



How Should We Pay for Health Care?

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Improving the way we pay for health care must be a central component in health care reform. Payment reform must link provider reimbursement and accountability to improving patient value: better health outcomes delivered at lower cost.¹ Today's deeply-flawed reimbursement approaches, however, fail this test. They actively discourage providers from delivering value to their patients. **(See Sidebar 1, which describes the problems with the prevailing reimbursement approaches: fee-for-service, capitation, and global provider budgets).**

We believe that reimbursement through bundled payments is the only approach that aligns providers, payers, and suppliers in a healthy competition to increase patient value. A bundled payment is a single payment that covers all the procedures, tests, drugs, devices, and services involved in inpatient, outpatient, and rehabilitative care for a patient's medical condition. For chronic conditions and primary care, a bundled payment is a single payment to cover the care for the condition or population segment over a specified time period. The bundled payment should be contingent on achieving good outcomes for the patient, with the provider bearing financial responsibility for poor outcomes, such as avoidable complications.

We are far from the first to advocate the adoption of a single payment for a course of care. The Diagnosis Related Group (DRG) system, originating in the U.S. Medicare system in 1984 and subsequently adopted in many other countries, embodies the notion of a single payment for an

¹ Porter, M.E., Teisberg, E. (2006). *Redefining Health Care*. Harvard Business Publishing; Porter, M.E. (2010). What Is Value in Health Care? *New England Journal of Medicine*; 363:2477-2481.

inpatient episode of care for a specific procedure or condition.² As implemented in practice, however, the DRG system has serious flaws. DRGs reimburse specific procedures or inpatient stays, not overall care for patient conditions. DRG-based systems are often only for hospital payments, with separate payments made to physicians and suppliers, and none of them contingent on patient outcomes.

A small number of effective bundled payment mechanisms do already exist, such as for joint replacement and spine surgery in Sweden³ and organ transplantation in the U.S.⁴ A growing number of large U.S. corporations, such as Boeing, Lowes, and Wal-Mart, have recently negotiated bundled payment contracts with individual providers, including Cleveland Clinic, Mayo Clinic, Virginia Mason, and Geisinger, for treating their employees who require complex care such as cardiac surgery. Bundled payments are also common for treatments that patients directly pay for, such as in vitro fertilization, plastic surgery, and Lasik eye surgery. In these situations, consumers demand a payment approach similar to how they pay for almost all other services they purchase.

Sidebar 1: Limitations of Existing Reimbursement Methods

FEE-FOR-SERVICE

The predominant payment mechanism in the U.S., and many other countries, remains fee-for-service (FFS), which links payment to specific procedures, treatments, services, and care settings. FFS has severe flaws, the most fundamental of which is that reimbursement increases with the quantity of procedures, tests, admissions and re-admissions that occur, whether or not they contribute to better patient outcomes. Indeed, FFS rewards errors, complications and poor results because these create a demand for more billable services. FFS also drives huge administration costs in billing for each service. Cancer care, for example, generates dozens of individual invoices, each containing hundreds or thousands of line items.

Fees paid in FFS systems often vary widely across similar providers, even within the same region, and in ways that do not reflect either the outcomes achieved or costs incurred. Some procedures and services (like imaging) are extremely well reimbursed. Others, particularly patient consultation, patient education, and services performed by primary care providers, are reimbursed poorly, if at all. Providers end up having to cross-subsidize across their services lines.

FFS leads to over-investment in units that perform generously-reimbursed services, creating excess capacity and more pressures for supply induced demand for such services. And, it leads to under-investment in unreimbursed or poorly-reimbursed services, even those that contribute to better patient outcomes and that avoid

² Fetter, R.B., Shin, Y., Freeman, J.L., Averill, R.F., Thompson, J.D. (1980). Case mix definition by diagnosis-related groups. *Med Care*; 18: 1-53.

³ Porter, M., Marks, C.M. (2014). *OrthoChoice: Bundled Payments in the County of Stockholm*. Harvard Business Publishing.

⁴ Porter, M.E. (2010). What Is Value in Health Care? *New England Journal of Medicine*; 363:2477-2481.

These examples provide clear evidence that bundled payments are feasible and effective.

However, most bundled reimbursements today take the form of limited-scope bundled pilots. The Affordable Care Act (ACA) calls for bundled payment experiments. But, like their DRG predecessors, these fall far short of value-based bundled payment principles and represent only modest, incremental steps beyond traditional procedure based, fee-for-service models. Comprehensive bundled payments still remain the exception, and little guidance is available about how to design and implement value-based bundled payment contracts.

Recent advances in value-based healthcare delivery concepts, however, have set the stage for much more widespread adoption. In this article, we describe the principles of value-based bundled payments, how such bundles should be constructed, and why we believe this

much higher costs (e.g., emergency admissions and expensive adverse complications or recurrences) later in the patient's care cycle.⁵

Finally, FFS creates a zero-sum mindset between payers and both providers and patients. Payers attempt to limit their exposure to expensive services by denying physicians' requests and insisting on prior approval for costly procedures. All of these problems disappear when payments become contingent on outcomes for the full care cycle for a medical condition rather than the quantities of procedures and services performed.

CAPITATION

The shortcomings of FFS have long been known, leading some countries to adopt capitation, a radically different reimbursement model. Under capitation, providers receive a fixed amount per patient per year and are responsible for all of that patient's medical needs. Because provider revenues are independent of the specific quantity and types of treatments performed, capitation is presumed to motivate providers to be more efficient and invest more in the cost-effective preventive, diagnostic, and maintenance care that lower downstream costs.

Capitation, however, has its own major disconnects with value. With a fixed overall revenue for a patient, providers (and payers) may ration or deny access to expensive procedures and services even if the services can lead to better long-run outcomes. It is difficult to fully risk adjusted patient populations so capitated payers and providers can boost margins and profits by targeting healthy populations and avoiding unhealthy ones.

Capitation payments also create a disconnect between the payment and what a provider actually controls. Under capitation, providers assume the actuarial risk of which conditions and circumstances they will be required to treat, not just the clinical risks, costs, and outcomes they can better control. Providers are poorly equipped to manage this actuarial risk, especially when they do not have sufficient patient volume to mitigate it. Capitation, then, distracts providers from focusing on what really matters – improving patient value through excellent care at the medical condition level.

Once capitation is thrust upon them, providers

⁵ Matthews, M., Litow, M. (2011). Why Medicare Patients See the Doctor Too Much. The Wall Street Journal. Accessed on June 2, 2014 at <http://online.wsj.com/news/articles/SB10001424052702304760604576428300875828790>.; Gosden, T., Forland, F., Kristiansen, I.S. (2000). Capitation, salary, fee-for-service and mixed systems of payment: effects on the behaviour of primary care physicians. Cochrane Database Syst Rev; 3: CD002215.

reimbursement method best aligns everyone's interests around value. We show how recent improvements in measuring patient's outcomes and the cost of care can overcome past barriers to wider adoption of bundled payments. We conclude by describing how bundled payments can transform competition in health care by aligning the long-term interests of patients, providers, payers, employers, and health care delivery systems.

WHAT IS A BUNDLED PAYMENT?

A value-based bundled payment is a single payment for treating a patient with a specific medical condition across a full cycle of care. The payment includes care for common complications and comorbidities, but excludes treatments unrelated to the medical condition. The payment amount should be contingent upon achieving good patient outcomes and provide a positive margin above the actual costs incurred by efficient and effective providers. The bundle should be targeted at a homogenous patient population and risk-stratified across a broader covered patient population. The contract should include stop loss provisions, funded

become motivated to take steps that actually work against value. They are drawn to broaden service lines so as to capture all the revenue from their covered populations, even if they do not deliver the best value for every condition. Rather than developing and growing areas of excellence, providers attempt to be "all things to all patients." Patients get locked into a single provider for all their services, regardless of the expertise and the value it delivers.

Providers also attempt to expand their covered populations so that the "law of large numbers" smooths out unexpected variations in patient disease burdens. Yet volume for volume's sake does not produce higher value to patients. And, consolidation in a region through mergers and acquisitions can potentially work against healthy competition.

In effect, by forcing providers to act as insurance companies, capitation payments distract them from becoming excellent at treating specific medical conditions. These very issues are emerging as a result of the ACA's focus on Accountable Care Organizations (ACOs), that are sometimes implemented through capitation or global budgets (see below).

GLOBAL PROVIDER BUDGETS

Under global provider budgets, the payer allocates a fixed annual budget to each providing organization, typically based on an assumed volume and mix of patients and services. Global provider budgets are the predominant reimbursement model in several countries, as well as in the Veterans Administration (VA) system in the U.S. Global budgets are attractive for payers since annual spending becomes highly predictable and the payer can maintain tight control over healthcare spending growth.

Under global budgets, providers must treat all the patients that seek care. A provider's revenue, therefore, becomes disconnected from the volume, mix and complexity of medical conditions it actually treats. With a fixed budget and little control over patient demand or mix of needs, providers rely on rationing and waiting time to cope with demands that exceed supply (as recently occurred in the VA system). In addition, providers will prioritize urgent or acute care over chronic care and preventative services. Conversely, providers that experience lower demand than expected, or realize a lower-cost mix of patients, can choose to live comfortably with their lower utilization rates rather than take proactive steps to cut costs. They will continue to spend their budget, often operating with considerable unused capacity that raises costs for the entire system.

by the payer, to protect against catastrophic cases. The bundle price should be stable over a specified period of time to allow providers to capture benefits from outcome and process improvements.

Finally, since a provider's reimbursement under global budgeting is independent of outcomes achieved, providers tend to under-invest in new skilled staff or new technologies. They must absorb all the incremental costs of innovation but receive no incremental revenue when the new technology leads to better patient outcomes. Global budgets are attractive for short-term control of aggregate health care spending but they almost inevitably lead to slow innovation, rationing, long waiting lists, denial of service, and financial distress of over-stressed providers.

A value-based bundled payment has four essential components.

1. **Covers care for a medical condition, not for a procedure or treatment episode.** A bundled payment should compensate providers for all the drugs, devices, tests, materials, facilities and services required to treat a given *medical condition* over a full *cycle of care*.

A medical condition is an interrelated set of medical circumstances best addressed in an integrated way, such as diabetes, breast cancer, or pregnancy and childbirth. The scope of a medical condition is defined from the perspective of the patient and not from a narrow specialty or organ system approach. Care for a medical condition includes managing common comorbidities and addressing related complications for the condition. Any medical condition is a candidate for a bundled payment, including acute conditions, chronic conditions, and primary care for patient populations with similar care needs.

The *cycle of care* for an acute medical condition starts with the initial visit for that medical condition and continues through treatment, recovery and rehabilitation. For example, the bundled reimbursement for a patient with severe osteoarthritis requiring a joint replacement would include the initial office visit, subsequent hospitalization and surgery, in-patient acute care, and recovery including follow up visits, physical therapy and rehabilitation. In chronic care and primary care, the cycle of care may continue indefinitely. The care cycle can include entities that are not part of the contracting

organization since bundled payments should encourage coordination and affiliation with such entities to integrate care.

For an acute condition, the bundled payment should cover the costs of all (i) clinical, staff, rehabilitation, and administrative personnel, (ii) equipment and facilities, (iii) supplies, devices, implants, tests, imaging, and medicines used during the care cycle, and the necessary support services such as a billing, HR and IT, to enable the care to take place.

For a chronic medical condition, the bundled payment should be time based (\$ per month or year). In diabetes, for example, the payment would cover the full annual costs for all the services needed to monitor and manage the disease, address comorbidities, and manage the risks of complications. The services would include care by multiple specialties, medications, tests, and preventative procedures, such as eye care, patient education, counseling, and monitoring. The cost of dealing with complex complications may best be covered in separate bundles, although the chronic care team would be held accountable both clinically and financially for complication incidence, adjusted for patient risk.

For primary care, bundled payments should also be time based, covering the full set of primary and preventative care services required for defined segments of patients with similar needs. Examples of such patient segments are healthy infants and children, healthy adults, adults at risk for developing chronic disease, adults with multiple chronic diseases including mild mental health conditions, and frail elderly.⁶ Each primary care segment requires a different mix of clinical, support, and administrative processes and personnel. Each segment will have different outcome measures. For example, crucial

⁶ Porter, M.E., Pabo, E.A., Lee, T.H. (2013). Redesigning Primary Care: A Strategic Vision To Improve Value By Organizing Around Patients' Needs. *Health Affairs*; 32: 516-525.

outcomes for frail elderly, such as avoiding re-hospitalizations and maintaining the ability to live at home, are very different than the relevant outcomes for healthy adults. Services for acute diseases or complications should normally be covered outside the primary care bundle, but with the primary care team held accountable for rates of complications and relapse.

A DRG-based payment falls far short of a value-based bundle because it typically reimburses only for inpatient episodes or procedures, such as cardiovascular surgeries, arthroscopic surgeries, hemodialysis, and labor and delivery, and does not incorporate the full range of physician, outpatient, rehabilitation, education, and other services needed to achieve good outcomes over a complete care cycle. It biases treatment to a particular procedure or a specified type of care, rather than encouraging innovation to treat the medical condition.

2. **Contingent on risk adjusted outcomes, including achieving a set of outcomes that matter to patients.** A value-based bundle payment should include a provider guarantee to achieve targeted levels of performance. It should either be contingent on achieving specified outcomes, such as functional status, or should incorporate performance payments or holdbacks based on outcomes achieved. No additional payments should be made to treat pre-specified, avoidable complications related to the condition or to cover readmissions, revisions, and re-occurrences within the time period specified by the bundle.

Condition-specific outcomes are multi-dimensional to reflect the multiple near and long-term results that matter to patients⁷ (see Figure 1). Making a bundled payment contingent on risk adjusted outcomes eliminates the concern in previous fixed price contracts that providers will cut costs in ways that jeopardize patient health, or that they will cherry pick healthier and simpler patients. Linking

⁷ Porter, M.E. (2010). What Is Value in Health Care? New England Journal of Medicine; 363:2477-2481.

payment to achieving excellent outcomes also allows providers to introduce more expensive treatment options that they believe will improve outcomes.⁸

Figure 1: The Outcomes Hierarchy

Tier 1	Health Status Achieved or Restored	Measured by survival rates, functionality, and clinical status at the completion of the cycle of care.
Tier 2	Nature of the Treatment and Recovery Process	Measured by time-to-recovery and the incidence of problems during treatment and recovery, such as infections, complications, medical errors, patient discomfort, and adverse side-effects.
Tier 3	Sustainability of Health	Measured by time-to-reoccurrence of the medical condition, and incidence of other care-induced illnesses.

For each medical condition, physicians and payers must agree on the set of relevant outcomes and the specific metrics that will be used to measure them. While a growing number of registries are being developed for specific medical conditions – organ transplants, in-vitro fertilization, cancer, and orthopedic procedures for knee, hip, and shoulder replacements – standardized and comprehensive outcome measurement by condition remains rare. Most measures certified by the National Quality Forum, for example, are process guidelines not outcome metrics.

The International Consortium for Health Outcome Measurement (ICHOM) has been established to develop globally standardized sets of outcome measures by condition, together with standardized

⁸ Goozner, M. (2011). United healthcare, five oncology practices try bundled payments. J Natl Cancer Inst; 103: 8-10.

risk factors, developed by global working groups of leading clinicians, to agree on and disseminate a minimum standard set of outcomes that matter for each condition. The increased availability of generally accepted outcome metrics will enable value-based bundled payments to become feasible for many more medical conditions.

Eventually, value-based bundles should be fully risk adjusted for the variations in outcomes and costs caused by co-morbidities, such as diabetes and cardiac conditions, and patient risk factors, such as age and obesity. At present, we often lack sufficient data and experience to do so, but limiting bundles to less complex patients and other practical steps can allow widespread introduction of bundles as risk adjustment improves.

Finally, payers should require that providers report outcomes as a condition of payment, both to payors and also the public. Over time, payers can encourage more patients to seek care at providers with bundled payment contracts to gain the benefits of better outcomes and greater efficiency in their care.

3. **Payment is based on the cost of efficient and effective care, not past charges.** The bundled price should provide a margin over a provider's full costs when using effective and efficient clinical and administrative processes throughout the care cycle. A value-based bundled price should not freeze existing reimbursement, or force arbitrary discounts from the sum of current fee-for-service charges. Nor should it be set to provide a positive margin for low-value providers, including those that fail to deliver good outcomes, have low capacity utilization, and incur high costs. The bundle price can be adjusted to reflect uncontrollable region-specific variations, such as differential wage levels for clinical and administrative personnel, utilities and real estate costs.

Constructing proper bundles has been challenging because providers have historically not known their true costs for treating a medical condition. Existing cost measurement approaches used by health care providers are flawed, because they are based on charges and focus on aggregating the cost of departments or service units rather than the costs of treating specific medical conditions over a complete cycle of care.⁹ As a result, most current bundled payment initiatives rely on discounts from past charges, rather than the actual costs of care for the medical condition, to set prices. The recent Medicare Bundled Payments for Care Improvement initiative, for example, bases its reimbursement on retrospective claims data based on fee-for-service (FFS) payments.¹⁰

Time driven activity-based costing (TDABC), derived from understanding the care processes used to treat a condition, gives providers the ability to measure true patient-level treatment costs (and to reduce those costs over time).¹¹ TDABC uses a two-step approach for accurately measuring the cost of treating a patient's medical condition over a complete cycle of care. First, a team of clinicians and administrators maps all the clinical and administrative steps used during the care cycle, and identifies the specific resources (personnel, equipment, space, materials and supplies) used at each step as well as the estimated time spent. Second, finance staff estimate the cost per available minute of each type of resource. Total treatment cost is calculated by multiplying resource time by resource cost per minute at each step, summing up across all the steps in the care cycle, and adding in the cost of all purchased materials and supplies.¹² The TDABC calculation provides the accuracy and transparency required to

⁹ Kaplan, R.S and Porter, M.E. (2011). How to Solve the Cost Crisis in Health Care. Harvard Business Review. September 2011.

¹⁰ Centers for Medicare and Medicaid Services (CMS). (2010). Bundled Payments for Care Improvement (BPCI) Initiative: General Information. Accessed on June 2, 2014 at <http://innovation.cms.gov/initiatives/bundled-payments/>

¹¹ Kaplan, R.S and Porter, M.E. (2011). How to Solve the Cost Crisis in Health Care. Harvard Business Review. September 2011.; Kaplan et al. (2014). Using Time-Driven Activity-Based Costing to Identify Value Improvement Opportunities. *Journal of Healthcare Management*. 59(6):399-413.

¹² Kaplan. (2014). Improving Value with TDABC. *HFM Magazine, June*.

allow providers to be confident about their costs and, consequently, the margins they can earn from a bundled payment contract.

In negotiating the bundled price, providers should strive to maintain their margins, not their current prices. Providers, knowing their costs when they enter into negotiations with payers, will recognize that it is possible to maintain or even increase their margins at a bundled price that is lower than the sum of their current fee-for-service payments. Effective providers will also reduce costs through greater efficiency, better capacity utilization, and fewer complications, re-admissions, and revisions.

Payers, on their side, want better outcomes for their covered patient populations while paying a single price that is less than their average current sum of fee-for-service payments to the multiple and fragmented facilities, clinicians, and therapists involved in the covered medical condition. Over time such a price will shift more volume to efficient and effective providers, who are often those with greater experience and higher volumes of patients with the condition. In this way, payers can reduce their spending (and their premiums) while their patients enjoy better outcomes, and more timely and efficient care.

4. **Specified limits of responsibility for unrelated care needs and catastrophic events.** While a bundled price should include care for common related complications and co-morbidities, providers should not be responsible for the costs incurred for care unrelated to the specific medical condition covered by the bundle. Examples of such exclusions include emergency treatment caused by an accident. Also, even for high-volume and well-understood conditions, patients can encounter rare complications that require treatments costing many times more than the entire bundled payment.

A value-based bundle should limit providers' exposure to unexpectedly high costs from catastrophic and outlier cases by including a "stop loss" provision that caps the provider's liability to a maximum payment, or co-insures for costs beyond a threshold. By limiting the total exposure of providers to excessive or unforeseen risk, the bundled price need not include a risk premium to protect providers against catastrophic cases. This is especially important when providers perform an insufficient number of cases to absorb such risk themselves.

WHY ARE BUNDLED PAYMENTS NOT ALREADY THE STANDARD?

Bundled payment contracts that embody the four essential components will closely align the interests of payors, providers, and patients to provide better outcomes to patients at lower costs. Bundled payments reward the value of the care delivered, not the volume of procedures performed, the number of visits that occur, longer inpatient stays, or the quantity of tests, images, and drugs prescribed. Bundled payments are linked to factors that providers can directly control – successful and comprehensive treatment for the patient's medical condition – rather than ad hoc care for any medical need that arises. Payers bear the actuarial risk of the incidence of the medical condition in their covered populations – the proper role for private and public insurance – while providers, appropriately, bear the medical risk and accountability for treating patients with specific medical conditions, with protection for truly catastrophic cases.

If bundled payments are so much better aligned with value compared to other reimbursement mechanisms, the natural question is why they have not already been put into widespread use in the U.S. and around the world? Part of the explanation is that many earlier bundled payment approaches and experiments, such as limited scope DRG payments, were poorly designed and reflected only a limited

understanding of value-based health care principles. This continues today. **(See Sidebar 2 “How Previous Bundled Payment Approaches Fall Short of the Mark”).**

We believe, however, that five primary reasons explain the current limited use of bundled payments:

Inefficient organization of providers; Fragmented services with low volume by condition; Inadequate or absent information on outcomes by medical-condition; inaccurate measurements of cost by medical condition; and Resistance to change by payers that have perceived benefits from complex to administer fee-for-service contracts. These institutional weaknesses have led to poor bundled payments design and limited support for

Sidebar 2: How Previous Bundled Payment Approaches Fall Short of the Mark

While some bundled reimbursement models meet one or more of the four conditions, most existing single payment mechanisms have serious flaws and fall far short of the power of value-based bundles.¹³

Cover short episodes or procedures, and not the full care cycles. They continue to reward uncoordinated care by making separate payments to hospitals and physicians, and often exclude many essential services such as rehabilitation and behavioral health services t.

Payments are based on average existing charges not on the costs of efficient delivery of effective care, rewarding ineffective and inefficient providers.

Not contingent on achieving good outcomes. “Performance payments,” if they occur, are usually payments for compliance with process guidelines.¹⁴

¹³ Porter, M., Marks, C.M., Landman, Z. (2014). OrthoChoice: Bundled Payments in the County of Stockholm. Harvard Business Publishing.

¹⁴ Camden Group. (2013). Top 10 Considerations in Developing a Bundled Payment Business Case. Accessed June 2, 2014 at via <http://www.thecamdengroup.com/thought-leadership/top-ten/top-ten-considerations-in-developing-a-bundled-payment-business-case/>; Adams, J.W. (2012). Bundled Pricing at the Texas Heart Institute: Lessons Learned from 28 Years of Practical Experience. Accessed on June 2, 2014 at http://www.hfmatxgc.org/files/file/Presentations/2012_10_Adams_John_BundledPricingAtTheTexasHeartInstitute.pdf. 2012; Edmonds, C., Hallman, G.L. (1995). CardioVascular care providers. Texas Heart Institute Journal;22: 72-76.; Wilensky, G.R. (1991). Medicare moves toward bundled payments. Acad Med; 66:452-454.; Cromwell, J., Dayhoff, D.A., McCall, N.T., Subramanian, S., Freitas, R.C., Hart, R.J., Caswell, C., Stason, W. (1998). Medicare Participating Heart Bypass Demonstration. Executive summary. Final report. Waltham, MA: Health Economics Research, Inc.; Johnson, L.L., Becker, R.L. (1994). An alternative health-care reimbursement system—Application of arthroscopy and financial warranty: Results of a 2-year pilot study. Arthroscopy: The Journal of Arthroscopic and Related Surgery; 10: 462—470.Johnson, 1994; Hasegawa, T., Bragg-Gresham, J.L., Pisoni, R.L., Robinson, B.M., Fukuhara, S., Akiba, T., Saito, A., Kurokawa, K., Akizawa, T. (2011). Changes in anemia management and hemoglobin levels following revision of a bundling policy to incorporate recombinant human erythropoietin. Kidney Int;79:340-346.; Iglehart, J.K. (2011). Bundled payment for ESRD – including ESAs in Medicare’s dialysis package. New England Journal of Medicine; 364: 593.; Chen, C.S., Liu, T.C., Chen, B., Lin, C.L. (2014). The failure of financial incentive? The seemingly inexorable rise of cesarean section. Soc Sci Med; 101:47-51.

their implementation. We discuss each of these barriers in turn and how they can now be overcome.

Negotiated at the payer-administrator level, with both sides having a zero-sum cost shifting mindset. Payers attempt to secure discounts from providers, or to put a multi-year cap on prices. Providers attempt to sustain prices. Clinician input is largely absent.

(i) Inefficient organization of providers. The current organization of care around specialties and services has entrenched the fee-for-service model. The specialty structure also makes it challenging for the multiple, independent providers that treat a patient's medical condition over a complete care cycle to work together for the patient's common interest. Disparate providers find it difficult to agree on a single bundled payment, accept joint responsibility for achieving targeted outcomes, and divide the single payment among themselves. Bundled payments work best, and are easier to create and implement, when providers have already organized into integrated practice units (IPUs) that focus on specific medical conditions.¹⁵ IPUs provide a much easier organizational structure for negotiating and implementing a bundled payment contract for that condition.

(ii) Fragmented services with low volume by condition. Broad service lines in many organizations fragment the volume of patients with a given condition. This not only exacerbates inefficient care, but also limits the accumulation of experience that gives providers confidence to enter into bundles in which they bear some risk for delivering excellent outcomes. The current trend to consolidate services within health systems will help to eliminate service duplication and encourage better focus and integration of the care they deliver.

(iii) Inadequate or absent information on outcomes by medical-condition. Systematic outcome measurement by medical condition, unfortunately, remains rare. Most clinical teams do not collect information on outcomes nor do they know their actual risk of complications. Payers also lack

¹⁵ Porter, M.E., Teisberg, E. (2006). *Redefining Health Care*. Harvard Business Publishing

comparative outcomes data on which to measure and reimburse providers. With insufficient valid information on patient outcomes, most bundled reimbursement experiments have contracted not on outcomes but on a narrow set of process and compliance measures. Or, at best, they rely on generic, easy to measure outcomes, such as patient mortality or readmission rates. As outcome measurement and reporting begins to grow rapidly, this constraint will be eased. In fact, the move to bundles can accelerate widespread standardized outcome measurement.

(iv) Inaccurate measurements of cost by medical condition. Valid bundles require that providers have confidence that the single payment will produce a margin over their costs for treating the medical condition over a full care cycle. With few providers today knowing their costs accurately by medical condition, they resort to inaccurate costs based on charges or simplistic estimates of whether a proposed bundled payment provides a margin over their actual costs. Payers, as well, cannot be confident that they are not over-paying for the services. As accurate costing spreads, providers will gain the confidence that they can use bundled payments as a competitive tool and an incentive to improve efficiency and integration of care.

(v) Resistance to change by payers. Finally, many insurers have enjoyed business success because of their competencies and information systems for complex claims adjudication and invoice processing. Bundled payments will likely make most of this capability and expensive infrastructure obsolete. Like most entrenched incumbents, insurers may cling to a familiar business model rather than adapt to a simpler mechanism even though it will reduce their costs substantially and provide more value to their customers.

Recent progress in value-based delivery is allowing all these constraints to be overcome. More providers are re-organizing into integrated practice units that aggregate volume, they are measuring

their outcomes and calculating their costs accurately for the medical conditions they treat. ICHOM Standard Sets covering 20 major conditions will be available by the end of 2015, with many more on the way. Some payers are beginning to recognize that their future role in the health system demands that they introduce bundled payments as the only effective mechanism to pay for value in health care. And, importantly, experiences from numerous bundled payment pilots and examples, covering an array of conditions, is allowing the playbook for creating bundled payment contracts to emerge. **(See Side Bar 3: Creating a Bundled Payment: Step-by-Step).**

BUNDLED PAYMENTS AND THE FUTURE OF HEALTH CARE COMPETITION

How will value-based bundled payments transform health care delivery? Today, payers and providers treat reimbursement as a zero-sum game in which each attempts to get a bigger share of a fixed or shrinking pie. In this game, providers acquire others or merge to assemble greater bargaining power. Payers attempt to drive down costs by not covering some medical services, requiring prior approval for expensive treatments, cutting reimbursement levels, implementing global budgets, or reimbursing through capitation payments that shift insurance risk to providers. Suppliers of drugs and devices spend heavily on sales and marketing to get onto approved lists, secure coverage at attractive prices, and persuade physicians to adopt their products. None of these actions increases the value delivered to patients.

A shift to bundled payments will allow competition to determine who provides the best value for patients. It will create many winners, especially patients. But it will also create some losers, notably the organizations that cannot deliver real value.

The Winners

Properly designed and implemented bundled payments create a competition that benefits all major stakeholders. *Patients* receive proven, coordinated and effective care for their medical condition(s), delivered efficiently without undue delay. Average outcomes improve substantially as effective providers treat more patients and ineffective ones treat fewer. Patients also benefit from lower co-pays or deductibles as costs go down.

Providers that are both effective and efficient in producing good outcomes for patients will earn a good margin on each patient treated. The endemic cross subsidies that affect different types of care today will be eliminated, as providers receive a fair price for the outcomes they deliver. Over time, effective and efficient providers for the condition will attract and care for more patients. The total margins of these providers will increase, and higher volume and experience will lead to even better outcomes and lower costs. Such providers can utilize bundles to compete regionally and nationally. For example, several leading orthopedic surgical practices across the U.S. have recently established the National Orthopedic and Spine Alliance to provide an efficient mechanism to contract directly with national employers.

Suppliers whose products or services enhance value for patients will see their products increasingly adopted as part of care cycles. To gain market share and grow, suppliers will need to prove high value by demonstrating that their drug, device, diagnostic test or information system improves outcomes that matter and/or lowers total care cycle costs.

Payers, whether private insurers, corporations, governments, or self-pay individuals, will achieve substantially better outcomes while reducing their spending for treating the covered medical conditions

and primary care population segments. We believe the benefits of adopting bundled payments are especially compelling for *self-insured employer plans*, which bear the costs and medical risk for care while also having a strong interest in their employees' short and long-term health outcomes. Self-insured plans are increasing in importance in the U.S. with 60% of individuals covered, at least in part, by such plans in 2012, up from 44% in 1999.¹⁶ Bundled payments provide an opportunity for self-insured employers to improve the health outcomes of their employees at lower prices than they currently pay. Employers can bypass health plans that resist the introduction of bundled payments and negotiate directly, as Wal-Mart, Loew's and others have already done, bundled payment contracts with selected IPU/centers of excellence to care for employees with specified medical conditions. We believe every employer should adopt or insist upon bundles for all major conditions where value can be clearly defined, and expect their plan administrators to put them in place.

The Losers

If patients, providers, suppliers, payers, and the health care system all win under bundled payment reimbursement, does anyone lose? The losers will be those unable to demonstrate good value to patients.

Providers that deliver poor outcomes will lose by no longer receiving additional payments for treating avoidable complications, infections, and readmissions, or for performing revision surgeries and repeat treatments for the medical condition. They will lose patient volume because they fail to deliver good outcomes. Providers will also lose if they fail to understand their actual costs, and enter into bundled reimbursement that does not cover their actual costs. Finally, providers lose if they opt out of

¹⁶ Kaplan. (2014). Improving Value with TDABC. HFM Magazine, June.

or stall on the shift to bundled payment contracts while payers and employers direct their patients to the providers with whom they have negotiated bundles.

Suppliers will lose if their products do not produce measurable improvements in the value delivered to patients through better patient outcomes and/or lower treatment costs over care cycles. Finally, payors that resist the migration to bundled payments because of inflexible and inadequate claims processing and bill paying systems will lose as their employer customers shift to competitors, or begin to contract directly with high-value providers.

CONCLUSION

Reimbursement using value-based bundled payments will end the vicious cycle created by reimbursing for volume, not value. Bundles reward providers that deliver better healthcare outcomes at lower costs. They penalize inefficient and ineffective providers who will find, over time, that their revenues fail to cover their costs for treating the covered conditions. Such providers must either improve or shift to treating other conditions where they can deliver better value. As lower value providers exit, the effective and efficient providers for a medical condition will increase their volume, further improving their outcomes and efficiency. Overall outcomes improve, efficiency improves, cross subsidies that work against value of care are eliminated, and excess spending due to fragmentation, and redundant capacity is reduced. All providers will be highly motivated to keep improving and innovating, creating a virtuous cycle of value improvement that enables the healthcare system as a whole to be a winner.

Past barriers to adoption of value-based bundled payments are being overcome. Providers are organizing care around integrated practice units, outcome measurement is growing rapidly, the tools to measure costs accurately for each medical condition are available, and consolidation of redundant care

is underway. Much work remains to put these innovations into wide-spread practice, but we are finally moving down the path of paying the right way for the right kind of health care. Every system participant needs to get started on this journey and accelerate its learning so that it can not only survive, but prosper.

Side Bar 3: Creating a Bundled Payment: The Playbook

The process of creating a value-based bundled payment involves a sequence of practical steps that engage all the principal actors to construct the bundle's essential components.

1. Assemble the Team

On the provider side, creating a bundle requires a team that includes clinical leaders that treat the medical condition, along with quality, and finance, and contracting personnel. Bundled payments must reflect the processes, outcomes, and costs that clinicians can embrace and take accountability for. Finance staff and contract administrators lack the specific expertise about medical condition treatments and outcomes to negotiate by themselves. Beyond sharing expertise, involving physicians promotes trust and understanding between clinicians and staff, enabling them to work collaboratively on value improvement. Physicians left on the sidelines resist the new payment model because the contracts often do not reflect the realities of their actual care or patient needs. For example, when the County of Stockholm developed its first bundled payment for total joint replacements, it formed a working group that included representatives from leading members in the county's orthopedic department community.¹⁷

On the payer side, Chief Medical Officer involvement should supplement contracting and claims staff. Involving clinical leaders from both the provider and payer organizations builds relationships and confidence that the arrangement will benefit both parties and, most importantly, patients.

2. Define the Medical Condition and the Covered Cycle of Care

The provider and payer teams must agree on what is included in the medical condition, as well as the beginning and the end of the care cycle. Physicians play a central role in defining the scope of the condition, but must do so from the perspective of the patient and not from a specialty-based or organ system-based approach. Defining the condition and the care cycle requires a pragmatic approach that focuses on the majority of patients, rather than the exceptions. Exceptional cases should be addressed outside the bundle, or through outlier provisions (see below).

¹⁷ Porter et al, "OrthoChoice: Bundled Payments in the County of Stockholm (A)," HBS Case # 714-514.

Any medical condition is a candidate for a bundled payment, including acute conditions, chronic conditions, and primary care for defined patient populations. For initial bundled payment efforts, we suggest selecting higher volume conditions with a well-defined cycle of care and for which patient outcomes (and hence care guarantees or bonuses) can be readily defined and measured. Orthopedic conditions, such as acute osteoarthritis requiring total knee or total hip arthroplasty, are good examples.¹⁸ These have a well-defined start date (the patients' pre-operative visit to the orthopedic surgeon where they become qualified for surgery) and end date (the completion of recovery after a defined period). In a rotator cuff repair bundle pilot, for example, physicians selected a care cycle ending 365 days after day of surgery, a period long enough for short-term surgical complications to emerge and be addressed within the bundle and with sufficient recovery time to meaningfully measure patient functional outcomes.

All bundles must define the included services during the care cycle, such as clinic visits, testing and radiology, use of operating room and facilities, surgeon services, anesthesiologist services, behavioral services, support staff, hospitality services, drugs, devices, and physical therapy. They must also define included complications, such as for premature re-operation or infection, that are part of caring for the condition. A bundle must also define excluded services, unrelated to the medical condition. A sound bundled reimbursement contract will include an adjudication process for cases when ambiguities or differences of opinions arise. In practice, we have found that such situations arise relatively rarely especially for well-defined patient populations.

Bundles can initially focus on a truncated care cycle for practical reasons, such as initially not including outpatient rehabilitation in orthopedic care because there are numerous independent providers potentially involved with whom the core provider lacks relationships. Over time, the care cycle can be extended upstream and downstream to include the full cycle of care.

3. Define and Measure the Outcomes that Matter

Physicians and payers must agree on a standard set of outcomes for the condition, and specific metrics for measuring them. Outcome metrics for bundled payment should typically include objective functional measures – knee flexibility and motion for total knee replacements, and types and expected rates of complications from surgery, chemotherapy, radiation, and other interventions. The outcomes should normally include patient-reported outcomes, such as degree of pain, ability to perform activities of daily living, time to return to work, and satisfaction with the overall outcomes. As noted earlier, ICHOM Standard Sets that include standard risk factors and have been validated by global clinician leaders are excellent candidates to be used for initial bundled payment contracts.

Some providers have resisted bundled payment pilot projects because their electronic medical record systems are not currently equipped to support outcome measurements. We believe that pilot projects should not be held hostage to limits on existing systems. Providers and payers can gain experience with bundled payment contracts by manually tracking their initial population of covered patients on spreadsheets or in dedicated data warehouses. Over time, electronic billing systems can be upgraded for the far simpler value-based bundled contracting environment.

4. Set the Risk Stratification or Risk Adjustment Approach

¹⁸ Porter, M., Marks, C.M., Landman, Z. (2014). OrthoChoice: Bundled Payments in the County of Stockholm. Harvard Business Publishing.

Bundled payments must account for the significant variations in the outcomes and costs for a condition due to patient risk factors and co-morbidities. Given that providers and payers often lack sufficient data to fully risk-adjust bundles today, a practical way forward is to restrict the initial bundles to the large cohorts of patients with similar risk profiles for the specific medical condition, such as those below a specified age and those without severe complications or comorbidities. For joint replacement, the initial cohort could be those patients classified as ASA 1 or 2. The remaining patients would continue to be reimbursed by the existing payment mechanism until better data became available to risk-adjust outcomes and the bundled payment itself.

Over time, risk adjustment can be applied to both the base payment and to the payments contingent on outcomes. In The County of Stockholm spine bundle, for example, the warranty payment covering expected complication and the performance payment based on pain reduction one year after surgery are both risk adjusted based on patient characteristics.¹⁹

5. Estimate Provider Costs over the Cycle of Care

Before entering negotiations on the actual bundled price, providers need to understand the total costs of treating that medical condition, including not only the costs incurred within the provider's organization but also the costs incurred by all other entities involved in the care cycle. Providers must also analyze the cost of addressing avoidable complications that are part of care guarantees. The TDABC approach described earlier provides a practical way to estimate these costs, including the variability of costs across patients, the differential costs associated with treating patients with different risk factors, and the frequency and cost of outliers, all essential inputs to bundled payment contracts.

Some providers voice concern about the effort required to measure their costs accurately, especially when today's costing software remains based on charge-based methods. However, the process mapping involved in TDABC not only informs bundled payment negotiations, but also provides invaluable insight for providers in improving and streamlining their care processes and improving their capacity utilization. Providers can also view the investment in accurate cost measurement as a one-time expenditure that will eventually lead to much lower billing costs over time by eliminating fee-for-service.

6. Pursue Initial Process Improvement

Before finalizing negotiation with the payer, providers will typically want to initiate at least one round of improvements to increase process efficiency, modify the mix of staff and resources involved in care, and choose the appropriate sites for care. We have found much room for cost improvement at virtually every provider that has implemented TDABC.²⁰ Opportunities for cost reduction will include the following:

¹⁹ Porter, M., Marks, C.M. (2014). OrthoChoice (C): Bundled Payments in the County of Stockholm. Harvard Business Publishing.

²⁰ Kaplan, R.S and Porter, M.E. (2011). How to Solve the Cost Crisis in Health Care. Harvard Business Review. September 2011; French, K.E., Albright, H.W., Frenzel, J.C., Incalcaterra, J.R., Rubio, A.C., Jones, J.F. (2013). Measuring the Value of Process Improvement Initiatives in a Preoperative Assessment Center Using Time-Driven Activity-Based Costing. Accessed June 2, 2014 at <http://www.sciencedirect.com/science/article/pii/S2213076413000419>; Kaplan et al. (2014). Using Time-Driven Activity-Based Costing to Identify Value Improvement Opportunities. Journal of Healthcare Management. 59(6):399-413.

- i. eliminate administrative and clinical processes and process variations that do not improve outcomes
- ii. ensure that involved clinicians and staff are working at the top of their capabilities
- iii. reduce cycle times for major process steps
- iv. spend extra money in the care cycle – such as on diagnostics, physician consultations, team meetings, and patient education – to avoid much higher costs of care, complications, and lack of patient compliance later on
- v. utilize only tests, scans, drugs, equipment, equipment and devices that demonstrably improve outcomes
- vi. perform care at appropriate locations matched to the resources required
- vii. increase capacity utilization rates by reducing duplication of services across locations and scheduling equipment and facility capacity beyond the traditional 5-day, 8-hour norms.

Implementing these cost saving opportunities can lower care cycle costs by 25-35 percent without compromising outcomes, and often improving them.

7. Commit to Outcomes and Guarantees, Collaborating with Involved Providers Upstream and Downstream

Bundled payments should be contingent on achieving targeted performance for specified patient outcomes. Performance payment options include bonuses for good outcomes, penalties for performance shortfalls, and financial responsibility for treating avoidable complications such as infections and readmissions. The bundled price, the outcomes targets, the guarantees for complications, and any bonuses or penalties are all negotiated together by the provider and payer teams.

Providers that will now be accountable for excellent patient outcomes will need to partner and collaborate with internal and external clinicians and entities involved in the full care cycle. For example, orthopedic surgeons should train independent and community-based physical therapists on the specific protocols to be used with the patients they refer. Physical therapists and other independent care givers will benefit from referrals but they will also be held accountable for their performance with patients.

In bundled reimbursement, providers also have the incentive to maintain communication with patients, via electronic messages, telephone calls, and remote monitoring, to encourage adherence to behaviors that support recovery and obtain feedback on their progress. All these interactions allow patients to receive far more integrated and comprehensive care, and experience better outcomes.

8. Develop Stop Loss/Outlier Provisions

Even for high-volume and well-understood conditions, patients can still encounter rare complications that

require treatments costing many times more than the entire bundled payment. Rather than put the provider at risk for such unexpectedly high cost events, a sound bundle should include a “stop loss” provision that limits the provider’s liability to a maximum payment, or offers co-insurance once a provider’s costs exceed a threshold limit. Data on past patient care for the condition often provide a sound statistical basis for defining the frequency of costs that fall outside a 2 or 3 σ threshold. For example, the Texas Heart Institute initiated a bundled service for cardiovascular surgeries in 1984 that included responsibility for lengths-of-stay up to the 95th percentile for each surgical group. The remaining 5% of patients continued to be charged on a fee-for-service basis.²¹

9. Negotiate the Bundled Price

The provider institution should enter the negotiation with a good knowledge of its costs, and with confidence about the effectiveness and efficiency of its clinical processes for the medical condition. The goal of contracting is to preserve the provider’s margins not its current prices. The cost of the care cycle serves as a reference point, and often a floor, for the negotiation. This enables the provider to seek a price that yields a positive *margin* over its costs while producing good outcomes, delivering seamless, integrated care for patients, using efficient processes and high capacity utilization of clinical, staff, and equipment resources.

For payers, the reference point is the sum of fee-for-service charges involved in the condition, including those for complications and poor outcomes. The goal is to reduce total cost while fairly compensating effective and efficient providers.

The bundled price and outcome targets established should be maintained for a multi-year period, such as three years, to create incentives for providers to benefit from innovations that improve outcomes and lower costs. Annual reductions in price or increases in outcome targets will work against provider acceptance of value-based bundles, and lead to resistance in negotiations.

Over longer periods of time, however, providers that learn how to deliver better outcomes at lower cost may want to use price or performance to attract more patient volume, and can offer new bundled contracts with higher performance targets and lower prices. This same dynamic is what drives improving effectiveness and efficiency in just about every other sector of the economy. The ability for providers to compete through improving the bundle should be incorporated into payment over time as experience grows.

10. Divide the Bundled Reimbursement Amongst Multiple Providers

Providers must devise a mechanism to split the bundled price among the multiple care givers, which may include some that are not part of (or employed by) the same provider organization. This can be a challenging task depending on the attitudes of the clinicians involved. Since each step in the care cycle is necessary for a successful outcome, no objective analytic method exists to allocate a fixed bundled price among the multiple care providers. From our experience, however, clinicians in an Integrated Practice Unit or the lead specialties in the patient’s care cycle are best positioned to serve as the main risk bearers or residual equity holders for the bundle. The lead provider or provider team can reimburse the other providers in a manner consistent with their existing reimbursement, such as negotiated fees perhaps with bonuses and penalties. The lead provider, who

²¹ Edmonds, C., Hallman, G.L. (1995). CardioVascular care providers. Texas Heart Institute Journal;22: 72-76.

has the greatest influence on care decisions and hence risk, appropriately retains the residual revenue from the bundled price after paying the other providers. It enjoys the upside if better care is delivered at a lower cost and bears the downside risk from a high incidence of complications or failure to meet the contract's performance targets.

11. Report Outcomes to the Payer (and to the Public)

In the final component of a value based bundle, each provider should be expected to provide timely, comprehensive medical condition outcome reports to payers, employers, referring physicians, patients, and the public. This provides accountability with all parties and will build confidence in this new payment mechanism over time.