Chapter 12

Pay for value

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Abstract: Texas Bix Bender is not a known health economist. In fact, he’s not an economist at all. He is the author of “Don’t Squat with Yer Spurs On! The Cowboy’s Guide to Life”, and in that book he provides some insight into the issues that affect improving healthcare effectiveness and efficiency. One of his guides to life is as follows: “If you find yourself in a hole, the first thing to do is stop digging” [3].

1. Introduction

In healthcare we find ourselves in a hole. For many years, we have been expounding that our healthcare system does not provide the quality we desire and that it is too expensive. Indeed, back in the 1970’s, President Richard Nixon declared that healthcare in the United States was in a crisis. Since that time, similar pronouncements have been made by many people. But what have we done? Basically, we have continued to dig, even though we were finding ourselves in a hole. It is time for a different approach.

In my opinion, the editors of this book have correctly stated the goal we should be pursuing: “We do not think that people want the lowest cost, universally available healthcare system. We think the central issue should really be the creation of a healthcare system that provides the highest value.” It is similar to what Warren Buffet has said – price is what we pay, value is what we get.

The editors also identify a constructive approach for defining value when they say that it “includes the quality of health outcomes, the safety of the process of delivery, and the service associated with the delivery process.” These factors would basically be the numerator of the value equation. The denominator would be cost. But cost can be viewed from several different perspectives in the healthcare field. It could be the cost per line item. For instance, what is the cost of a chest x-ray? An MRI scan? A blood glucose lab test? Alternatively, costs could be viewed from the standpoint of the cost per visit with the healthcare delivery system. Under this approach, cost would include the encounter with the physician or allied health professionals plus testing, imaging, etc. A third approach could be cost for an episode of care – for instance, built around a hospitalization, thus including more line items and visits in the total. Or alternatively, we could think of it as cost per certain types of patients over a longer period of time, perhaps a year or longer. For example, cost per transplant patient per year (thus picking up readmissions, etc.)

It is interesting that when viewed within the perspectives outlined above, most people would agree that the best way to analyze cost from a value standpoint would be to take costs over a period of time. However, the actions taken to date to try and stem costs have been predominantly aimed at holding down the price per line item. Indeed, the Medicare program since the mid 1980’s has imposed price controls as a prime method of trying to control costs. It has not worked. A pertinent quote from George Will comes
to mind: “... a policy that has a record, running from Roman times to the present, that is unblemished by success. It is the policy of price controls.” [22].

The fact that Medicare price controls have not led to better effectiveness nor efficiency of care is heightened when one looks at recent studies that show that Medicare payment rates have now on average gone below the cost of providing care. Therefore, there is a significant cost shift that is included in private insurance premiums that are subsidizing care provided to patients on government programs [9, 12].

And what are the results of this healthcare delivery “experiment” of the line-item price control approach trying to controlling cost? 1) Patient time with physicians is down. As their payments have been reduced, physicians have increased the number of patients they see per day and spend less time per patient visit—thus, making the patient encounter less satisfying [7]. 2) Utilization of ancillary services is up. Partly because less time is devoted to the patient visit, more tests and images are ordered to discover the underlying nature of the problem and cover for possible legal issues if a medical problem is missed. Therefore, even though line item prices are constrained, total costs go up anyway. And as total costs go up, the government then restricts the payment levels even more, and the cycle continues. See Table 1. 3) Medical decision making not based on evidence or knowledge continues. The result is that more things are done to people, more medications are prescribed, and more devices are used. The approach provides no incentive to define what is most appropriate for specific individual medical cases nor to distribute the knowledge that is available for medical decision making.

The Commonwealth Fund has reported data that has shown this result for Medicare overall by looking at two time periods—one four-year period where Medicare physician fees increased and one four-year period where Medicare physician fees decreased. Interestingly, the overall physician service cost per beneficiary went up the same in each four year time period.
Annual Rates of Increase in Physician Fees and Expenditures/Fee-for-Service Beneficiary

<table>
<thead>
<tr>
<th></th>
<th>1997-2001</th>
<th>2001-2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual percent change</td>
<td>3.4</td>
<td>7.4</td>
</tr>
<tr>
<td>-0.7</td>
<td>7.4</td>
<td></td>
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</table>

Source: Letter to Medicare Payment Advisory Commission from Herb B. Kuhn, Director, Center for Medicare Management, CMS 4/7/06 as referenced by Dr. Stuart Guterman, The Commonwealth Fund

And to make matters worse, the price control payment levels are now reaching points where more and more physicians are and will be refusing to see new Medicare patients or Medicare patients at all [2]. This scenario is basically playing out in the manner economists indicate is the typical pattern for price controls – reduced access, compromised quality and costs increasing anyway. We need a better approach.

The fortunate thing is that a better approach is available. There are large variations in spending on healthcare within regions of the United States, and between healthcare institutions in this country. This has been studied for decades by the Center for Evaluative Clinical Sciences at Dartmouth. When comparing high cost areas with low cost areas, the Dartmouth team has observed that total health cost is derived from a simple formula: Total cost = cost per item of service x use rate of services. They go on to conclude that “utilization contributes substantially more than price per unit of care (line items) to variations in per enrollee spending.” [6] In other words, high spending regions and institutions cost more primarily because they use more physician visits, more hospitalizations, more intensive care unit days, and more surgeries than those that cost less. Yet the increased use of resources comes without a demonstrated improvement in the outcomes, safety, or service.

Indeed, Dr. Jack Wennberg, the person who has conducted the most studies on the variations in cost of care between regions in the United States, has concluded that, contrary to what most people believe, price is not the key factor.

So if we want to stop digging our hole deeper, what should we do? If the premise of this book is correct, we desire a) good patient outcomes, b) a safe environment, c) satisfied patients, and d) efficient healthcare delivery with reasonable costs per patient over time. If physicians and medical institutions are paid for this package of desired endpoints (value), they will be much more likely to deliver it. In short, we need to move towards pay for value.

2. Pay for performance vs. pay for value

In recent years pay for performance has become a common phrase in the healthcare field. Indeed, there are numerous projects under way where changes in payment rates are made under a pay for...
Table 3

Financial impact on two academic medical centers under present direction of pay for performance

<table>
<thead>
<tr>
<th></th>
<th>Academic medical center A</th>
<th>Academic medical center B</th>
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</thead>
<tbody>
<tr>
<td>Hospital days†</td>
<td>11.2</td>
<td>24.4</td>
</tr>
<tr>
<td>Physician visits†</td>
<td>31.2</td>
<td>79.3</td>
</tr>
<tr>
<td>Financial results</td>
<td>$25,800</td>
<td>$44,000</td>
</tr>
<tr>
<td>Total CMS payments per Medicare Patient†</td>
<td>Hypothetical</td>
<td></td>
</tr>
<tr>
<td>Percentage “incentive” for completing processes</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Pay for performance “incentive”</td>
<td>$1,290</td>
<td>$2,200</td>
</tr>
</tbody>
</table>

†Calculated on the basis of services provided during the last 6 months of life from Dartmouth Atlas of Health Care.

Performance scheme. Most of these incentives target a mix of process and structural measures, with less emphasis on patient satisfaction and overall patient outcomes [18]. As stated in the Mayo Clinic Proceedings [20], these programs have varying payment approaches, but quality bonuses are common. Typically, payers give physicians and medical institutions an annual “bonus” or percentage for meeting a goal (such as prescribing angiotensin-converting enzyme inhibitors at hospital discharge for acute myocardial infarction) or withhold a small percentage of payment until the requirements are met.

The theory is that the process steps being measured represent good quality. Therefore providers following these processes should get a bonus. However, if the payment is given as a percentage of total spending per patient at the facility, it will also inadvertently give the greatest payment bonus to the most inefficient medical centers, as shown below.

In Table 3, provider A and provider B are actual academic medical centers from the same state. Assume that both complete the desired quality processes and are paid an additional 5% of the total CMS payment for meeting CMS standards. Both have a similar mix of patients and similar outcomes. However, utilization patterns (e.g., intensive care unit days/patient, physician visits/patient, etc.) vary greatly between the providers. Given the circumstances of this comparison—similar patients, similar outcomes—and the country’s desire to improve healthcare cost efficiency, the efficient provider should be the one with the greatest payment incentive. However, under the present pay for performance direction, the opposite will happen. As Table 3 shows, the inefficient provider will receive the largest reward.

Years ago, Walter McNerney, who oversaw the integration of Blue Cross and Blue Shield and helped shape the debate leading to Medicare and Medicaid stated, “Although quality assessment is gathering institutional momentum, its value still hangs in the balance… poorly conceived or mismanaged, it can heighten cost and quality problems and, through narrow focus, keep the public’s attention off the larger picture” [11]. McNerney cautioned about a burgeoning quality assessment movement that was permeating health care at that time. His concern was that overly simplistic assessments of quality may not be relevant to the complexities of medical care and may subsequently compromise both quality and cost [11].

Payers creating pay for performance programs face the same issues. They have the challenge of selecting what to measure, designing a fair incentive plan, and marshaling sufficient numbers of patients so that physicians and medical institutions will take notice. Epstein [8] in the January 22, 2004, issue of The New England Journal of Medicine noted that “incentives based on a handful of measures of quality may encourage physicians to focus their efforts...
on improving quality in the areas targeted by the programs, neglecting other important aspects of care. In contrast, incentives based on too many measures may overwhelm physician practices.”

In their book *Redefining Health Care: Creating Value-Based Competition on Results*, Michael Porter and Elizabeth Teisberg [17] argue that many pay for performance efforts are not about quality results but are about completing processes, which may or may not lead to better results. “These current (P4P) efforts... carry some risks. Most... are not actually about quality results, but processes. Most “pay for performance” is really pay for compliance. Compliance to too many process standards... runs the risk of inhibiting innovation by the best providers.” They go on to write; “The only truly effective way to address value in health care is to reward ends, or results, rather than means, such as process steps.”

Results from a *Journal of the American Medical Association* report entitled “Hospital Quality for Acute Myocardial Infarction: Correlation among Process Measures and Relationship with Short-Term Mortality” [4] lends credence to this observation. In that study, the authors analyzed hospital performance on the CMS/Joint Commission on Accreditation of Healthcare Organizations process measures for acute myocardial infarction (i.e., use of angiotensin-converting enzyme inhibitors at hospital discharge, smoking cessation counseling, etc.) They found that hospital performance on these measures explained only 6% of the hospital-level variation in short-term, risk-standardized mortality rates for patients who had a heart attack. As a result, the researchers suggested that reporting short-term, risk-standardized mortality rates – outcomes – is a better approach to characterize hospitals’ overall quality of care.

A more recent study by Landrum et al. analyzed care provided to colorectal cancer patients in varying regions. They separated the regions into low spending regions and high spending regions. Interestingly, they found that high spending regions had a higher percentage of recommended processes being accomplished on their patients. However, the higher spending regions also had a higher use of processes that were not recommended, a higher use of processes with uncertain benefit (such as using treatments when co-morbidities indicate no expected benefit) and most interestingly, the patient outcomes in terms of three-year mortality were no different between the low spending regions and the high spending regions [10].

On the basis of studies such as those discussed above, as well as their own detailed analyses, researchers at Dartmouth recently concluded the following: “Efforts to improve the quality and cost of US health care have focused largely on fostering adherence to evidence-based guidelines, ignoring the role of clinical judgment in more discretionary settings. ... Clinical judgment, not clinical guidelines should be the focus of policy efforts to improve the quality of care and address disparities in spending” [19].

In short, if we want to improve health care cost efficiency as well as effectiveness, we must move away from pay for performance approaches that reward process achievement, and move toward paying for value. Dr. Robert Nesse, a panelist at the Mayo Clinic National Symposium on Health Care Reform in 2006, used the following analogy:

“What would the cost of a hamburger be if, instead of paying for the outcome of good food delivered in a congenial location by friendly service, we actually just paid for the number of cooks... and how many wait staff went by... The economics of health care are not dramatically different. We are paid for the process. We are not paid for the outcomes.”

### 3. Moving towards pay for value

The models for how we might pay providers for medical services range from fee for service to full capitation. There is no perfect method. Both ends of the spectrum have strengths and weaknesses. As
stated by Margaret O’Kane and a diverse group of leaders in the May/June, 2008 issue of Health Affairs: “Fee for service theoretically aligns providers and patients interests by removing any incentive to deny care, as long as the patient can pay what providers want to charge. Fee for service also protects clinicians from substantial financial risk for the contingent and unpredictable health needs of patients. The downside is that fee for service creates incentives to provide ever more narrowly defined specialized, and higher priced services, even when the expected clinical value added is doubtful or non-existent. Providers gain from delivering more care, but are not rewarded, and will often lose revenue from evidence-based parsimony. On its own, fee for service payment does little to align patients and providers interests in improving outcomes while minimizing costs. Capitation is intended to give providers strong incentives favoring efficiency, but it also carries the potential to be abused. Needed care may be withheld, especially if capitation is not combined with transparency about outcomes and patients experiences. In the 1990s, questions about inappropriate restrictions on access to care led to a tremendous public backlash” [14].

In the zeal to change payment schemes, it is important to remember this public backlash in the mid-90’s. Society is saying we need to reduce health cost increases. Yet in the managed care era of the mid-90’s, health cost increases were actually relatively the same or lower than GDP growth. (Table 4) But as the O’Kane article appropriately reported, society rebelled. People felt that health resources were being inappropriately withheld. Thus as changes in payment approaches are made, the need for transparency of outcomes and patient satisfaction cannot be emphasized too much. The transparency is needed so that patients who experience lower resource use can see whether the outcomes from the provider are good.

This chapter argues for a move from a fee for service payment system to pay for value approaches. However, there is a category of patients for whom fee for service may be the most appropriate payment scheme – the complex, difficult to diagnose patient. Christianson and his colleagues [5] discuss this group in their recent book “The Innovator’s Prescription” They argue that “solution shops” are needed for the complex patients. Solutions shops are defined as “institutions structured to diagnose and recommend solutions for unstructured problems.” They go on to explain that solution shops exist outside of healthcare as well. They conclude that, “almost always, solution shops charge their clients on a fee-for-service basis... there are simply too many variables in addition to the consultants’ diagnosis and recommendations that affect the outcome... and because diagnosing the cause of complex problems
and devising workable solutions have such high subsequent leverage.” Thus, even in an environment of
changed approaches to pay for medical care, there is still a place for fee-for-service.

Fortunately, there are a number of models for changing how health services are paid that lie between
these extremes. Also important is the fact that the payment models described below are not all mutually
exclusive. Thus, some of them could be implemented in series or at the same time. In addition, they
could be applied selectively to certain medical conditions. What follows are some payments schemes
that would begin to reward value:

4. Shared savings

Under the shared savings concept, groups of high cost patients (such as patients hospitalized for
diabetic-related complications) would be identified. A payer would determine the annual cost per patient
for each separate provider system. The payer would share this information with each provider system,
and offer to share savings in total cost per patient with each provider system that can deliver such savings
while maintaining or improving patient outcomes. Employers (as payers) have an added advantage in
that they can measure potential lower absenteeism and the resulting increased productivity from the
workforce. This method of calculating both savings from reduced medical expenses as well as increased
productivity of workers has been used in the Seattle area by large employers working collaboratively
with Virginia Mason Medical Center. Interestingly, in those applications, the benefit of increased
productivity and lower absenteeism were more substantial than were the actual reductions in medical
costs.

While the shared savings approach has many positive features, it will be easier for medical centers
in high cost areas and medical centers that are presently high cost themselves to achieve these savings.
Thus, it provides less incentive to providers who have already been functioning efficiently. In addition,
if there is no corresponding penalty for high cost providers, those who elect not to participate in the
program would likely continue their high-spending ways. In other words, there is no across the board
incentive to move to a more efficient care delivery approach. And there are huge variations in cost per
patient – even between medical centers in the same state and in the same multi-hospital organization. As
an example of these variations in spending per medical center, Dr. Wennberg et al., in an article in the
November/December 2007 issue of Health Affairs, comment on the differences in Medicare spending per
decedent during the last two years of life. For instance, they cite that Catholic Health Care West hospitals
in the Los Angeles area spent $79,002 per decedent, whereas those in Sacramento spent $46,866 [21].
In this real world example, utilization again is the differentiator. The Los Angeles hospital used 87.6
hospital bed inputs per 1,000 decedents, compared to 47.9 in Sacramento. ICU bed use (the most
expensive setting in health care) was even more dramatically different, with the Los Angeles hospital
using 35.8 ICU bed inputs per 1,000 decedents compared to 16.9 in Sacramento. Now let’s assume the
Los Angeles hospitals reduce their costs halfway toward the Sacramento rates and that there is a 50–50
shared savings for the cost reduction between the payer and provider. In this hypothetical situation, that
would still put the Los Angeles hospital cost per patient at $62,934 compared to Sacramento’s $48,866.
Yet the Los Angeles hospital would receive a bonus of $8,034 per patient while Sacramento’s “bonus” for
providing care that is still 25% less expensive would be nothing. In the long run, payment systems that
actually reward all efficient delivery of care are needed – not just those to deal with the most inefficient
5. Variable provider payment updates

Under this payment approach, a payer would risk adjust patient outcome measures (mortality, safety, patient satisfaction) on a provider specific basis as well as cost over a span over time – such as the Dartmouth Atlas costs in the last six months of life, or cost per cardiac surgery patient, etc. One might use hospital-based episodes of care since hospitalized patients account for the majority of health care expense. These data would be used to determine which care systems are delivering the best value (outcomes over cost). Providers delivering the best value would receive larger payment updates when the usual annual payment change is determined. Providers who are not delivering high value care would receive lower updates or perhaps no updates at all.

To give an indication of how this might play out for a subcategory of hospitals, consider Table 5. It shows every teaching hospital in the United States on an outcome measure (case mix adjusted mortality where 1.0 is average for the United States, and anything higher than 1.0 is better than the US average). It also looks at costs in the last six months of life from the Dartmouth Atlas. Each dot reflects a hospital in the United States. The graph has been divided into four quadrants; those in the lower right have poor mortality rates and high costs, those in the upper left have good mortality rates and lower costs. Under the scheme being suggested, when a payment update was scheduled, those medical centers in the upper left quadrant would receive a higher than normal payment update. Those in the lower right quadrant would receive a lower than normal payment update, and those in the upper right and lower left quadrants might receive a normal payment update. Clearly, such a scheme could be made to be “budget neutral” by having the percentage of increased payment update for the high value providers be the same as the percentage lower payment update for the low value providers.

In addition, this scheme does provide an incentive for every medical center to be an efficient provider. Thus, it overcomes one of the weaknesses of the shared saving approach described above. This payment approach could be phased in as well. For instance, rather than basing the update for all services, one could start with variable updates just for the (Diagnosis Related Groups (DRGs) that cost a payer the most. For a few of these DRGs, teams could decide on appropriate outcome measures as well as how

<table>
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<th>Table 5</th>
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<tr>
<td>Teaching Hospital Variability in Value</td>
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<tr>
<td>A Increased payment update</td>
</tr>
<tr>
<td>B Decreased payment update</td>
</tr>
<tr>
<td>C</td>
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<tr>
<td>D</td>
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</tbody>
</table>

Cost in last 6 months of life ($000s)

- Cost mix adjusted mortality (>1 is better)

- Increased payment update

- Decreased payment update

- A

- B

- C

- D

- 0 1 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60

- 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8
the cost per episode would be calculated. Then one would start the variable update just for those DRGs and gradually expand the number of DRGs covered. For instance, Dartmouth and Commonwealth have produced a similar chart for a more targeted group of patient conditions.

6. Chronic condition coordination payments

Under this approach, patients with one or more chronic conditions would choose a “medical home” (an organization with resources and infrastructure to coordinate chronic disease patient care over time) for their care management, preventive and minor care associated with those chronic conditions. The medical home would receive a periodic, prospectively-defined “care management payment” to cover those services. Acute patient care episodes would be paid separately under regular insurance coverage rules.

As the US population ages, an increasing percentage of our population is living with one or more chronic diseases. Especially when there are multiple chronic diseases, coordination of the care and assuring that patients are following treatment regimens becomes more important. Otherwise, over time, increased acute episodes cause costs to increase.

However, if immediate health cost savings are desired in the first year or two after implementation of these medical home programs, it would be wise to start them for patients who have been hospitalized for a condition related to one or more of the chronic diseases [15]. From the experience at Geisinger Health System, there were benefit from having a care coordinator for all chronic disease patients. However, those who had been hospitalized were the patients where such care coordination showed short term cost savings through reductions in readmissions to the hospital. It is understandable that the other patients will not show immediate cost savings because their chronic disease is not yet to the point where it is causing complications. In fact, for those patients, costs in the short term may actually increase. For example, an uncomplicated diabetic patient who is not taking her/his medications, is not coming in for eye exams,...
or regularly checking their glycosylated hemoglobin levels will likely be low cost in the upcoming year. A medical home would probably increase the costs for these patients, because of the additional health services that would be consumed. However, the potential payoff from avoiding complications in the future (perhaps avoiding heart surgery, amputations, etc.) could very well be happening many years into the future.

A Medicare demonstration project following chronic disease patients in 15 locations from 2002 to 2005 found a similar result. “... care models (that) enroll patients while they are in the hospital... have shown large reductions in readmissions... making this... (hospitalized chronic disease patient) a potentially rewarding one [16].”

Thus, if a Medical Home program will be evaluated on cost savings in the short run, it is highly recommended that it be targeted to those chronic disease patients who have already sustained an acute hospital episode.

7. Shared decision making

Under this payment approach, all patient candidates for selected, elective treatment options or surgery, (for example, spinal fusion or bed rest, coronary artery bypass graft or prescription drugs etc.) would be offered an approved educational decision aid related to their specific disease/condition. This decision aid would provide education about the disease or condition. It would also explain the advantages and disadvantages of each treatment option. A number of such Internet-based educational systems exist and they are gradually expanding the medical conditions and procedures that are being covered.

Under this scheme, medical centers would be separately compensated for offering an independent educational program to the patient. In addition, it would likely be beneficial for payers to create incentives for patients to complete the educational sessions. These incentives could include the payer reducing or eliminating co-pays for patients who take the education.

Some may ask whether there would be enough difference in the rate that procedures would be done with this type of education to warrant the efforts. However, the potential is larger than one might initially assume. It has been previously noted that Dartmouth has shown wide variability in the use rates for procedures in the United States. Henry Aaron [?] of the Brookings Institution in his book entitled “Can We Say No?” commented on the rate that coronary artery bypass grafts and coronary angioplasty combined is done per million population in the United States. He noted that the U.S. rate of 5,967 was almost four times higher than the United Kingdom. However, does the United States do too much, does the United Kingdom do too little, or are both rates questionable? Dartmouth has indicated that integrated delivery systems tend to do fewer procedures. Thus, using internal data from Mayo Clinic as an example of an integrated delivery system, the rates for doing coronary artery bypass grafts and coronary angioplasty on an age and sex adjusted basis for the same year was 3,179 per million population, or about 40% less than the United States as a whole. So what do U.S. patients choose after taking an independent shared decision making educational program? With regard to coronary revascularization for angina, the rate of patients selecting surgery was reduced by 30% – close to the integrated delivery system difference with the US rate [13]. Thus, the potential for substantial savings appears to be significant.

8. Accountable care organizations

Under this approach, a group of physicians and a hospital would be responsible for quality and overall annual spending for their patients. Physicians could be paid at normal fee for services and DRG rates.
and then receive added payments for meeting resource use and quality targets over the course of a year. Since added payments would depend on meeting use rate and quality targets, it would likely lead to forming virtual accountable care organizations based on physician hospital referring relationships.

Such an approach is designed to create incentives for physicians and hospitals to work together to provide better value care. At the same time, in order for the virtual accountable care organizations to develop, it may be necessary to change some of the legal rules prohibiting collaborative efforts between independent physicians and hospitals. Since achieving cost savings is a prime objective, once again it would make sense to evolve into this payment approach by starting with those hospital DRGs accounting for the highest cost.

9. **Episode based payments for hospitalized patients – or mini-capitation**

This approach would provide a single bundled payment to hospitals and physicians managing the care for patients with major acute episodes. One lump sum payment for both hospital and physician services is different from the present Medicare DRG payment that only covers the hospital service. The new approach is intended to encourage the two groups (hospitals and treating physicians) to effectively integrate patient care.

Focusing episode based payments on hospitalized patients concentrates efforts where the large costs are. An advantage of this approach is that one does not get bogged down trying to change payment schemes for all medical services. This is especially pertinent, since 10–15% of patients will account for 80% of total costs. As Len Nichols, director of the health policy program at the New American Foundation said before the Committee on the Budget of the United States Senate on June 26, 2007: “The secret is not, however, to re-jigger 10,000 prices in 3,000 counties so that we get them right once and for all (or until medical knowledge or technology or input prices change again). The secret is to pay for what we want... while bundling ever-larger sets of services into one payment, which frees clinicians and providers to find more efficient ways to deliver health.”

This approach would basically expand what currently happens with most transplants in the United States. Mayo Clinic has the largest total transplant program in the country. Almost all of our transplant patients are covered by mini-capitation packages. These can even cover periods of time that are greater than the hospitalization itself.

10. **Conclusion**

The need to improve efficiency of health care in the United States is evident. The theme of this book about systems thinking and engineering clearly needs to be embedded in our healthcare systems. We need much better application of process flow analysis, LEAN thinking, and various quality improvement techniques. In doing so, however, we should remember that the use rate of service is the real key to efficiency. It is important to do a heart surgery procedure or an MRI scan as efficiently as possible. However, it is even more important to have integrated systems in place that do no more heart surgeries or MRI scans than are needed.

How we pay for health services can not by itself correct the problems that we face of inefficient healthcare delivery. But they can help and there are a number of alternatives available. Table 7 shows that alternative payment approaches discussed and where they might be most applicable. It is time to get started.
Table 7
Applicability of potential pay for value schemes

<table>
<thead>
<tr>
<th>Payment approach</th>
<th>Acute conditions</th>
<th>Chronic conditions</th>
<th>Prevention</th>
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<tr>
<td></td>
<td>Procedures</td>
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<td>Shared Savings (FFS)</td>
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<td>✓</td>
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<tr>
<td>Variable Payment Upgrades (FFS)</td>
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<tr>
<td>Full Capitation</td>
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References


Robert K. Smoldt is Chief Administrative Office Emeritus of Mayo Clinic. He served as a member of Mayo Clinic Board of Trustees and Mayo Clinic Executive Committee from 1990 through 2007; and is presently pursuing U.S. health reform in close partnership with Mayo Clinic’s president and chief executive office. Mr. Smoldt earned the B.S. degree from Iowa State.
University and the M.B.A. degree from the University of Southern California. He has given numerous presentations and is a recognized speaker on the health care environment. Mr. Smoldt has provided leadership at Mayo Clinic facilities in Rochester and Scottsdale. He has completed two terms as secretary of Mayo Clinic Rochester Board of Governors and served on the Mayo Clinic Scottsdale Board of Governors as a senior advisor from 1998 to 2000. He has been involved in health care administration for over 30 years – both with the U.S. Air Force and Mayo Clinic. Mr. Smoldt joined Mayo in 1972, and he has worked in a variety of administrative positions in both medical and surgical departments. Prior to his CAO role, he served as chair of the Department of Planning and Public Affairs. Mr. Smoldt also has been active in Medical Group Management Association, along with other members who manage and lead medical facilities across the nation – and work together to improve their knowledge, skills and the effectiveness of medical group practices. He has chaired the organization’s research and marketing committees and has acted as moderator of its international conference in London, England. Most recently, he was a member of the Medical Group Management Association National Awards Committee, which honors those who make significant leadership contributions to health care administration, delivery or education in medical group practice and presents the following awards: Harry J. Harwick Award for Lifetime Achievement Award, Physician Executive Award, Fred Graham Award and Medical Practice Executive of the Year Award.