The Business Case For Quality: Case Studies And An Analysis

Current payment mechanisms allow, and even reward, defective care because they are unable to reward future benefit.

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ABSTRACT: The financial implications of implementing quality improvements are often poorly understood. Simply put, does improving quality yield a return on investment? We examine four cases—management of high-cost pharmaceuticals, diabetes management, smoking cessation, and wellness programs in the workplace—to understand the financial and clinical implications of improving care. We explore costs and benefits, in both the short and the long term, to four stakeholders with different and sometimes conflicting interests: providers, purchasers and employers, individual patients, and society. Finally, we recommend policy changes to better align financial incentives for superior quality of care.

Does improving health care quality cost money or save money? Much controversy surrounds this seemingly straightforward question. The answer is often unknown, since the needed analyses are missing or inadequate. Even where analyses do exist, the answer varies with the stakeholder's viewpoint and the time frame examined. An investment that improves quality for patients may have different financial consequences for providers or payers.

Important work is under way around the country to implement quality improvements. Numerous causes for deficiencies have been identified, including limited consumer knowledge, rapidly changing technology, disconnection between consumers and payers regarding payment schemes (administrative pricing), and inadequate measurement.[1] In addition, the misalignment of financial incentives creates a formidable obstacle to the adoption of quality interventions. A quality improvement may be desirable for its positive impact on patients, for its ability to improve efficiency (save money), or both. However, health care organizations may be reluctant to implement improvements if better quality is not accompanied by better payment or improved margins, or at least equal compensation.

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Without a business case for quality, we think it unlikely that the private sector will move quickly and reliably to widely adopt proven quality improvements. To deepen the understanding of the facts surrounding the business case for quality and to identify promising policy options, we undertook case studies of several improvements in actual health care delivery and purchasing organizations, with two pivotal questions in mind: First, does improved quality increase or reduce margins or provide a return on investment in a defined time frame? Second, what entity realizes a financial benefit from a specific quality improvement?

Study Methods

■ **Basic project design.** With help from a panel of health services research experts, we identified and ranked a series of health care improvement interventions in the areas of chronic disease care, patient safety, waste reduction, prevention, and approaches to value-based purchasing. Criteria for rating included the total clinical burden represented by the topic, the degree of confidence in effectiveness of the innovation, and the alignment of the topic with existing agendas for improving U.S. health care, such as *Healthy People 2010*.[2] From this rating process, we chose seven topics for case studies: (1) management of high-cost pharmaceuticals (low molecular weight heparin and statins); (2) chronic care (diabetes management); (3) management of encounters (drop-in group medical appointments); (4) prevention (smoking cessation); (5) health maintenance (wellness programs in the workplace); (6) hospital contracting (selective referral to high-volume facilities); and (7) medical error reduction (computerized physician order entry, or CPOE, for medications).

Most of these interventions reflect attempts to correct underuse of effective care processes, rather than to reduce overuse or misuse. For each topic, the study team identified at least one health care organization (provider or purchaser) that had implemented the improvement and in which the financial and clinical results could be described and quantified. Case writers reviewed literature, visited each organization, interviewed managers and clinicians, and examined financial information. The project team reviewed the resulting cases in concert with a group of senior policy analysts, researchers, and executives to draw first-order conclusions about policy implications. Four of the seven cases are presented here.

■ **Defining the term "business case."** The operational definition of the term *business case* in this project was as follows:

> A *business case* for a health care improvement intervention exists if the entity that invests in the intervention realizes a financial return on its investment in a reasonable time frame, using a reasonable rate of discounting. This may be realized as "bankable dollars" (profit), a reduction in losses for a given program or population, or avoided costs. In addition, a *business case* may exist if the investing entity believes that a positive indirect effect on organizational function and sustainability will accrue within a reasonable time frame.

A distinction should be made among the business case, the economic case, and the social case for an improvement. In many of the case studies, an economic case could be made in which discounted financial benefits exceed discounted costs,

whether they accrue to patients, employers, providers or payers, or some other segment of society. The business and economic cases are most likely to diverge when benefits from reduced morbidity and mortality are sizable but when the financial benefits occur more than several years later, so that the investor has less opportunity to realize those benefits. A third formulation is the social case, which is the benefit to the individual (patient) or to society of improved health status and productivity, regardless of cost. For example, investment in smoking cessation may have a clear economic case and a compelling social case but a poor business case. If an economic case exists, it should in principle be possible to realign payment policy to create a business case as well. This may also be true for the social case if the government or society is willing to pay.

It is crucial to note that the definition of *business case* used in this project does not include other important reasons—for example, philanthropic motives, regulations, or professional ethics—that a health care organization or investor may choose to adopt an innovation, even in the absence of a business case. As several of these case studies demonstrate, these less tangible motives are real; nonetheless, we doubt that nonfinancial motivations are sufficient, without a financial return, to drive and sustain widespread adoption of improved quality practices.

Case Studies

Following are brief summaries of four cases; the full text is available elsewhere.[3]

■ **Management of high-cost pharmaceuticals (Henry Ford Health System).** We studied two interventions to improve medication use at Henry Ford Health System, one dealing with the high-cost drug low molecular weight heparin (LMWH) to treat deep vein thrombosis (DVT) , and the other to improve pharmaceutical care of elevated cholesterol levels in a lipid clinic.

Low molecular weight heparin. LMWH is a newer version of a classic drug used for treatment of DVT, a condition accounting for approximately 300,000 hospital admissions annually.[4] Based on published studies, we estimated that LMWH has a potential ratio of cost to savings of 1:5 compared with usual care for DVT. The cost of LMWH exceeds the cost of the most commonly prescribed alternative by approximately $45–$49 per day, but because initial LMWH treatment can be provided on an outpatient basis, its proper use reduces hospitalizations, diminishes the need for laboratory testing, shortens lengths-of-stay, and reduces overall costs by approximately $800 per patient.

The adoption of LMWH for DVT at Henry Ford Health System was slow, because of the complexity of the treatment plan for DVT patients, which required coordination among the emergency department staff, primary care clinicians, and specialty physicians. In the first six months of 2001 only twenty-nine of a pool of 500 potentially eligible patients were on the protocol, yielding a net savings of $22,000, primarily from reduced hospital stays. However, the combination of the low penetration of the protocol among eligible patients, along with the off-proto-

col use of LMWH in patients for whom it had a less obvious financial benefit, canceled the savings obtained in DVT patients.

In this case, both the costs and patient benefits occur in the short term. Henry Ford Health System is an integrated care system, and some of its patients are in its own capitated health plan. For these patients, the medical group benefits financially from avoided hospital admissions, and the hospital benefits from the shorter lengths-of-stay, making the business decision compelling. However, these same financial benefits are not equally aligned for the medical group and the hospital under different payment arrangements such as fee-for-service (FFS). Furthermore, Medicare does not pay for LMWH as an outpatient drug.

To realize a large portion of the $360,000 per year opportunity, the health plan would need to spread application of the LMWH protocol to the estimated 400–500 eligible patients per year. The organization also would need policies to curtail the use of LMWH in patients for whom it was not clinically approved.

■ **Lipid clinic, including statin use.** The second intervention at Henry Ford, a lipid clinic, was designed to monitor statin therapy more effectively and to improve management of patients with high serum cholesterol levels, particularly those with a history of coronary heart disease. Proper statin use can reduce the frequency and mortality rates of heart attacks, but the drugs are often not used effectively in U.S. health care.[5]

Henry Ford spends $6–$7 million per year for statins, which is approximately $675 per patient for about 10,000 patients. A study of 295 patients in 1996 indicated that 53 percent had reached the desired level of blood lipids, the aim of the therapy, while 47 percent were receiving lesser or unknown benefit. Taking into account the clinical research literature on statins and statistical estimates of the longer-term costs of repeat heart attacks, the estimated ratio of cost to savings for effective treatment would be approximately 1:2.

To increase the effectiveness of treatment, the Henry Ford Health System introduced a lipid clinic on a trial basis for 800 patients. The clinic employs a protocol for monitoring statin use that allows pharmacists, without direct physician involvement, to track patients' lipid levels, modify dosage, provide behavior modification counseling, and encourage patients to exercise and reduce fats in their diet. About 84 percent of the clinic patients achieved the desired levels of blood lipids. Implementing the lipid clinic required capital investment as well as increased operating costs, totaling roughly $145 per patient per year. The costs of monitoring patients were not reimbursed by Medicare or other payers.

The lipid clinic demonstrated clear patient benefit. Yet, in a period of financial pressure, Henry Ford was unable to justify expanding the program beyond patients in its capitated health plan. Although the long-term financial case would likely have been positive (an estimated 2:1 return on investment), fully realized benefits in reduced complications would be remote in time. Especially in a competitive and mobile market, Henry Ford might well find itself paying to reduce

cholesterol levels in patients who would no longer be its patients by the time their averted heart attack would otherwise have occurred.

■ **Diabetes management (HealthPartners and Independent Health).** Diabetes mellitus, the seventh leading U.S. cause of death, rose 33 percent in prevalence during the 1990s and now affects sixteen million Americans.[6] Strong research evidence shows that the development and progression of many complications can be reduced through careful blood sugar control. This case analyzed two diabetes management programs: one at HealthPartners, an integrated delivery system in Minneapolis, and the other at Independent Health Plan, an independent practice association (IPA) in Buffalo.

HealthPartners created a diabetes management program in 1994; Independent Health implemented a comparable program in 1997. Each program includes practice guidelines, provider and member education, patient screening and reminders, performance feedback to physicians, and case management. Costs at HealthPartners rose $330 per patient over a ten-year period. The projected savings over the same period, because of lower service use, was $405 per patient—a net benefit of $75 per patient. Since the setup costs are heavily weighted toward the beginning of the ten-year period and the benefits of lower complications are delayed toward the end, the return on investment requires the full ten years to be realized. Interestingly, in year ten the annual benefit is expected to exceed costs by an estimated $1,500 per patient.

Financial analyses in both organizations demonstrated a negative return on investment for the program in the short run. In the longer run, a positive return would occur through avoidance of increased morbidity, but, because of enrollee turnover, both organizations might not be able to realize that return.

■ **Smoking cessation (Group Health Cooperative of Puget Sound).** Nearly one-fourth of U.S. adults smoke cigarettes. Smoking is the most significant preventable U.S. cause of disease and death, accounting for more than 430,000 deaths annually. Studies show that 70 percent of adult smokers would like to quit.[7]

Group Health Cooperative of Puget Sound, a staff-model health maintenance organization (HMO) in Washington State, has been a leader in developing and operating smoking-cessation programs for the past twenty years. Group Health's Free and Clear program combines behavioral counseling and pharmacotherapy as part of members' covered benefits. Quitting rates among smokers in the program are 25–30 percent. Despite inability to recoup costs in the short run, Group Health has remained committed to smoking cessation, with senior managers believing strongly in such (unmeasured) collateral benefits as institutional reputation, higher member retention, appeal to patients and employers, and employee pride.

Both individual patients and society benefit economically from smoking-cessation programs through reduced downstream costs of morbidity and disability, but the business case for these programs is weak from the short-term organi-

zational perspective. The health plan incurs sizable costs but is unable to realize a predictable, measurable return on investment from the long-term payoff.

■ **Wellness programs in the workplace (General Motors Corporation).** This case study analyzes incentives for corporate purchasers of health care to invest in wellness programs to improve employees' and dependents' health status. Modifying health risk behavior is believed to be among the most effective ways to reduce avoidable morbidity and mortality. LifeSteps, a joint United Auto Workers (UAW)–General Motors (GM) health promotion program, was started in April 1996 and continues to the present.

GM self-insures health care for its 1.25 million employees, retirees, and dependents. In 1994 GM examined the patterns of use among its employees and projected a 25 percent increase in medical spending over ten years, based strictly on demographics of the employed population (increases in prices and advances in technology were not included). The major opportunity for GM from this program is reducing the rise in health care spending. LifeSteps participants undergo a health risk appraisal and are classified as low, medium, or high risks. GM calculates excess costs as the difference in spending for those in the two higher- risk groups compared with those in the low-risk group. An estimated 26 percent of total costs is attributable to excess risk. In addition to reducing health spending, GM estimates an opportunity for savings of $350,000 per plant annually in absenteeism costs.

GM originally intended LifeSteps to be available only to its enrollees in traditional FFS or preferred provider organization (PPO) coverage, because this is the group for which GM pays medical costs directly, but it ultimately extended the program to include those enrolled in HMOs as well. LifeSteps has two levels, basic and intensive, and each level has multiple components. An evaluation study indicated an increased migration of 3 percent of patients annually to low-risk status in the two communities that are piloting the intensive level versus the basic level.

Migration to low-risk status for a typical age distribution of 1,000 employees is estimated to save $53,165, or about $53.16 per employee. These savings recur in each year that the employee remains in the low-risk tier. Unfortunately, data on the cost of the program were not available to the case-study team, making it impossible to calculate the benefit-to-cost ratio. In this case, the investor is the same entity as the payer (the employer), allowing short-term savings to be realized. The longer-term payoff is again elusive, as the employee may become the financial responsibility of another employer or payer (such as Medicare) in the future.

Lessons From The Case Studies

■ **Four initial questions.** In an initial overview of the case studies, four questions emerge that help organize the formulation of policy implications.

Will the proposed innovation actually result in improved care? We tried at the outset to select innovations of proven worth. Several of these evidence-based improvements did not appear to produce real improvements in care after all. These failures could

be attributable to limitations of the innovation itself or to problems in implementation. Through effective deployment and many years of experience, HealthPartners was able to make a complex diabetes management program function well. By contrast, at Henry Ford, harvesting the potential of LMWH or lipid management proved very difficult (at least in the early stages) in the face of barriers in organizational culture, communication, and habit. Poor implementation of a potentially effective innovation is not a business-case problem; it is a management problem, although an outsider may have a hard time telling the difference.

Is the improvement considered a part of the core of health care or an optional feature? Even for innovations of proven or plausible effectiveness, this set of cases makes clear that not all appear equally compelling from the organizations' points of view. Henry Ford leaders viewed the lipid clinic as an optional program, and the innovations had to prove their worth to survive or expand. HealthPartners' diabetes management program or Group Health Cooperative's smoking-cessation efforts may seem equally optional to outsiders, but the organizations' leaders appeared to think otherwise. In these cases, the organizations felt somehow obligated to offer the service as if it were at the core of their work, much as they would view removing an inflamed appendix or treating a fracture.

When organizations regarded an improvement as part of the core of care, they tried to find ways to maintain it, by seeking sources of revenue and reducing costs of operation (for example, Group Health sold Free and Clear programs to other organizations). When organizations saw improvements as optional, they faced a different choice: whether to keep, drop, or extend an innovation.

Is there money to be made, and by whom? This question is pivotal to the business-case issue. In most of the case studies, the innovation did improve quality, whether as a core or an option, and someone would benefit financially. However, as expected, the financial benefit often did not return to the initial investor or was greatly delayed. Diabetes case management produced substantial reductions in total cost but too late to be a viable short-term cost-reduction strategy. However, the case indicated that if HealthPartners intended to provide population-based chronic care and was able to retain patients over a ten-year period, then it regarded the program as financially viable. Smoking cessation almost certainly reduced costs, but in a population whose turnover rate was too high for Group Health Cooperative to recoup its expenses. The exception was in the purchaser-based case, in which management of high-risk employees in a stable workforce returned financial benefit to GM. Effective deployment of LMWH treatment could have been a moneymaker for Henry Ford, but only because, as an integrated system, it could offset its increased outpatient drug spending by decreased hospital use.

What nonfinancial consequences matter? The cases revealed several forms of organizational motivation that did not appear to translate directly to the bottom line, at least in the short run. The Group Health Cooperative and HealthPartners cases demonstrated a sense of "mission" on the part of leadership as strong motivation

and as the organizational rationale for their antismoking and diabetes improvement efforts. In both cases, the business case for change appeared to rest on confidence in the organizational survival advantage of improvement, such as retained market share, increased staff loyalty, and reputation among employers. Although many such nonfinancial effects could, in principle, be estimated in monetary terms, the organizations did not even try to count them in the current financial statements or even midrange financial plans.

■ **Stakeholder analysis.** For each stakeholder, business-case issues include both the financial return on investment and a list of collateral benefits, which may augment the financial return but which, in most situations, are unlikely to carry the day if the financial return is absent. Such collateral benefits include enhanced market position; reduced regulation and oversight; improved reputation; improved patient retention and decreased reenrollment, marketing, and acquisition costs; improved recruitment and retention of essential staff; and improved health outcomes.

Ignoring the collateral benefits for a moment, Exhibit 1 allows us to see the financial effects from the viewpoint of each stakeholder. It is striking that in all cases where the investing organization is a provider, and even when the innovation is effective for patient care, the business case is unfavorable. The exception is when the purchaser is the investor and can reap the benefit in reduced spending in the longer term. At the same time, the quality improvements are either neutral or favorable to the individual, society, and the purchaser or employer. Once again, an economic case can be made even when the business case is lacking. Furthermore, a social case is evident where the individual and society have clear long-term benefits resulting from lower morbidity and mortality. This divergence of interests dramatically illustrates the need for policy action to align financial incentives for organizations to invest in quality improvements that are of value to individuals and to society.

■ **Defects in the business case, and potential policy remedies.** This leads to the crux of the study, an analysis of the actual patterns of disconnection between

EXHIBIT 1
Financial Impact For Stakeholders In Four Cases

Case	Investigating organization	Care provider	Purchaser/ employer	Individual patients	Society
High-cost drugs					
LMWH	Provider	Unfavorable	Unfavorable	Favorable	Favorable
Lipid clinic	Provider	Unfavorable	Favorable	Favorable	Favorable
Diabetes management	Provider	Unfavorable	Favorable	Favorable	Favorable
Smoking cessation	Provider	Unfavorable	Neutral/unknown	Favorable	Favorable
Wellness program	Purchaser	Favorable	Favorable	Favorable	Favorable

SOURCE: Authors' analysis based on case studies.
NOTE: LMWH is low molecular weight heparin.

quality improvements and the business case in health care organizations. For innovations of technical, clinical, and social merit, we see five sets of impediments, which, if remedied, could facilitate a business case for the adoption and spread of proven quality improvements (Exhibit 2).

Failure to pay for quality, while paying for defects. In several cases, no revenue source existed to support the improvement in care. Excellent diabetes management at HealthPartners, new pharmacist roles in lipid clinics at Henry Ford, and expertise in smoking cessation at Group Health Cooperative all represented superior alternatives to prevailing care, and yet crucial components of each involved services that could be billed to no one. In effect, the rewards in the payment system are perverse; ordinary, even defective care receives the same payment as optimal care.

This is partially because excellence is regarded as optional. Control of lipid levels in lipid clinics was markedly superior to control elsewhere, and yet the market accedes to the notion that integrated lipid level management may or may not be provided by care systems. It thereby accepts the extra cost of wasted medications and downstream cardiovascular complications.

To overcome these barriers, perverse reimbursements for care need to be designed out of the system. To accomplish this, clinicians and clinical organizations may wish to offer stronger guarantees of defect reduction and clinical excellence. In essence, if the market is insensitive to differential quality, educate the consumer. Government and private purchasers of care ought to consider moving "optional" aspects of quality into the expected "core" of care, creating a stronger need for providers to decide how, not whether, to provide an improvement. This would apply especially to the care of chronic conditions, in which the current payment mechanisms allow, and even reward, defective and fragmented care because they are unable to reward future benefit.

Inability of consumers to perceive quality differences. Executives in several cases seemed to believe that investments in higher quality of care drew some additional market share, but only weakly. Thus, it is unlikely that people with DVT at Henry Ford knew that their hospitalizations would be shorter under proper LMWH management, or that diabetics in Minneapolis could fully appreciate the added health benefits of their care in HealthPartners' diabetes management program as distinguished from routine and usual care. The consumer voice that might otherwise in theory have shifted payment toward higher quality was muted, or even silenced. This applies even to forms of improvement that are shown in Exhibit 1 that return money to patients and their employers. In effect, organizations, both providers and payers, that want a robust business case for quality need to play a stronger role in teaching consumers how good care can be and what to ask for that they may not now be getting.

The most obvious counterweight to this defect is transparency. Showcasing quality differences would be an attractive strategy for providers who want to make quality a business strategy. We favor the renewed release of hospital-

EXHIBIT 2
Possible Remedies In Organizational And Payer Policies

Impediment	Patients	Clinicians and organizations	Government and private payers
Failure to pay for quality, while paying for defects	Demand less underuse, overuse, and misuse	Offer quality guarantees Make performance information public Understand waste and continually reduce it in all operations	Pay differentially for sicker patients Put integrated care into the "core" Require performance reporting Extend Leapfrog standards to chronic illness care[a] Request guarantees Pay for nonvisit care
Inability of consumers to perceive quality differences	Demand reports on defect levels	Show performance publicly Explain and show new care models Explain defective nature of overuse of ineffective care Offer service guarantees	Educate the public on optimal care models (Open Access, Chronic Care Model) Release annual hospital-specific mortality data (CMS) Pay differentially for higher-cost patients
Displacements of payoffs in time and place	Choose best providers	Seek capitated payment Work on decreasing voluntary disenrollment rates	Offer capitated payment Unify Part A and Part B (CMS) Pay for case management Pay for nonvisit care Lengthen enrollment terms Increase disincentives to change caregivers Consider supporting and investing in "pre-Medicare" prevention and chronic care programs (CMS)
Disconnections between consumers and payers (administrative pricing)	Demand ability to pay for what is preferred, within a reasonable set of options	Mass-customize alternative forms of care	Experiment for paying for "features" under Medicare (such as e-mail visits) (CMS) Allow more choices to consumers (but without cost shifting) Encourage innovative care formats, especially for chronic disease
Uneven access to relevant information among clinicians	Learn science-based protocols and interact with physicians	Adopt electronic patient record Improve storage and retrieval systems Use registries, especially for the chronically ill Use reminders and decision supports	Support IT infrastructure development through capital financing Use market power to insist on spread of best practices

SOURCE: Authors' analysis based on case studies.
NOTES: CMS is Centers for Medicare and Medicaid Services. IT is information technology.
[a] See J.D. Birkmeyer et al., *Leapfrog Patient Safety Standards: The Potential Benefits of Universal Adoption* (Washington: Leapfrog Group, November 2000).

specific mortality data, for example, as HCFA (now the Centers for Medicare and Medicaid Services, or CMS) tried to do against strong political opposition in the late 1980s. Both payers and clinical groups might also try harder to help consumers become aware of optimal, feasible patterns of care, such as the use of the

chronic care model developed and proved by Edward Wagner and colleagues at Improving Chronic Illness Care and the new formats of "open access" and e-mail-based care now slowly taking root.[8] Since the particular selection of cases in this paper did not emphasize that form of quality defect known as "overuse," which is rampant in the United States, it is important that a consumer-based appeal for higher quality be well informed about the dangers of excessive, unscientific care. Transparency includes not just helping consumers understand what care they are missing, but also what care they should avoid.

Of course, transparency about excellence, especially in care of chronic and costly diseases, raises the specter of adverse selection—that is, selective enrollment of the costliest patients without concomitant increases in reimbursement. Several case-study sites mentioned this risk as relevant, although none had data. It is logically apparent that organizations "selling" excellence in care would probably do so more enthusiastically if payment were adjusted appropriately for the patients they thereby recruit.

Displacements of payoffs in time and place. The first two barriers would have been mitigated in several cases, especially in integrated delivery systems and under capitated payment, if the financial benefits of improvement were not displaced so far in time and space from the improvements themselves. From a total cost perspective, lipid clinics, smoking-cessation programs, diabetes care management, and risk reduction all probably save money. However, someone else would likely receive the financial returns because of (1) displaced savings, such as to employers through keeping employees at work; (2) delayed savings, accrued so much later that because of turnover the benefiting enrollee would by then likely be getting care elsewhere; or (3) the tendency they have, when discounted over time, to fall below the threshold of an adequate return.

The obvious remedy to displacements of rewards is to reunite them with the activities that generate them. Capitated, population-based payment mechanisms, although in disfavor, offer by far the best chance for this. It is no accident that Henry Ford Health System tried its lipid clinics in its managed care population but had difficulty extending them to its FFS lines. Displacement of financial returns still impedes them, but they, as opposed to the fragmented "nonplan" systems, at least have a chance for a demonstrable return on investment.

Other than capitation, government and private payers should consider direct and bundled payment for case management, as well as payment for nonphysician providers who can integrate the patient's experiences. The CMS should consider uniting payments under Parts A and B of Medicare to align incentives better for keeping chronically ill patients out of hospitals and make more realistic morbidity adjustments of fee schedules to make caring well for the sickest patients attractive. Since many of the benefits of prevention programs and care for the chronically ill occur during the "Medicare years" but require investments before age sixty-five, policies might also be crafted so that the CMS could consider paying for

"One way to improve quality is to allow customization; the current payment mechanisms do not."

or rewarding such programs for younger people, even though they are not yet Medicare beneficiaries.

It may also be useful to consider policies and contracting provisions that extend the periods of individual enrollment beyond the traditional one-year term, or at least that provide incentives for patients and employers not to switch care providers. Greater confidence that they will continue to care for specific patients may increase organizations' enthusiasm for investing in improving the quality of care for those patients, especially for the chronically ill.

Disconnections between consumers and payers (administrative pricing). Even if payment schemes were sensitive to quality, and even if consumers could see the difference between better and worse care, the business case for improvement would be weakened by the distance between the patients and the payment rules. People and payers who might be quite willing to pay a premium for more fully integrated chronic disease care, for the option of a group visit, or for detailed management of their lipid medications do not have the option to do so because of fixed fee schedules and complex payment rules. This is particularly true under Medicare. In effect, people do not have the option to pay for what they want, even if what they want is better than what they have.

If transparency about care quality and program configuration were available, it ought to be possible for consumers to select more customized care packages if they could be released from the handcuffs of pure administrative pricing. If patient A wants e-mail care, and patient B does not, why should each not be able to choose what he or she most values? One way to improve quality is to allow customization; the current payment mechanisms do not.

Uneven access to relevant information among clinicians. In several cases, the business case fails because of poor execution of a promising change. The scientific foundations for cost-effective use of LMWH are strong, and yet it proved difficult to embed the proper protocol for its reliable use even in an excellent clinical organization. The failure of adequate statin management in a remarkably high percentage of patients is costly in both dollars and morbidity. These cases reveal a strong potential relationship between the robustness of the business case and the capacity of organizations to standardize care and guide clinicians.

The key lies largely in improved systems for clinical information storage and retrieval, including both human and technological components, yet we continue to note that the business case for information technology (IT) investment is uncertain. We suggest that both government and private payers should have a strong interest in the rapid maturation of the technology platforms and standards, as well as the organizational frameworks, that have a better chance of placing information

and decision support at the sharp end of care. There is little excuse for our current inability to get LMWH to every patient who should have it, and to none who should not, or to assure optimal statin use in every patient who should have statins at all. The barriers are largely financial and cultural.

■ **Study limitations.** Several limitations constrain the generalizability of our findings. First, the Business Case for Quality project used only seven case studies, and it is risky to try to generalize from these to the vast array of improvements that health care organizations could undertake. Second, our project involved organizations that were willing to work openly with us and perhaps more committed to innovation and improvement than most. Defects in the business case for this select group may be even more consequential for organizations with weaker track records in the pursuit of quality improvement.

Third, the innovations we happened to select for study generally attempted to reduce underuse of effective care, rather than to reduce overuse of ineffective care. We hope that future work will correct this unfortunate gap in our study design, especially since the business-case issues may vary greatly between the two arenas of overuse and underuse. Fourth, our design did not allow us specifically to stratify patient populations, such as between those with private insurance or public financing, and therefore precluded examination of variations in the business case for quality among such subgroups. These gaps and others make clear the need for much more detailed empirical studies of the business case for quality.

Shifting The Balance Toward Quality

In a fragmented health system, in which the patient moves among different providers, employers, and payers, major challenges arise in aligning the financial incentives for improving the quality of care. The challenges are even greater when, as in health care, important decisionmakers cannot distinguish among levels of quality, when payment is unresponsive to defect levels, when the harvest in improved patient outcomes and reduced cost occurs mainly in the long term, when administrative pricing separates values from payment levels, and when cultural and managerial constraints limit the pace and penetration of improvement.

As shown in Exhibit 2, the changes needed to address these challenges require a more active role for the public, large payers, and the government. Medicare ultimately inherits the benefits or burden of the performance of the health care system and could much more directly reward activities such as prevention and chronic disease management. Payment now mainly reflects resource costs, not benefits to the patient. Many defects in care have no consequences to the organizations that could reduce them. For programs that clearly benefit society, such as the lipid clinics and diabetes management programs illustrated in our case studies, direct reimbursement through public expenditures, or policies that require these improvements as common practice, may be necessary to shift the balance toward improved quality.

There is a compelling need to understand better the economic implications for all stakeholders of implementing quality improvements. This set of cases suggests several themes with major policy implications. In most cases, clear benefit accrued to the patient (that is, the social case was intact), and stakeholders *in toto* achieved a financial advantage in the long term from predictable cost savings (that is, the economic case was intact), but the financial return for the investor was either missing or uncertain (that is, the business case was elusive or defective). When both the social case and the economic case for improvement are favorable but the business case is negative, it is time to consider reforms in both payment and policy to reward organizations that are willing to invest in quality.

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NOTES

1. See, for example, J.P. Newhouse, "Why Is There a Quality Chasm?" *Health Affairs* (July/Aug 2002): 13–25.
2. U.S. Department of Health and Human Services, *Healthy People 2010: Understanding and Improving Health*, 2d ed. (Washington: U.S. Government Printing Office, November 2000).
3. The seven case studies are to be published individually by the Commonwealth Fund in March 2003.
4. J. Hirsh and J. Hoak, "Management of Deep Vein Thrombosis and Pulmonary Embolism: A Statement for Healthcare Professionals," Council on Thrombosis (in consultation with the Council on Cardiovascular Radiology), American Heart Association, *Circulation* 93, no. 12 (1996): 2212–2245.
5. S.A. Abookire et al., "Use and Monitoring of 'Statin' Lipid-Lowering Drugs Compared with Guidelines," *Archives of Internal Medicine* 161, no. 1 (2001): 53–58.
6. Centers for Disease Control and Prevention, "Diabetes Rates Rise Another 6 Percent in 1999," 26 January 2001, www.cdc.gov/diabetes/news/docs/010126.htm (14 January 2003).
7. M.C. Fiore et al., *Treating Tobacco Use and Dependence—Quick Reference Guide for Clinicians*, October 2000, www.surgeongeneral.gov/tobacco/tobaqrg.htm (14 January 2003).
8. E.H. Wagner et al., "Improving Chronic Illness Care: Translating Evidence into Action," *Health Affairs* (Nov/Dec 2001): 64–78; and M.M. Murray and C. Tantau, "Same-Day Appointments: Exploding the Access Paradigm," *Family Practice Management* 7, no. 8 (2000): 45–50.