health care but may also attenuate overuse of discretionary services by fostering greater awareness of costs. The shift from insurance to savings raises concerns about the distribution of financial responsibility between the healthy and the sick, but it salutarily highlights the imperative to adjust pay-as-you-go entitlement programs according to the demographic realities of an aging population and the budgetary realities of costly technology. The language of individual ownership weakens society's sense of collective responsibility for its most vulnerable members but emphasizes the importance of individual effort in generating the economic resources that underlie any system of care. The HSA moves the nation another step toward a personalized and privatized health care system.

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Do High-Deductible Health Plans Threaten Quality of Care?

Thomas H. Lee, M.D., and Kinga Zapert, Ph.D.

Employers struggling with rising health care costs are implementing their strategy for the post–managed-care era — a shift of costs and responsibility to the consumer. As Robinson describes in this issue of the *Journal* (pages 1199–1202), this shift is likely to be accelerated by the spread of health savings accounts, which are expected to encourage as many as 25 percent of privately insured Americans to enroll in "high-deductible health plans" by the end of the decade. With these insurance products, patients bear a substantial portion of their health care costs ($1,000 or more per year for individuals). Advocates of these products hope that they will do more than shift part of the increase in health care costs to the patient: they believe that financial incentives will turn patients into "activated consumers" who exert pressure on health care providers to improve the efficiency and quality of care.

This approach raises a number of questions. First, are consumers capable of assuming the majority of the responsibility for making decisions about their own health care? Enrollment in high-deductible plans is still low, but it is increasing rapidly, and some tools for comparing hospitals and physicians are already available on the Internet. But will turning patients into consumers actually improve the outcomes of their care? Or might the health of financially concerned patients suffer because they choose not to seek care or not to adhere to medication regimens?

For critics of consumer-directed health plans, these questions were answered two decades ago. The RAND Health Insurance Experiment showed that cost sharing (requiring out-of-pocket expenditures by the patient) reduces costs by lowering health care utilization — but that it has some undesirable consequences. As compared with the provision of free care, cost sharing reduced the percentage of low-income adults who sought "highly effective care for acute conditions" by 39 percent[1] and was associated with worse blood-pressure control and less reliable use of preventive care measures such as Pap smears. In this early trial, patient-consumers did not appear to be able to differentiate necessary from unnecessary care.

Subsequent research confirms that increasing costs for patients leads to decreases in medical expenditures, but the decreases affect care that is strongly supported by evidence as well as interventions that have questionable value. After Medicare instituted reimbursement for mammography in 1991, women with supplemental insurance that covered out-of-pocket costs were found to be two to three times as likely to undergo breast-cancer screening as were women who lacked such coverage.[2] Data from the Medical Outcomes Study showed that patients with low or high copayments were

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Table 1. Awareness and Use of Quality Ratings among the General Public.*

Level of Quality Information Reported	Survey Year	Looked at Quality Information	Considered a Change on the Basis of Ratings	Actually Made a Change
		percent of general public		
Hospital	2001	22	4	2
	2005	21	4	2
Health plan	2001	18	4	<1
	2005	20	4	1
Physician	2001	13	2	<1
	2005	11	2	1

* Data are from Harris Interactive, Strategic Health Perspectives 2001–2005.

less likely to seek care for minor symptoms than were patients with no copayment — and that patients with high copayments also sought care for serious symptoms at a lower rate.[3] More recently, the introduction of a tiered formulary that required high copayments for certain drugs was associated with an increase in the percentage of patients who stopped taking prescribed statins (21 percent vs. 11 percent).[4]

Since enrollment in high-deductible health plans is just starting to increase, data on whether enrollees are getting better or worse care are fragmentary at best. However, survey data collected by Harris Interactive provide little evidence of an emergence of the "market-driven health care" culture that is critical to the success of high-deductible health plans — that is, a culture in which consumers actually use data on quality to choose their hospitals and doctors. Nationally representative telephone surveys of 1000 adults conducted in 2001 and 2005 found low rates of use of information on the quality of hospitals, health plans, and physicians — and no sign of an increase in use during this period (see Table 1).

If patients have not yet turned into consumers of quality data, they are nevertheless just as sensitive to costs as they have always been. Data from a 2005 online survey of more than 900 adults who reported that they were enrolled in high-deductible health plans show that these respondents were more likely than other privately insured adults to forgo filling a prescription because of cost (see Table 2). In this survey, enrollees in high-deductible health plans were less likely to report that they had received common preventive services and were more likely to report that they had had health problems as a result of avoiding seeing a physician because of cost.

These survey data do not necessarily mean that enrollees in high-deductible health plans are actually getting worse care. Their responses could be biased by dissatisfaction with the cost sharing inherent in the design of high-deductible plans. For example, 69 percent of people enrolled in more traditional health plans said they were satisfied with their out-of-pocket costs, as compared with 44 percent of those in high-deductible health plans. Perhaps our worries based on the reports of unfilled prescriptions and forgone physician visits will not be borne out by analysis of data on what actually happened to patients who enrolled in high-deductible health plans.

Some organizations that are rolling out such plans are monitoring quality closely and report no major adverse trends to date. Nevertheless, even boosters of these plans are nervous. A national survey of 300 employers conducted by Harris Interactive in 2005 found that 80 percent believed that high-deductible health plans and health savings accounts would help to control costs by forcing consumers to spend more wisely on health care services. But 65 percent of the employers who participated in this survey also said they expected that these plans would cause consumers to forgo needed health care.

Given the findings of research to date, we believe that we should do more than worry about the dangers of shifting costs to consumers; we should prepare for the likelihood that the reliability of their care will worsen as patients realize that they are paying for it. If the rates of mammograms and Pap smears decline, and if prescriptions go unfilled, it seems clear that the results will include increases in preventable deaths from cancer, heart disease, diabetes, and other conditions.

In our view, the stakes are too high for employers, insurers, and health care providers simply to wait and see what happens. We believe that purchasers should

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Table 2. Proportion of Members of High-Deductible Health Plans and Other Privately Insured Patients Who Did Not Fill a Prescription Because of Cost.*

Condition for Which Medication Was Prescribed	Patients Enrolled in Non–High-Deductible Plan	Patients Enrolled in High-Deductible Plan
	percent	
All	13	28
Diabetes	15	24
Depression	9	30
Arthritis	9	16
Chronic pain	9	23
Heart disease or hypertension	8	18
Allergies	7	23
Asthma	9	23
High cholesterol	2	16
Other chronic condition	17	25

* Data regarding patients in non–high-deductible plans are from a random-digit-dial telephone survey of adults in private health plans who report that their deductibles are less than $1,000 for single coverage and less than $2,000 for family coverage. Data for patients in high-deductible plans are from an online survey of adults in private health plans who report that their deductibles are $1,000 or more for single coverage or $2,000 or more for family coverage. A total of 438 patients enrolled in a non–high-deductible plan and 916 patients enrolled in a high-deductible plan were surveyed, and the given conditions were reported by the following numbers of patients in each group: diabetes, 31 and 71, respectively; depression, 69 and 196; arthritis, 85 and 229; chronic pain, 60 and 156; heart disease or hypertension, 129 and 295; allergies, 140 and 374; asthma, 51 and 135; high cholesterol, 131 and 274; and other chronic condition, 96 and 234. The percentages were calculated on the basis of weighted figures. All data are from Harris Interactive, Strategic Health Perspectives 2005.

start adjusting their plans to remove disincentives to obtaining needed care. For example, they should provide full coverage for effective preventive care and for medications for chronic conditions such as hypertension, high cholesterol levels, and diabetes. We think they should also modify product designs so that low-income patients have less exposure to financial risk. And we recommend that insurers develop new tools and strategies for ensuring that their members understand their own benefits. Early experience with high-deductible health plans indicates that members are confused about what they have to pay for; as a result, they cut back on preventive care even when it is fully covered.

Even the very best communication tools will not be foolproof, however. Therefore, we believe that health care providers should invest in information systems and other programs to keep track of populations with chronic disease and to ensure that they receive needed care and adhere to their regimens.

We are not saying that the clock should be wound back and that these plans should be dismantled. After all, the economic pressure of increasing health care costs must be addressed, and no one is urging a return to a form of managed care that balances minimal out-of-pocket expenses for patients with severe restrictions on their choices.

However, relying on market forces alone to improve health care is a strategy fraught with hazard. We think the times call for a new approach to health insurance that combines some accountability for consumers with incentives for providers to develop systems to improve the quality and efficiency of their care. We hope that current models of high-deductible health plans will only be steps along the way to that synthesis.

An interview with Dr. Lee can be heard at www.nejm.org.

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