capitation has failed: the chronic dis-integration of medical services management under contracts that necessitate meaningful integration. According to Lipton and colleagues, "In contrast to other types of...risk-sharing arrangements, HMOs may transfer risk for drug costs to physician groups without relinquishing control of core pharmacy functions, such as formulary decisions. While HMOs might retain some core pharmacy functions to achieve 'seamless' care across physician organizations, avoid fragmentation at the HMO level, and ease administration for employers, we hypothesize that an opposite outcome—greater fragmentation of patient care at the physician group level—may compromise quality." Often desperate attempts to shift the financial burdens associated with medical risk, while not accommodating their broader financial benefits, are symptomatic of an antiquated health insurance system and have inspired uncounted health care business failures. These attempts represent the micromanagement of a broken system, a spastic rearrangement of the exam room furniture in the Titanic's medical clinic.

From this, we can draw one sad conclusion: Our current health insurance system—including Medicare, which was built to mirror that system—is hopelessly out of step with the inevitable rotation of medical care delivery from services to technology. The absence of a Medicare outpatient prescription drug benefit is the most glaring illustration of this problem. If we have a problem with the increasing pharmacy costs associated with our medical progress, it is because public and private insurers have exposed us most where they should have least. These insurers have simply failed to keep pace with medicine's technology-driven good news. Slapping prescription coverage onto the current Medicare program (that is, adding a dreaded "Part C" to what long ago should have been a unified Parts A and B) will perpetuate all of the problems associated with the current balkanization of care financing and delivery.

Before suggesting reforms to public and private insurance systems that clearly chafe against what should be a natural and desirable systemic rotation, we need to deconstruct its specific components. In the next section I illustrate how the changing mix of drug costs and other medical expenses affects payers with the maddening task of rationalizing and managing aggregate health care spending.

The Six Faces Of Pharmacy Economics

The only way to solve a complex problem is to break it down into its component parts. This would be particularly useful in its own right, given the current confusion and lack of good data regarding the economics of pharmaceutical progress. There are several value propositions for pharmaceutical care, many of which stand in stark
contrast to each other. Taken together, they reflect the clinical heterogeneity of the progress we have made in medicine.

**The fast-pays.** Several “expensive” new drugs lower short-term health care costs. These drugs are a bargain for payers and society, compared with the cost of the services and chronic diseases that they delay, manage, or prevent. A good example is anticoagulant therapy for stroke: The lifetime costs for a severe stroke average $100,000, while anticoagulant therapy costs just $1,095 a year. The expensive new class of “atypical” antipsychotic medications have the same effect, again proven in the inverse. Soumerai found that “limits on [drug] coverage...resulted in immediate 15–49 percent reductions in the use of antipsychotic drugs, antidepressants and lithium, and anxiolytic and hypnotic drugs. It also resulted in coincident (43–57 percent) increases of 1 to 2 visits per patient per month to community mental health centers, sharp increases in the use of emergency mental health services and partial hospitalization. The estimated average increase in mental health care costs per patient [under the limits] exceeded the savings in drug costs by a factor of 17.”

The new AIDS drugs also fall into the “fast-pay” class, at least from the payers’ perspective, even if they ultimately increase long-term costs for society.

**The slow-pays.** Some “expensive” new drugs decrease medical costs but only after several years. The clearest example of these “slow-pay” drugs is the new class of selective estrogen receptor modulators (SERMs), such as Evista (raloxifene). Although there are many conflicting data, the theory (and a few preliminary studies) of SERMs argues that they increase bone-mass density, reduce osteoporosis, and prevent costly hip fractures in the elderly—but only when taken years before any symptom onset. These drugs also may protect women against heart disease, but the economic effects of this clinical benefit are also many years down the road. Numerous types of heart disease drugs also fall into the “slow-pay” class. Many of these drugs are the core tools of disease management programs, as described earlier, they generally increase rather than decrease costs in the short run. The clearest example of this foil to the conventional wisdom is diabetes. A poster child of the disease management movement. One HMO study found that diabetics in a highly managed system used “recommended care services—glucose tests, eye exams—at a higher rate (substantially higher) than other parts of the country, one of the reasons costs are higher.” With payback periods occurring years after therapeutic initiation, “slow-pay” drugs are not (or should not be) popular with insurers focused on quarterly or annual financial targets. This may explain why these drugs—especially the SERMs and antihypertensive drugs—are the...
subject of widespread direct-to-consumer (DTC) advertising.

- **The narrow-pays.** Some “expensive” new drugs decrease overall medical care costs for only a narrow clinical subpopulation and thus do not offset their aggregate medical costs. These drugs tend to address clinical problems that are imprecise, difficult to diagnose, or highly prevalent with a broad range of symptom severity. Many are subject to an economic paradox described by Weisbrod and LaMay: “Since total health care expenditures depend on both expenditures per case and the number of cases treated, a new technology may decrease costs per case but increase costs in the aggregate.” Examples of clinical conditions treated by “narrow-pay” drugs are congestive heart failure, obesity, depression, and diabetes; each of these involves a wide range of clinical indication, from mild symptoms that affect only quality of life to severe symptoms that result in hospitalization, major disability, and death. Cholesterol management provides a good illustration of the economic problem here. Lichtenberg found that “hospital costs were $8 million lower among the 2221 volunteers who got the drug [cholesterol-lowering simvastatin], but the medicine itself cost $11 million.” Contrary to much managed care rhetoric but consistent with its reimbursement practices, most vaccines sit squarely in the “narrow-pay” class; immunizations have to be administered to large populations to prevent scant disease incidence and costs.

- **The diffuse-pays.** Some “expensive” new drugs increase medical costs but decrease nonmedical costs. Vaccines for common problems such as the flu fall into this class, which explains why employers often pay for and administer them directly, rather than relying on insurers that have minimal economic interest in their effectiveness. Other drugs in this class, such as nonsedating allergy medications, treat medically inexpensive but productivity-reducing conditions. Similarly, the expanding use of selective serotonin reuptake inhibitors (SSRIs) for mild depression, obsessive-compulsive disorder, and social phobia—the source of much fury by health insurers—have clear economic value for employers. These diffused economic impacts are quantified in Lichtenberg’s study in this volume of Health Affairs, which found positive associations between increases in drug spending and reductions in missed work days. Unfortunately, few employers have the technical means or intellectual bandwidth to relate pharmacy cost data to their employee productivity data; they also have numerous legal disincentives not to do so. This orphaning of their economics explains why, as a group, these drugs also receive ample DTC advertising.

- **The pay-me-laters.** Some “expensive” new drugs lower short-term health care costs but increase long-term costs. These drugs
embody the economics of smoking in reverse: They improve health status, short-term costs, and life expectancy, while guaranteeing higher costs over the long run. The most notable drugs in this class are several new biotechnology products, in particular Pulmozyme (dornase alfa, recombinant), for the treatment of cystic fibrosis, and Avonex (interferon beta-1a), for multiple sclerosis. In the absence of such breakthrough drugs, these horribly disabling diseases entail high rates of hospitalization and palliative drug care. Despite the short-term advantages of AIDS drugs, they too ultimately may fall into this category.

**The no-pays.** Several new drugs do not save anybody money; they merely improve people's lives. Many have derided these drugs as “recrea-ceuticals,” even when, in the case of a drug like Viagra (sildenafil citrate), they treat conditions that directly affect a critical component of the human experience. Other drugs in the “no-pay” class treat mild obesity, severe acne, toenail fungus, or overactive bladder. Also included in this class are expanded indications for SSRIs, including one for “premenstrual dysphoric disorder,” or the medicalization of severe premenstrual syndrome (PMS).

**Toward A Belated Artfulness**

The complex business of assigning drugs to economic classes should fall to the nation's insurers, and their reimbursement strategies should follow suit. Through a combination of ruthless honesty and hard data, insurers can and should determine their investment returns on specific drugs and manage drug benefits accordingly. The implementation of thoughtful, value-based payment for “expensive” drugs constitutes the quintessence of truly “managing care.” If insurers have difficulty identifying drugs' economic classes, they should look to the DTC advertising they find so infuriating: slow-pays, diffuse-pays, and no-pays get the most DTC treatment; marketing mixes for the fast-pays and narrow-pays still lean toward physician detailing, journal advertising, and managed care marketing.

How should health insurers pursue this difficult set of allocations? Obviously, they should embrace and promote the fast-pays. Because economic returns on the slow- and diffuse-pays accrue to employers while raising costs for fully insured plans, insurers should acknowledge this value transfer with their employer-customers and design drug benefit packages accordingly. The more problematic classes are the pay-me-lateters and narrow-pays; insurers need to adopt sophisticated analysis and disease management techniques to optimize the economic effectiveness of drugs in these classes.

The best tool for making these determinations already exists: cost-effectiveness analysis (CEA). To date, insurers have failed mis-
erably at using CEA, a methodology that combines cost and quality data into a simple ratio that allows for drug-to-drug comparisons of value. Researchers of all stripes have noted that few insurers use any sort of CEA in their drug coverage decisions. According to Marc Berger, CEA has not been mobilized by the health plans because of a "short-term parochial financial perspective, while CEA takes a long-term view which captures all costs, benefits, and hazards regardless of to whom they accrue." This perspective can be modified through regulatory reforms that discourage health plan disenrollment, moving the line of demarcation between fast-pays and slow-pays outward and thus encouraging insurers to embrace more slow-pays.

Until insurers adopt the analytic sophistication of CEA for all drugs, they will continue to do what Mechanic calls "implicit rationing" of medical resources in arbitrary and often counterproductive ways. Mechanic notes that "fairness requires that rationing take place in an informed context and not by stealth...The consequences of implicit rationing processes should be as open as possible, should be reviewed routinely by medical peers and through outside audit, and should be an important topic for discussion within health care institutions." The use of CEA to determine this line of economic demarcation will accomplish a belated and important goal: bringing transparency to managed care pharmacy decisions.

Who Pays The Price Of Progress?

We all pay the price of progress, ultimately, through often indirect and tortuous means. If so, then the best way to rationalize the conflicting value propositions created by "expensive" new drugs is to fix several major flaws in our current health insurance system that obfuscate those value propositions, as follows. (1) Establish tax parity for all health benefits and noncovered medical expenses; this would neutralize the role of the employer in switching health plans, reduce enrollee turnover, and push out the pharmaceutical investment horizon for insurers. (2) Relax federal laws that galvanize the separation of physicians and hospitals and thus doom the market's desire to manage pharmacy costs by managing provider economic incentives. (3) Establish federal mandates for classes of drugs with enormous clinical value but negative economic returns, eliminating the compulsion of insurers and self-insured employers to underpay for drugs in the narrow-pay and pay-me-later classes.

Detailing and debating the merits of these important reforms is well beyond the scope of this paper. Rather, I sketch each one briefly in the context of pharmaceutical progress and leave it to others to go the next arduous mile. For now, it is important to frame each of these ideas within its essential context: If pharmaceutical progress
“Many drugs improve the quality of people’s lives while increasing costs. These are the drugs nobody wants to pay for.”

is indeed the single greatest economic pressure on our current health care system, then it is appropriate to view reforms of the entire system through the prism of pharmacy economics.

■ Tax parity. Annual turnover rates of 20 percent among health plan enrollees are the inevitable marketplace result of restricting premium tax-deductibility to direct, employer-sponsored health coverage. Employers shop for coverage on behalf of their workers, and most offer access to only one or two insurers in a given year. “When they switch insurers, employees are forced to follow suit. As Moran reports, “As long as enrollees in managed care plans switch plans every few years, economically rational managed care entities should be expected to underinvest in pharmaceutical-based intervention strategies whose benefits were less than immediate.”

By liberalizing the tax benefit associated with health coverage, we liberate the health insurance marketplace. Under tax parity, employers would allocate pretax compensation for employees. Those employees would then be free to choose whatever insurer appeals to them; they would be more likely to remain with that insurer over time and as they change jobs. The resulting enrollment stability would move the pharmaceutical investment horizon for insurers outward; it would also encourage them to compete on the real value they bring directly to employees—and to consumers purchasing coverage in a liberalized, open retail market. Tax parity would also allow consumers to spend pretax dollars on drugs that fall far outside insurers’ investment horizons and coverage. This would encourage consumer-driven market demand and pricing for pharmaceutical progress that has no economic value for any third party, but much value for consumers: the no-pay “recrea-uticals.” This is consistent with the current movement toward patient cost sharing on many no-pay drugs and echoes Fuchs’s argument that the beneficiaries of new technologies should be paying their associated costs.

■ Modification of foolish federal laws. As the failure of provider risk sharing for pharmacy costs painfully illustrates, the balkanization of medical delivery under current reimbursement systems precludes the market’s ability to exploit the dynamics of the medical resource rotation described in this paper. Provider groups can and will accept economic risk for drugs—especially the high-cost injectables administered in the ambulatory setting—if they can capture the economic rewards of reduced hospital costs. Unfortu-
nately, a generation of antikickback and Stark “self-referral” laws stands in the way. Modifying these laws to accommodate pharmacy risk sharing represents a broader regulatory reform that the system desperately needs anyway: the belated economic integration of physician and hospital organizations. “Gain-sharing” programs are one obvious way to achieve this integration; unfortunately, to date the market’s efforts to institute such programs have been hamstrung by the perpetuation of these overreaching and archaic laws.

- **Federal benefits mandates.** As our taxonomy of pharmacy economics indicates, many clinically important drugs provide negative economic value: They improve the quality of people’s lives while increasing costs in the short and the long run. These are the drugs nobody wants to pay for—employers, insurers, or at-risk providers. Access to such drugs is highly variable and made ever more complicated for patients as insurers attempt to control their medical costs and compete on premiums. This marketplace gamesmanship further splinters insurance coverage and increases the destructive uses of medical underwriting; its end result is increased cost burdens on the most vulnerable patients, defeating the whole purpose of insurance. Because the cost for these drugs represents the creation of social and public health utility—increased life expectancy, reduced disability, and improved quality of life for patients with chronic and terminal illnesses—we should mandate coverage for these drugs, at the federal level, accompanied by a federal law against medical underwriting. Federal mandates that supercede state laws will level the health insurance playing field nationally and locally and will preempt insurers’ attempts to splinter and subdivide drug coverage for the highest-cost drugs with negative economic returns.

The time for these reforms is now. The addition of a Medicare outpatient drug benefit promises to exacerbate all of the tensions and conflicts raised in this paper. If, as proposed, the new benefit does ultimately mirror the private sector’s pharmacy benefit management system, then we need to fix the worst marketplace failures of that system. The health insurance market is struggling mightily to pay for our great medical progress. Today, doing the right thing for patients is too often the wrong thing for insurance company shareholders. Reforms that neutralize this conundrum are consistent with a central feature of the U.S. health care system: our unwillingness to say “no” to progress and to the patients benefiting from it. As Berger observes, “Society has not been willing to accept that there are limits on health resources...Suggestions that there is a core of effective services which should be available to all and other services which could be provided based on

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**NOTES**

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ability to pay have not found wide-spread support."

If Berger is right—and the managed care backlash is strenuous proof that he is—then we should accept this fact of our medical progress and adapt our insurance system accordingly. Our society will not tolerate explicit rationing. Our only recourses are to make implicit rationing transparent and to pay for our medical progress in the old-fashioned way: collectively, through better health insurance coverage.

The author acknowledges the research and editorial assistance of Kathleen Ford.

NOTES
2. Data collected from the National Heart Association, National Center for Health Statistics; and Centers for Disease Control and Prevention.
7. Weisbrod and LaMay, "Mixed Signals." 121.
12. Ibid.
15. Petersen, "HMOs Get What They Pay For," 42.
18. Soumerai and Lipton, "Computer-Based Drug-Utilization Review."
19. Horn, "Intended and Unintended Consequences."
20. Lichtenberg, "Do (More and Better) Drugs Keep People Out of Hospitals?"
24. This number has been reported throughout the health care business press and has been conveyed to the author by numerous managed care executives and employer health care purchasers.
31. Soumerai and Lipton, "Computer-Based Drug Utilization Review."
34. H.L. Lipton et al., "Managing the Pharmacy Benefit in Medicare HMOs: What Do We Really Know?" Health Affairs (Mar/Apr 2000): 52.
41. Numerous articles by Uwe Reinhardt, Paul Langley, Marc Berger, Robert Epstein, and the author.
45. Moran, "Prescription Drugs and Managed Care." 73.
46. Berger, "The Once and Future Application."