Consumer-Driven Health Plans: Early Evidence And Potential Impact On Hospitals

These plans might be a potent force for lower health costs but also for uniform pricing by hospitals.

by Gail R. Wilensky

PROLOGUE: The umbrella term "consumer-driven health plans" covers a variety of plans, the best-known of which are health reimbursement arrangements (HRAs) and health savings accounts (HSAs). The idea is controversial. Detractors note that health plans with high deductibles mean high out-of-pocket expenses. As one *Health Affairs* author phrased it, "too often, private health insurance is an umbrella that melts in the rain." Meanwhile, supporters of these plans, who have also written in these pages, see them as an overarching protection that provides health care when it is needed while containing costs for everyone. Although engaged discussion continues about these plans—including whether they are "consumer directed" or merely "consumer accepted"—it is undeniable that a growing number of Americans rely on them. As a result, both patients and the medical profession will be working within their structure, with various changes sure to take place.

But what will the changes be? At this point there are more questions than answers about what increased reliance on these kinds of health plans will mean. Will they help reduce health care costs? How will they affect patient care and quality of life? Will they foster increasing consumer demand for transparent health-related costs? In all likelihood, people with consumer-driven health plans will be asking more and more questions about cost. And, undoubtedly, hospital costs—some of the highest-ticket items in health care—will be among the expenses undergoing increased scrutiny.

In this paper, Gail Wilensky suggests that one of their implications is that hospitals will be coming under pressure to provide price-transparency to value-conscious consumers. One way to tell whether this is happening: if there are more in-depth surveys on hospital costs as well as ratings of the quality of hospitals and physicians. In turn, this type of consumer drive for information might serve to bring about greater uniformity in hospital pricing; stay tuned. Wilensky (gwilensky@projecthope.org) is a senior fellow at Project HOPE in Bethesda, Maryland, and a commissioner on the World Health Organization's Commission on the Social Determinants of Health. She ran the Medicare and Medicaid programs as HCFA administrator under President George H.W. Bush.

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ABSTRACT: Consumer-driven health plans—tax-advantaged accounts paired with high-deductible coverage—represent a small but rapidly growing part of insurance offerings. Supporters believe that such plans will encourage consumers to become better-informed, more cost-conscious users of health care. Opponents worry that patients will obtain fewer necessary and nonessential services alike. Early evidence suggests that consumer-driven plans result in lower costs and increased use of preventive and chronic care services, but these findings are preliminary. The biggest effect for hospitals might be the pressure produced for increased price transparency and greater uniformity in pricing, although high-deductible plans also could reduce hospital spending by reducing use. [*Health Affairs* 25, no. 1 (2006): 174–185]

TO DATE THERE IS NO INDICATION that consumer-driven health plans have had any noticeable effect on hospital payments or pricing strategies. The number of people covered by such plans has been and remains quite small, although they have grown during the past year. All of this might change if the future growth rates in offered and purchased plans even approximate some of the current predictions. Whether this growth would affect hospital spending or pricing strategies is subject to debate.

This paper reviews what is known about health reimbursement arrangements (HRAs) and health savings accounts (HSAs); their growth and uptake; their near-term impact; speculation about their future growth; and what growth in these types of plans might mean for hospital spending and pricing strategies. The term *consumer-driven health plan* means different things to different people. In this paper, it denotes a high-deductible insurance plan that is paired with some type of tax-advantaged account.[1]

Growth In HRAs And HSAs

■ **Health reimbursement arrangements.** HRAs and HSAs are the two most popular types of tax-advantaged accounts associated with consumer-driven health plans. HRAs began to be developed as a result of regulations issued by the Internal Revenue Service (IRS) during 2001–02. In an HRA, the employer funds the account, the account is "owned" by the employer, and the money remains with the employer if the employee leaves the company. This latter feature might reduce the extent to which people regard money in their accounts as their own and therefore could reduce their incentive to conserve the funds. For those who advocate greater consumer involvement in health care, this lack of portability represents a serious flaw, one that was remedied in the Medicare Prescription Drug, Improvement, and Modernization Act (MMA) of 2003.

■ **Health savings accounts.** HSAs, which were authorized by MMA, pair high-deductible plans that meet certain requirements with fully portable, employee-owned, tax-advantaged accounts. Their underlying premise is that when paired with a high-deductible health plan, they will encourage patients to become better-informed, more cost-conscious consumers, thereby reducing unnecessary or inap-

"Unlike the experience with medical savings accounts, most large insurers have entered the consumer-driven plan market."

propriate health care use. The rationale is that if patients perceive that they are using their own funds rather than the insurer's, they will be more judicious in using those funds. However, not all accept the premise that patients will make better or even different decisions, although there is empirical evidence to support the view that at least under certain circumstances, consumers are sensitive to prices in health care.[2]

HSAs might also increase the pressure for price transparency, since consumers will have an increased interest in knowing the prices of health care services, at least until they reach their deductible. Consumers' increased interest in price transparency will add to pressures on hospitals for price transparency already exerted by Congress and the Health and Human Services (HHS) Office of Inspector General (OIG), as a result of concerns about higher hospital pricing for the uninsured than for the insured populations.

Because the IRS did not clarify the rules governing HSAs until mid-2004, uptake rates based on 2004 and 2005 data are likely to underpredict future adoption rates. Nonetheless, the early results remain interesting.

■ **Growth and uptake.** Because consumer-driven plans are relatively new, estimates of their penetration vary, depending on the source and on whether both HRAs and HSAs are included in the estimate. According to the National Institute for Health Care Management (NIHCM) Foundation, a combined four million people had either type of account by the end of 2004 (an estimated 600,000 had an HSA).[3] According to data from a Henry J. Kaiser Family Foundation/Health Research and Educational Trust (HRET) employer survey, 1.6 million employees were enrolled in consumer-driven plans with an HRA in 2005.[4] Finally, America's Health Insurance Plans (AHIP), an industry trade group representing managed care plans and health insurers, reported that slightly more than one million people were covered by HSAs coupled with high-deductible plans in March 2005—more than double the number reported the previous September.[5]

Firms' offerings. Information about the numbers of firms offering HRAs or HSAs to date and companies' reported intent to offer them in the future is one measure of their likely near-term impact. According to AHIP, the number of firms offering HSAs tripled between September 2004 and March 2005.[6] The Kaiser/HRET survey found that almost 4 percent of the employers that offered health benefits in 2005 offered a high-deductible plan with an HRA or HSA, which would imply that 2.4 million workers were offered this benefit. About half that number of firms reported offering an HSA in 2005.[7]

The rapid growth being reported appears likely to continue for at least the near term. According to a survey sponsored by the Federation of American Hospitals (FAH) and the American Hospital Association (AHA), 70 percent of employers are

likely to offer some type of consumer-driven plan by 2006.[8] Aetna reports that half of its National Account requests for proposals (RFPs) requested such a plan.[9] A Hewett Associates survey reported that 57 percent of employers are considering an HSA-type consumer-driven plan.[10]

Large insurers' offerings. Unlike the experience with medical savings accounts (MSAs), a market that few of the major insurers ever entered, most large insurers have entered the consumer-driven plan market, either directly or by acquiring early entrants, or by both strategies. Thus, Aetna's purchase of Lumenos and UnitedHealth Group's purchase of Definity and Golden Rule gave both companies already developed products to offer while they developed their own offerings. Anthem/WellPoint, CIGNA, and several Blue Cross/Blue Shield plans are also already offering consumer-driven health plans. These large insurers' presence in this market suggests that they regard such plans as a serious new business venture.[11]

Market and plan characteristics. According to AHIP, the approximately one million people who were covered by HSAs were slightly more likely to have purchased their plans in the individual rather than the group market. Plans purchased from the group market were split fairly evenly between the small-group market (firms with fifty or fewer employees) and the large-group market (firms with more than fifty workers). Of people who had purchased coverage in the individual market, 37 percent had not previously been insured. Only a very small number of those previously not insured purchased HSAs in the group market.[12]

The FAH/AHA-sponsored survey of employers (conducted by Reden and Anders, reporting information for 2004) indicates that most firms that offer either HRAs or HSAs offer both. It also reports that HSAs have prevailed in the individual and small-group markets; HRAs, in the larger-group, self-funded market. These employers reported that 95 percent of their enrollees have access to existing networks and negotiated rate structures. Nearly two-thirds of the plans publish some type of comparative cost information; about half publish comparative quality data. However, few make adjustments for severity of illness.[13]

Early Evidence Of Plans' Effects

Because it is so early in the history of HRAs and HSAs, assessing their future impact is a highly speculative venture. Nonetheless, the results thus far suggest that consumer-driven plans could reduce both health care spending and use. To date, the effects do not appear to be deleterious. But, not surprisingly, some have raised concerns about whether these reductions are sustainable and also whether consumers have the information they need to make good decisions. Concerns have also been raised about whether consumers will inappropriately reduce utilization or fail to use whatever information about quality is available.[14] These are, of course, ultimately the issues that will determine whether consumer-driven health plans will or should be a part of the U.S. health care landscape.

■ **Effects on spending.** A 2005 report by the Congressional Research Service

(CRS) summarizes what is known about HRAs' impact on health care spending.[15] Some additional information is available from a recently released survey of more than 2,500 adults by McKinsey and Company that included more than 1,000 consumers with full-replacement coverage (that is, only a consumer-driven plan was offered), employer-based consumer-driven plans, along with a control group with traditional insurance.[16] Most of those with consumer-driven plans had HRAs rather than HSAs, since it is still so early in the history of HSAs, which might have muted some of their effect. Aetna has also released information for 2003 and 2004.[17] Finally, the Kaiser/HRET survey includes some information about premiums for consumer-driven plans.[18] With the exception of the latter, these studies have not been subject to peer review and have used only limited risk-adjusted groups for comparisons.

Mercer released an employer study in late 2004 showing that consumer-driven plans cost employers about $600 less than health maintenance organizations (HMOs) and much less than traditional indemnity plans. This study reported that the plans cost $5,233 per employee in 2004 versus $6,707 for a traditional indemnity plan.[19] Humana provided consumer-driven options to its employees and dependents in 2001 and an HRA option in 2002. Humana reported very low cost increases: 4.9 percent in 2002, compared with an average trend of 15 percent in Louisville, Kentucky (the plan's headquarters city), and 2.7 percent in 2003, compared with a nationwide trend of 10–20 percent cost increases.[20] In Aetna's recently released data showing 2003 experience and early indicators of 2004, those who were continuously enrolled in 2003 showed a 3.7 percent increase in year-over-year costs. Early indicators suggest a 6 percent year-over-year cost increase for 2004.[21] The Kaiser/HRET survey reported that average health plan premiums were much lower for the HRA type of consumer-driven plan but that the premiums, when combined with the employer contributions, were not statistically different from the total cost or total premiums for health plans overall.[22]

Whether the apparent reductions in spending that have been reported in most of the studies can be sustained over time is unclear. The CRS notes some anecdotal evidence suggesting that cost trends for consumer-driven plans creep up over time, but even so, they appear to remain lower than the growth rates of traditional health plans.[23] The Aetna data also suggest this finding, but the Kaiser/HRET data question how much reduction is actually occurring.[24] Also, it is unclear whether costs for HSAs will be different from those for HRAs. Because HSAs clearly belong to the employee and are also fully portable, it is possible that there will be less erosion in savings over time, compared with HRAs.

The newer plans are also much more likely to be associated with negotiated rates than were some of the initial entrants into this market. This, too, might be important to the sustainability of savings over time. At least some of the early HRAs were associated with "boutique" health plans, which could not provide the same level and types of discounts that the large insurers could. Early on, questions had been raised as to how individuals could be expected to negotiate with institu-

tional or individual providers for lower rates as effectively as larger insurance companies, with their increased buying power, can do. However, conversations with major insurance companies offering consumer-directed plans and early data suggest that access to negotiated rates will be a part of most plan offerings.[25] In other words, providers that are part of insurers' preferred provider organization (PPO) networks have agreed to use their PPO-negotiated rates when being billed by participants in consumer-directed plans. Otherwise, enrollees might be expected to lose any advantage gained from the high deductible when they reach the insured portion of their coverage.

■ **Effects on health care use.** Questions also have been raised as to how consumer-directed health plans might affect utilization. Results from the RAND Health Insurance Experiment (HIE) indicated that although most people who cut back on their use of health care saw minimal effects on their health status, there were adverse consequences for the poor and sick.[26] In general, their reduced use was harmful, particularly as it related to the care of nonsymptomatic chronic illnesses such as hypertension. In fact, the reduced use increased the likelihood of death among members of that group.[27]

Early indications of the effects of decreased health care use associated with HRAs and HSAs appear to be that it is not harmful and, in some cases, might be leading to more interest in use of preventive and chronic care. For those who were continuously enrolled in the Aetna consumer-directed plan, there was no major change in the percentage of diabetic members receiving four standard, annual exams and screenings. For those enrolled in Aetna's plan with an integrated drug benefit, there also were no major changes in the percentages of members receiving appropriate medications for hypertension, asthma, or cardiac conditions. There was also an increase in the use of preventive care for 2003 compared with 2002.[28]

Information from the McKinsey and Company survey is even more promising. It found that plan participants were as or more likely to receive various types of preventive care (for example, annual check-ups, mammograms, and prostate exams), compared with people covered by traditional insurance, and 20 percent more likely to participate in company-sponsored wellness programs. Consumer-driven plan participants were also more likely to "carefully follow" treatment regimens for chronic conditions than were those with traditional insurance (36 percent versus 27 percent). The differences for hypertension were even more striking: 51 percent versus 31 percent. Overall, the differences were 55 percent versus 44 percent. Although consumer-driven plan participants reported lower utilization for less serious conditions, they did not use fewer health care services for either "very" or "extremely serious" conditions.[29]

Obviously, a variety of caveats should be offered regarding these findings. The McKinsey and Company survey reflects self-reported behavior by consumers and therefore might not be an accurate reflection of what actually happened. Although selection was not an issue among participants choosing consumer-driven

plans, since these were the only plans offered by their companies, the companies themselves might be different from employers as a whole and therefore might have employees who differ on important characteristics. Companies that are subject to self-selection could undo many of the positive effects reported by McKinsey and Company, although Aetna also reported positive findings.[30]

In addition, any assessment of health effects will, of necessity, be based on early findings, since none of the plans has been around very long. Finally, it should be noted that these findings are not inconsistent with the earlier RAND findings, where negative results were reported for only those who were both poor and sick.[31] Presumably, poor, sick people are less likely to be working and therefore unlikely to be working for companies that offered a full-replacement consumer-driven plan or an Aetna type of consumer-driven plan. The effect of such plans on poor, sick people might well differ from the experiences that have been reported thus far.

Others have cited indications that higher costs to patients affect both care that is strongly supported by evidence and care of questionable value.[32] Similarly, some studies have shown that higher drug copayments decrease the use of all drugs, not just the less essential ones.[33]

■ **Effects on satisfaction.** Early results are not nearly as favorable with regard to consumer satisfaction as they were for spending and utilization, but the dissatisfaction observed is different from what occurred, for example, in the 1990s from managed care. The McKinsey and Company survey reported that only 44 percent of consumer-driven plan participants were as satisfied as or more satisfied than they had been with their traditional plans. Satisfaction varied widely across companies but, interestingly, not according to health status.[34] Since people in poor health might face higher expenditures under a consumer-driven plan, this finding is somewhat surprising.

As would be expected, part of the dissatisfaction with consumer-directed plans was related to the increased costs they experienced directly. However, a big source of dissatisfaction resulted from lack of information available for employees and dependents to make informed health care decisions. This finding is consistent with results from a Towers-Perrin survey, in which 59 percent of 1,400 plan participants said that they needed more information and tools to make decisions about their health care. Interestingly, most consumers were not turning to their consumer-driven health plans for information but rather to Web sites or other intermediaries.[35]

Another factor that seems important in explaining satisfaction was how and why employers were perceived as switching their employees to consumer-driven plans. Employers that were thought to be encouraging workers to take more control over their long-term health were viewed more favorably than employers that were seen as attempting to shift more of the costs to workers.[36]

Next Steps

Although the early evidence is intriguing—spending rates lower than those of traditional insurance, no obvious reductions in care for serious illnesses, greater compliance with chronic illness treatment regimens, and increased likelihood of less extensive and costly treatments—the lack of appropriate information on prices and quality is an obstacle to producing value-conscious health care consumers. Even when health plans make some cost information available, at least two problems persist. First, consumer-driven plan participants appear to be uncomfortable getting information from their health plans rather than from more neutral parties. Second, too often the information is not provider-specific. The Reden and Anders survey indicated that more than half the time, information was provided about only average costs for services in a market and that less than 30 percent was cost information provided for specific services at named hospitals or physicians.[37] Information on average costs would allow consumers to put specific costs into context, but it places too much burden on them to obtain specific costs prior to making a decision about whom to see or where to go for their care.

Plan participants also need information about the quality of care they can expect to receive from physicians or hospitals of differing costs. The availability of information is not very encouraging on this front, either, although interest in making more quality information available is gaining a foothold in Washington. The Reden and Anders survey reports that 56 percent of the plans do not publish information on the quality of either physicians or hospitals and that only 11 percent publish information on both. About a quarter of the plans publish information on hospitals only.[38]

Encouraging or even allowing consumers to be more cost- and value-conscious requires good, reliable, valid information on both cost and quality. But even if consumer-driven health plans are not an important part of our future, this type of information is critical if public and private purchasers are to use more value-based purchasing, a proposition that most would find more attractive than the current state of decision making. How to make this happen, where to place such data, how best to disseminate the data, who should fund the needed data collection, and how it should be funded are among the many questions that need to be answered if patients and payers are to make better decisions. The country needs to be more aggressive in making this type of information available, regardless of what happens to consumer-driven plans, and it can't happen soon enough.

Likely Effects On Future Spending

The effects of consumer-driven plans on future health care spending, particularly spending for hospitals, are likely to be relatively small, although at this early stage, much uncertainty remains. There are several reasons for this.

■ **Market status.** First, it is unclear how important a part of the insurance market consumer-driven plans will become. Insurers and employers are expressing in-

"Any major growth in consumer-driven plans will ensure that interest in hospital pricing remains an issue."

terest in offering such plans to their employees, but the absolute number of people enrolled remains very small. Whether or not large numbers of employees will find such plans of interest is unknown as well. It is also unclear whether most employers that do offer consumer-directed plans will offer them as part of a choice of insurance strategies or whether the full-replacement model is likely to dominate. If they are offered as an option, it is also unclear whether there will be serious selection problems and whether employers will attempt to cross-subsidize premiums or otherwise try to compensate for differential risk, if there are selection problems.

To date, HSAs, which might have more effect on spending than HRAs, have been more attractive to the individual market than to the employer-sponsored market. We should be able to see whether this trend continues in 2006. If it does, HRAs rather than HSAs will be the dominant tax-preferred account for consumer-driven health plans; for reasons already discussed, HRAs' effects on spending might be less than those associated with HSAs.

If or when there is a big push for expanding access to insurance coverage for those without employer-sponsored insurance through use of refundable tax credits or other financial instruments, interest in consumer-driven plans in general and HSAs in particular might balloon. Given the current state of the budget and deficit and the previously articulated priorities of the president, it is hard to imagine this type of push occurring before the end of the decade.

■ **Impact on hospitals.** Uncertainty also exists about whether consumer-driven health plans will have much effect on hospitals. Most people who have any contact with hospitals will exhaust whatever deductible is in their plan. This means that the presence of consumer-driven plans might have less effect on hospitals than on the choice of other health care providers or on the choice of prescription drugs, durable medical equipment, or medical devices. The one exception might be for people who have only an emergency room visit, but such visits account for only a relatively small share of the hospital dollar.

Although this argument has some intuitive plausibility, the results from the RAND HIE suggest that it might be inappropriate to dismiss the effects that a high-deductible plan could have on hospital spending. The concentrated nature of health care spending and the high cost of hospitals remain important issues; however, it is nonetheless true that some of those who might otherwise have been hospitalized will not be as likely to be so with a consumer-driven plan. The HIE found that those with a large family deductible were 23 percent less likely to be hospitalized in a year relative to those in the "free-care" plan. These people also used 25–30 percent fewer health services in general.[39]

Joseph Newhouse suggested recently in this journal that instead of thinking

about consumer-driven care and managed care as opposing strategies, it might be useful to think of them as being complementary strategies. The HIE showed that the initial increased cost sharing primarily affected the probability of seeing a physician or being admitted to a hospital but had little effect on the costliness of the episode, once it was initiated. Managed care strategies that survived the managed care backlash, such as disease management, case management, and tiered pricing, are more likely to affect the cost of an episode.[40] Whether consumer-driven plans will adopt these types of strategies is as yet unclear, but if they do, they could provide a mechanism for both reducing the likelihood of a hospitalization and moderating the cost of a stay.

■ **Care coordination.** In a similar vein, the increased consumer involvement expected (and required) by consumer-driven plans might make patients more understanding of and amenable to the benefits of better care coordination that would be needed for the more cost-effective provision of costly services. This assumes that the patient would view the care coordination as providing better, and not just cheaper, care. An increased willingness to tolerate management for care beyond the deductible could have at least as much importance for moderating spending as any effect on spending below the deductible.

■ **Value of having choices.** Realizing the benefits of consumer-driven health plans also depends on the availability of alternative choices. In the absence of effective competition among providers, there is little incentive for providers to offer competitive prices. Also, there is some indication that the increased level of hospital consolidation that took place in the late 1990s might mute some of the price competition that would otherwise have occurred.[41]

Potential Effects On Hospital Pricing

Even with the modest growth in HRAs and HSAs to date, their presence is likely to raise interest in current hospital pricing strategies and to increase pressure for pricing transparency. Interest in pricing transparency thus far has focused on the higher prices that some hospitals were charging the uninsured; uninsured patients were facing hospital "charges," as opposed to the lower, negotiated rates paid on behalf of people with insurance. Any major growth in consumer-driven plans will ensure that interest in hospital pricing remains an issue.

It is not clear that hospitals have a very good understanding of their costs versus the charges they have been allowed to use—particularly costs by department or for various services. Anecdotal evidence suggests that people who self-pay for elective surgery get lower prices than even those negotiated for groups, but this might constitute such a small part of hospitals' markets that they are willing to price at levels they would not condone if the same prices were to also apply to large purchasers. Increased awareness by hospitals in how they price and in their ability to collect the deductible would put much different pressure on hospitals than in the past; indeed, they have had little reason to be interested in either of

these issues before.

The increased public interest in transparency, along with the need to inform consumers and physicians of the likely costs of a hospital admission, could push hospitals toward a more uniform pricing structure. Whether the country would be "better off" with uniform pricing, or at least much smaller differentials in pricing, is debatable.

In the hospital world, price differentials have generally been to the disadvantage of poorly organized or lower-income, uninsured people. In the pharmaceuticals world, the reverse has tended to be true. Here, pricing differentials have tended to favor lower-income countries or countries that are more sensitive to prices with lower pharmaceutical pricing. It can be, and has been, argued in the economics literature that price differentials where the countries or individuals who are less price-sensitive and have higher incomes pay higher prices produce a more efficient and equitable solution than would be produced by uniform pricing.[42] Even though pricing differentials have not favored low-income hospital patients in the past, requiring uniform pricing could turn out to be an area where we need to be careful about "getting what we wish for."

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NOTES

1. B. Lyke, C. Peterson, and N. Ranade, *Health Savings Accounts,* CRS Report for Congress, Updated 23 March 2005, http://www.law.umaryland.edu/marshall/crsreports/crsdocuments/RL3246701212005.pdf (accessed 26 October 2005).
2. M.A. Morrisey, *Price Sensitivity in Health Care: Implications for Health Care Policy,* 2d ed. (Washington: National Federation of Independent Business Research Foundation, July 2005).
3. T.E. Ehrbeck and K. Packard, *Will Consumer-Driven Health Care Take Off? Expert Voices* (Washington: NIHCM Foundation, May 2005).
4. G. Claxton et al., "What High-Deductible Plans Look Like: Findings from a National Survey of Employers, 2005," *Health Affairs* 24 (2005): w434–w441 (published online 14 September 2005; 10.1377/hlthaff.w5.434).
5. America's Health Insurance Plans, Center for Policy and Research, "Number of HSA Plans Exceeded One Million in March 2005," 2005, http://www.ahipresearch.org/pdfs/HSAExceedMillion050405_full.pdf (accessed 12 August 2005).
6. Ibid.
7. Claxton et al., "What High-Deductible Plans Look Like."
8. Reden and Anders Ltd., "Consumer Directed Insurance Products: Survey Results," April 2005, http://www.fah.org/issues/studies/HSA%20Survey%20Results%20Presentation%2004-20-05%20FINAL.pdf (accessed 26 October 2005).
9. J. Rowe, "Health Saving Accounts: They Are Great" (Presentation at Harvard–Sanofi/Aventis Health Policy Summit: Current Issues in Health Policy, Boston, Massachusetts, September 2005).
10. Ibid.; and Lyke et al., *Health Savings Accounts.*
11. Reden and Anders, "Consumer Directed Insurance Products."
12. AHIP, "Number of HSA Plans."
13. Reden and Anders, "Consumer Directed Insurance Products."
14. T.H. Lee and K. Zapert, "Do High-Deductible Health Plans Threaten Quality of Care?" *New England Journal of Medicine* 353, no. 12 (2005): 1202–1204; and K. Davis, M. Doty, and A. Ho, *How High Is Too High? Implications of High Deductible Health Plans,* Pub. no. 816 (New York: Commonwealth Fund, 2005).
15. Lyke et al., *Health Savings Accounts.*

16. V. Agrawal et al., "Consumer-Directed Health Plan Report—Early Evidence Is Promising" (Pittsburgh, Pa.: McKinsey and Company, North American Payor Provider Practice, June 2005).
17. Rowe, "Health Savings Accounts."
18. Claxton et al., "What High-Deductible Plans Look Like."
19. AISHealth.com, "Consumer-Directed Care: Cost Savings Will Drive More Employers to CDH, Study Predicts," 3 December 2004, http://www.aishealth.com/ConsumerDirected/CDarticles/CDHCostSavings.html (accessed 26 October 2005).
20. John Bertko, chief actuary, Humana Corp., testimony before the Joint Economic Committee, U.S. Congress, 25 February 2004.
21. Rowe, "Health Savings Accounts."
22. Claxton et al., "What High-Deductible Plans Look Like."
23. Lyke et al., *Health Savings Accounts.*
24. Rowe, "Health Savings Accounts"; and Claxton et al., "What High-Deductible Plans Look Like."
25. Author's conversations with Jack Rowe, CEO, Aetna Corp.; Stephen Hemsley, COO, United HealthGroup; and Gary Lauer, CEO, eHealth Insurance Services.
26. The RAND Health Insurance Experiment was a multimillion-dollar project conducted in the 1970s, in which families were randomly assigned to health insurance plans that varied from no cost sharing to a catastrophic coverage plan.
27. J.P. Newhouse, "Consumer-Directed Health Plans and the RAND Health Insurance Experiment," *Health Affairs* 23, no. 6 (2004): 107–113.
28. Rowe, "Health Savings Accounts."
29. Agrawal et al., *Consumer-Directed Health Plan Report.*
30. Ibid.; and Rowe, "Health Savings Accounts."
31. Newhouse, "Consumer-Directed Health Plans."
32. Lee and Zapert, "Do High-Deductible Health Plans Threaten Quality of Care?"
33. R. Tamblyn, "Adverse Events Associated with Prescription Drug Cost-Sharing among Poor and Elderly Persons," *Journal of the American Medical Association* 285, no. 4 (2001): 421–429.
34. Agrawal et al., *Consumer-Directed Health Plan Report.*
35. Towers Perrin, "2005 Consumerism Survey" (Valhalla, N.Y.: Towers Perrin, 2005).
36. Agrawal et al., *Consumer-Directed Health Plan Report.*
37. Reden and Anders, "Consumer Directed Insurance Products."
38. Ibid.
39. Newhouse, "Consumer-Directed Health Plans."
40. Ibid.
41. C. Capps and D. Dranove, "Hospital Consolidation and Negotiated PPO Prices," *Health Affairs* 23, no. 2 (2004): 175–181.
42. F.P. Ramsey, "A Contribution to the Theory of Taxation," *Economic Journal* 37, no. 145 (1927): 47–61; and W.J. Baumol and D.F. Bradford, "Optimal Departures from Marginal Cost Pricing," *American Economic Review* 60, no. 3 (1970): 265–283.