricing, but there is a practical limit to the scope of reference pricing. If too many high-volume services are subjected to reference pricing, enrollees are more likely to be confused about where to go for each particular service, and there is likely to be a larger administrative burden for the purchaser and health plan. Moreover, reference pricing, as one respondent said, is a "blunt instrument" that excludes providers with the highest prices but does not reward extremely efficient providers. For example, significant price variation remains across hospitals in the CalPERS reference pricing program. As one respondent said, "The benefit design does not reward the provider that charges $15,000 any more than the provider that charges $30,000."

Because of the complexity in pricing and billing for procedures, some market observers pointed to the need to combine reference pricing for inpatient procedures with a bundled payment approach, where a reference price is set for an episode of care that would include, for example, all services provided during hospitalization and major services after discharge. This approach could also generate additional savings.

Implications

CalPERS's experience suggests that reference pricing for hip and knee replacements can save money without much disruption

for enrollees. Reference pricing also can have larger effects on a health care market by making consumers more aware of price variation and by injecting some competition into hospital pricing. Respondents commonly pointed out that reference pricing served as a mechanism for CalPERS to exert leverage on prices—an outcome that some believed is more important than actual cost savings. As one market observer said, "The main intention of the benefit design was to control costs, but it was also an important statement from CalPERS to say, 'Enough is enough. You can go to Cedars-Sinai, UCLA, Stanford or UCSF, and they will only charge you $30,000 [or less], so why would you go somewhere else and pay $110,000?'"

Still, reference pricing appears to have limited potential to address cost trends broadly because it focuses on individual service lines and may be best suited for a limited number of services that drive significant spending. Moreover, reference pricing, which relies on fee-for-service payment, does not address unnecessary utilization. Purchasers and policy makers are pursuing broader provider payment reforms that move away from fee-for-service payments to encourage more efficient care delivery. Such approaches include accountable care organizations, where provider entities take financial risk for the costs and quality of care of a defined population of patients.

A key challenge for purchasers is that they have limited resources to devote to cost-saving strategies and must decide where to focus their efforts. Whether reference pricing is a worthwhile approach for an individual purchaser may depend in part on the administrative and implementation costs as well as the opportunity cost of forgoing other strategies. ■

Notes

1. Robinson, James C., and Timothy T. Brown, "Increases in Consumer Cost Sharing Redirect Patient Volumes and Reduce Hospital Prices for Orthopedic Surgery," *Health Affairs*, Vol. 32, No. 8 (August 2013).
2. Galizzi, Matteo Maria, Simone Ghislandi and Marisa Miraldo, "Effects of Reference Pricing in Pharmaceutical Markets: A Review," *Pharmacoeconomics*, Vol. 29, No. 1 (January 2011).
3. Ibid.
4. Anthem Blue Cross of California, *Reference-Based Pricing: Pilot Results*, internal corporate presentation, Sacramento, Calif. (provided to HSC on May 1, 2013).
5. Robinson and Brown (2013).
6. Li, Chia-hsuan, et al., *Effects of a Reference-Based Purchasing Design on Healthcare Utilization and Outcomes of Knee and Hip Replacement Surgeries*, presentation before AcademyHealth Annual Research Meeting, Baltimore, Md. (June 23, 2013).
7. Anthem Blue Cross of California (2013).
8. California Public Employees' Retirement System, *Facts at a Glance*, Sacramento, Calif. (August 2013).
9. There is little patient-to-patient variation in prices paid within a hospital for hip and knee replacements because health plans in California generally pay case rates or on a per diem basis, and the length of hospital stays is generally consistent across patients for routine cases.
10. Authors' calculation based on data reported in Robinson and Brown (2013).
11. Ibid. Note that the number of hip and knee replacements among CalPERS patients decreased to 447 in 2011.
12. Nussbaum, Alex, "Surgery Cost Caps Save Pension Fund 19% Without Hurting Health," *BloombergBusinessweek* (June 24, 2013).
13. Andrews, Michelle, "Federal Rule Allows Higher Out-of-Pocket Spending for One Year," *Kaiser Health News* (June 11, 2013).

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