The traditional fee-for-service reimbursement model is widely acknowledged to be a major driver of escalating health care costs. Because it rewards the volume of treatments, not the medical outcomes produced, it offers no way for the industry to reward its best providers and for patients to seek them out. It also penalizes cost reduction since eliminating unnecessary procedures leads to lower reimbursements.

For this reason, many health care practitioners and policymakers advocate a new bundled-payments model that reimburses providers with a fixed fee for delivering all the services required to deliver a complete cycle of patient care for a specific clinical condition. Bundled payments (BP) have the potential to reward providers that deliver more value to their patients — better outcomes at lower costs.

In practice, however, bundled payments have struggled to gain traction. One reason is many bundled-payment contracts use artificially short time horizons, not a complete cycle of care, which cause the contract to be similar to a traditional fee-for-service model. Another reason is these new contracts are negotiated at the payer-administrator level in a zero-sum cost-shifting process. Insurers strive to lower the prices they pay while the hospital’s contract administrators attempt to preserve top-line revenues. Physicians, left on the sideline while these new contracts are being forged, are further distanced from the new payment model because they often lack experience in measuring patient outcomes and have little confidence in their costs.

To understand how to address these concerns, an academic team from Harvard Business School brought together a group of orthopedic surgeons from the Boston Shoulder Institute and Harvard Pilgrim Health Care, a Boston-based insurer, to create a new BP model focused on patient value. While the final price for the contract has yet to be negotiated, we believe that the structure and development process used to create this bundle can inform other providers and insurers about how to create bundled-payment contracts that benefit all the stakeholders: providers, insurers, and, most importantly, patients.

**The Motives of the Pilot’s Members**

The Harvard researchers believed that their expertise in value-based health care delivery could help the physicians and the insurer construct a superior BP contract in which the insurer paid a lower price, providers preserved their financial margins, and patients enjoyed superior outcomes. Rather than a zero-sum negotiation, such a new contract would be a win-win for insurers, providers, and patients.

The surgeons (all physicians from Brigham and Women’s Hospital and Massachusetts General Hospital) participated because they wanted a reimbursement model that rewarded providers for delivering better medical outcomes for their patients at a lower cost. They were already measuring their patient outcomes and were in the process of introducing a costing approach that would enable them to participate in a new payments model.

Harvard Pilgrim agreed to join the effort because it recognized that traditional payment models were unlikely to help control rising health care costs. With regulators increasingly prone to challenge rate increases and employers unwilling to accept premium increases, the insurer felt that a BP model, co-created with clinicians, represented an attractive path for offering lower prices to its customers while preserving their access to the best providers.
The team has been meeting every two weeks over the past four months to design a BP model for a pilot project. The key elements of the project are the following:

**Defining the Bundle**

The working team selected damage to rotator-cuff tendons as the clinical condition to be bundled. Rotator-cuff repair (RCR) is a high-volume procedure with a definable cycle of care for which there is substantial variability in outcomes across physicians. Therefore, the team believed that RCR surgery offered an opportunity to improve outcomes and standardize treatment around best processes.

The team members wanted to define a cycle of care that corresponded to the medical condition of the patient. They selected a care cycle that starts with the initial pre-op appointment and concludes one year after the day of surgery. They agreed that this period would allow short-term surgical complications to emerge and be addressed within the bundle and that the recovery time would be sufficient to meaningfully measure patient outcomes.

The procedures and resources in the bundle would include pre-op appointment and testing, use of the operating room and facility services on day of surgery, surgeon, anesthesiologist and support staff, clinic visits, in-hospital drug and laboratory tests, and post-surgical physical therapy.

Two issues had to be addressed. First, although the bundle is tied to achieving measurable outcomes during the year, no business organization in any industry will wait that long for payment. Harvard Pilgrim agreed, therefore, to pay most of the bundled price 30 to 60 days after the surgical event; the remainder would be held back until the guaranteed outcome could be assessed at the 365-day mark.

The second issue was Harvard Pilgrim’s existing IT system, which had been designed to support the fee-for-service model. The insurer agreed to bypass the system and use manual procedures in the pilot study to track and bill patients and pay providers.

**Selecting the Patient Population**

The team’s goal was to be as inclusive as possible in specifying the patient population while incorporating the appropriate risk adjustments. The team identified a core group that would capture at least 80% of the potential RCR population. It also created risk-adjusted tranches to include patients who, based on medical evidence, had a higher intrinsic risk of failure due to medical comorbidities, age, body-mass index, and other factors and adjusted expected outcomes and a pricing differential for patients in each tranche.

**Specifying Outcomes and Guarantees**

The surgeons reviewed the clinical literature and their own research to select, with the insurer, the outcomes that matter most to patients. These included a mix of objectively measurable outcomes, such as rotator-cuff strength and the rates of complications that occur during operations, and subjective patient-reported outcomes such as pain, the ability to perform activities of daily living, and satisfaction with their outcomes.

The bundle incorporated the metrics in two ways. First, payments would be made to physicians and the hospital only if patients achieved specified minimal performance in each area. Second, if outcomes exceeded a more ambitious performance level, the insurer would make incremental bonus payments.

Such outcome-based guarantees and incentives are rare in traditional top-down bundled-payment contracts created without the input of frontline physicians. These contracts typically involve compliance with certain procedures (such as timely administration of pre-operative antibiotics) that may be easy to agree on and implement but may be peripheral to the ultimate patient outcome. The Boston Shoulder Institute surgeons and
Harvard Pilgrim agreed that their set of metrics could provide patients better experiences and could be used to attract more patients to high-value providers.

To enhance transparency, the insurer intended to clearly communicate to patients, ahead of time, a price for the complete treatment cycle and the outcomes that could be expected. The physicians agreed to provide outcomes data to the insurer throughout the care cycle.

**Ensuring Patient Engagement**

Everyone recognized that the engagement of both patients and external professionals involved in the RCR cycle of care was critical for the project’s success. Toward that end, the Boston Shoulder Institute agreed to identify downstream physical therapists and to train, certify, and compensate them. The physicians also planned to conduct extensive patient pre-op education on narcotics, discharge, and physical therapy as well as provide 24-hour turnaround for all telephone calls, same-day office visits for urgent care, and a phone call from the physician’s office on the first day after surgery.

Harvard Pilgrim agreed to design new, innovative plans whose features included waiving such liabilities as co-payments if a member chose a high-value RCR provider for the surgery. The insurer expected to publicize the BP pilots through media and employer channels to attempt to drive increased volume to these high-value providers.

**Estimating Costs**

The Boston Shoulder Institute wanted to enter the negotiation with an in-depth understanding of all its costs over a typical RCR-care cycle, something that it could not learn from its existing costing systems. The Harvard Business School team helped the institute’s physicians and staff apply time-driven activity-based costing to measure the costs across the full cycle of care. They began by taking a careful inventory of resource needs and usage for each process in the cycle.

The figure “Initial Surgical Consultation” shows the detailed map for the first process. At each step in this process, the team identified the personnel and equipment required and measured the time consumed by each resource in performing that process step.
The team then accessed data from hospital and physician departmental budgets, the human resources system, and the equipment and facilities databases to estimate the “capacity cost rate,” the cost per minute of each person and piece of equipment used in the care cycle. It also calculated the cost of space used by each resource or clinical and administrative process. The team combined the time and cost estimates to obtain the total cost for surgical treatment of rotator-cuff tears.

**Setting the Price**

Going into the price negotiation, the Boston Shoulder Institute’s aim is to achieve better patient outcomes and thereby earn a margin over the actual costs incurred. This will come in several ways: the bonus payments for consistently producing superior outcomes; more business driven to them by the insurer because of the better outcomes; and, with a higher volume of patients, more cost-efficient processes. Harvard Pilgrim’s objective is to achieve a bundled price that represents a discount from its fee-for-service payments to facilities, clinicians, and therapists for the RCR care cycle (along, of course, with the superior outcomes). Looking down the road, it believes that if it can extend the new BP model to other conditions, it will be able to reduce its premiums and differentiate itself by offering superior, guaranteed outcomes.

Boston Shoulder Institute physicians and Harvard Pilgrim are now waiting for senior management at Partners HealthCare, the parent of Brigham and Women’s Hospital and Massachusetts General Hospital, to review the proposed bundle and to negotiate the price for a trial period. The trial would allow the physicians, hospitals, and
therapists to learn how to work together under the new arrangement and set the foundation for a long-term contractual relationship.

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Throughout the project, the Harvard researchers have kept the discussions focused on the prize: aligning provider and insurer incentives to deliver more patient value. The interactions have given the providers confidence that the costs assigned to the clinical treatments were accurate and have assured the insurer that the provider’s costs will be based on clinical best practices and high capacity utilization. Over time, as more provider organizations agree to outcome-based bundles, Harvard Pilgrim believes an informed market will introduce competitive pressures to sustain a fair sharing of value between providers and insurers.

All participants have been impressed by the collaborative ethos of the working group. Conversations are open and frank. Rather than a traditional negotiation about who bears which costs, the face-to-face interactions have built trust that is enabling the insurer and physicians to arrive at a win-win value-based solution.