THE HAMILTON PROJECT

DISCUSSION PAPER 2015-09 | OCTOBER 2015

Correcting Signals for Innovation in Health Care

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OCTOBER 2015

BROOKINGS

Abstract

A combination of legal rules and institutional forces pushes health plans to cover nearly every medical innovation. The result is that many Americans are effectively forced to over-insure themselves for coverage of some therapies they do not much value. At the same time, others might be willing to spend even more on health plans that would cover therapies that are not considered medically necessary or that have not yet been developed. Technology developers thus receive distorted signals about the size of the market for new innovations, leading them to develop medical treatments that are not in line with what Americans would demand in a well-functioning market.

Over time, the spending growth fueled by these distorted signals will become increasingly difficult to ignore. Yet the most prominent policy ideas for reining in spending growth concentrate on slowing the rate of technology *diffusion*. In so doing, they fail to fully grapple with the mix and pace of technology *innovation*. Our data, for example, show that a third of Medicare's spending in physician or outpatient settings in 2012 reflects technology that did not exist a decade earlier. Addressing the incentives for technology development, and not just its diffusion once invented, is critical.

We therefore advance a handful of policy proposals to adjust the innovation signal. In particular, we propose (1) replacing the tax exclusion for employer-provided health insurance with a tax credit, (2) strengthening Medicare's coverage determination process, and (3) experimenting with reference pricing for certain therapies in Medicare. Although these proposals may strike some as politically unrealistic, alternative approaches to tackling the one-size-fits-all nature of insurance—in particular, allowing health plans to compete on the scope of what technologies they cover—would require regulations that are unlikely ever to be politically and culturally attractive.

Table of Contents

Chapter 1. Introduction

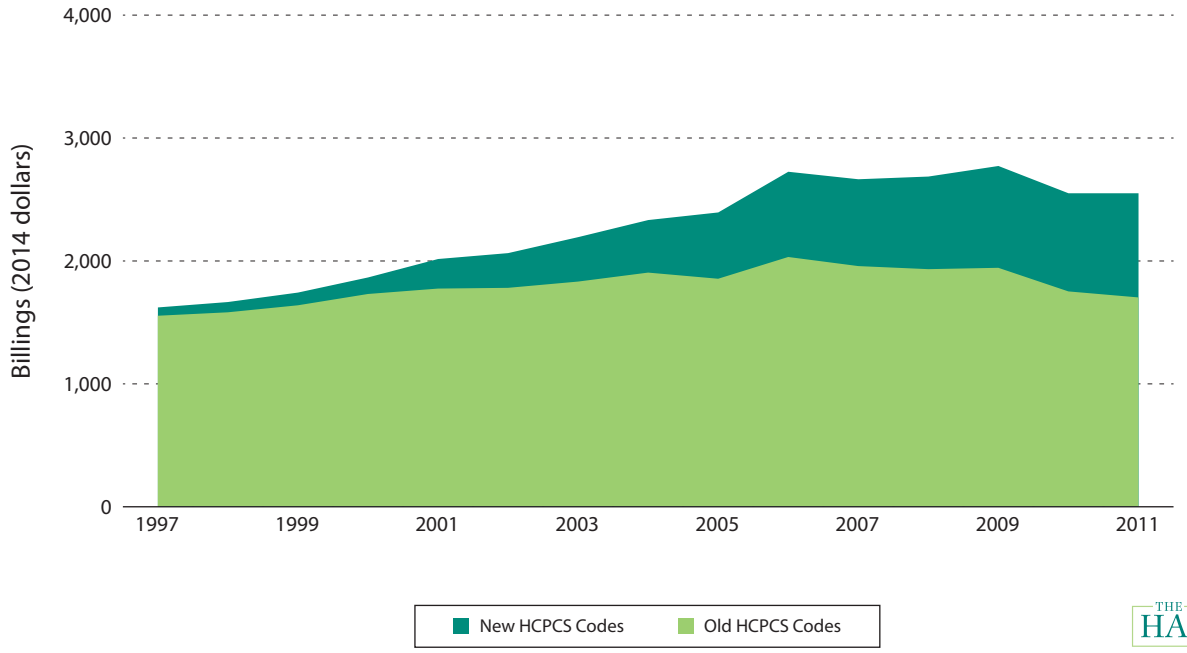
Health economists have long known that technology adoption accounts for a substantial fraction of health-care spending growth—roughly 30 to 50 percent. New technology may cost more to treat the same condition and may enable providers to treat new conditions, directly driving up spending. New technology may be less expensive on a per-unit basis, but have fewer side effects, leading to its application to a wider range of patients and supplanting previous modes of care. Finally, technology that improves longevity will raise spending as people seek more care over their extended lifetimes.

The adoption of new technology turns on two factors: (1) diffusion, which is when existing technologies are incorporated into medical practice, and (2) innovation, which is when new treatments are born. Figure 1 demonstrates the importance of innovation to health-care spending. In this figure, we separately show how much providers billed Medicare for existing and for new medical technologies. "New technologies" are defined as those not present in 1997. From 1998 through 2011, spending on technologies that were not present a decade earlier (in dark green in the figure) increased steadily and by 2011 accounted for almost a third of Medicare spending delivered by physicians and outpatient hospital departments.[1]

When it comes to technology development, the central challenge is to encourage high-value innovation while discouraging innovation that drives up costs without much improving health. A combination of legal rules and institutional pressures, however, forces consumers into the plans that cover the same health-care technologies. As a result, consumers have no choice but to insure themselves against the risk of needing expensive care of marginal clinical value—even if they would prefer to purchase cheaper coverage that excluded such care. That, in turn, sends an "if you build it, we will pay for it" signal to technology developers, encouraging them to invest in new technologies that yield incremental benefits without regard to cost.

FIGURE 1.

Medicare per Capita Payments for New and Old Technologies, 1997–2011



Source: Authors' tabulations for Medicare carrier and outpatient files since 1997.

Note: HCPCS stands for Healthcare Common Procedure Coding System.

Existing policy efforts have focused primarily on technology diffusion—the light green portion of figure 1. Global budgets and somewhat less extreme variants, like ACOs and bundled payments, are the exemplars of this diffusion-attenuating movement. Such payment schemes shift financial risk to providers and thus discourage the inefficient use of *current* technology. But they do not fully address *innovation*. Payers and providers still exist in a legal regime that supports, and sometimes requires, the provision of all medically necessary care. Naturally, payments tend to escalate to accommodate new innovations that enter mainstream clinical practice—including expensive therapies that are little or no better than cheaper alternatives. Shifting risk to providers thus only weakly constrains the adoption of high-cost but low-value technology.

We propose three policies to adjust the innovation signal and encourage the development of medical technology that offers better value for the money. First, Congress should eliminate the tax subsidy for health insurance for high-paid employees. Second, Congress should reform Medicare's coverage determination process so the program is not required to cover therapies that deliver insignificant health benefits at a high cost. Because of the influence of Medicare over the commercial market, many private insurers would likely follow its lead. Third, the Centers for Medicare & Medicaid Services (CMS) should experiment with reference pricing—a practice under which insurers pay a single reference price for all treatments with similar therapeutic effect, allowing patients who want less-cost-effective treatments to pay any difference out of pocket.

Chapter 2. The Causes of Demand Pooling

Consumers' demand for health insurance, like their demand for other goods, varies with income and preferences. For a number of historical, legal, and institutional reasons, however, consumers are constrained to purchase health plans (or are enrolled in government health-care programs) that uniformly cover all medically necessary care. This "demand pooling" means that many Americans insure themselves against the risk of needing therapies they do not value.

The problem is especially acute for low-income Americans. As Hall and Jones (2007) have shown, the proportion of income that a consumer is willing to spend on health care grows more rapidly than income. A typical individual who makes $400,000 per year would thus wish to spend more than eight times as much on health care than someone who makes $50,000. Yet, instead of buying health plans that meet their variable demand, the rich and poor alike must buy plans that cover health-care technologies of questionable value.

Demand pooling and the distorted innovation signal arise from a combination of four forces—coverage requirements, features of plan design, the tax code, and reimbursement methods—each of which we discuss below. Taken together, these forces send an unambiguous signal to developers that "if you build it, we will pay for it," whether or not the innovation offers good value for the money. Unsurprisingly, manufacturers respond to that signal by innovating. The link between market size and innovation is well established—a 1 percent increase in market size increases innovation in new molecular entities by 4 percent (Acemoglu and Lin 2004). Market size will also grow with increases in prices, intellectual-property protection, the number of insured people, and incomes.

A. COVERAGE REQUIREMENTS

Although most health insurers exclude experimental services and require prior authorization for certain therapies, insurers rarely decline to cover treatments that physicians deem medically necessary (Hall 2003). That is partly because, when coverage disputes do arise, courts are often unwilling to construe contractual terms to allow health insurers to refuse coverage (Hall and Anderson 1993). Even where scientific evidence supports the inefficacy of a particular therapy, the courts will sometimes defer to the treatment decisions of physicians who hold views outside the scientific mainstream (Ferguson, Dubinsky, and Kirsch 1993). More than half the states have created external boards to review medical necessity determinations, further impeding insurers' efforts to decline to pay where there is genuine room for doubt about a treatment's efficacy (Gresenz and Studdert 2005). In addition, a given treatment can be highly effective for a small set of conditions but of little or no value for others, but insurers face headwinds when they attempt to restrict the treatment to those for whom it's medically indicated. The result is that, "technologies that may provide high value for carefully selected patients are often used indiscriminately for a much larger cohort of patients" (Fuchs 2011, 585).

Indeed, experience suggests that insurers generally cannot sustain efforts to decline to pay for new treatments, even in the absence of good evidence of clinical effectiveness. In the late 1980s and early 1990s, for example, insurers resisted covering autologous bone marrow therapy for breast cancer, only to relent in the face of legal pressure. In the 2000s a similar story played out with bariatric surgery. The latest flashpoint involves expensive drugs to fight hepatitis C, especially the drugs Sovaldi and Harvoni. Lawsuits have already been filed against insurers that have restricted the drugs to only those patients with serious liver damage. Especially because prominent physician groups endorse the drugs' use for a broader population, history suggests that insurers will eventually acquiesce.

In addition, a number of state laws mandate the coverage of certain treatments. Depending on the state, for example, insurers can be required to cover in vitro fertilization, behavioral therapy for autism, or acupuncture. Of greater significance, roughly three-quarters of the U.S. population lives in states that mandate coverage for both on- and off-label uses of cancer drugs, despite the often-weak evidence of their effectiveness for off-label uses (Bach 2009). State insurance commissioners may also insist that health plans sold in the state cover all medically necessary care, notwithstanding insurer efforts to carve out specific treatments.

State coverage mandates do not apply to all health plans, however. The Employee Retirement Income Security Act of 1974 (ERISA) preempts state coverage mandates with respect to health plans offered through employers that self-insure. Such plans are governed exclusively by federal law, which contains only a few coverage mandates. Under the ACA and

the Mental Health Parity and Addiction Equity Act of 2008, for example, all health plans must cover treatments for mental health and substance use disorders on the same footing as treatments for medical and surgical benefits (29 U.S.C. 1185a). In addition, the ACA requires health plans to cover preventive services without cost sharing (42 U.S.C. §300gg-13).

Federal law is much more intrusive with respect to plans sold on the individual and small-group markets. Under the ACA, those plans must now cover the essential health benefits, which are defined to include the benefits that are already offered under an existing plan in the small-group market (Bagley and Levy 2014). Since existing plans already cover medically necessary care with relatively few carve-outs, federal law effectively demands that individual and small-group insurers cover all medically necessary care.

All told, a stable, market-based approach to health-care technology management is not feasible without some strong regulations that depart considerably from existing norms and from the ACA.

B. OBSTACLES TO OFFERING PLANS THAT RESTRICT COVERAGE OF TECHNOLOGIES

Setting the legal constraints to one side, there are rarely robust data about the benefits of medical treatments, making it difficult for insurers to figure out when a technology is valuable or wasteful, and consequently, to modify coverage accordingly (Neumann, Kamae, and Palmer 2008). Generating effectiveness data for any given treatment will normally be too expensive to be worthwhile for individual health plans. If any one plan were to develop compelling data and exclude a particular technology on that basis, other insurers could follow suit without having to make the same research investment. Because of this collective-action problem, health insurers lack the right incentives to invest in research on the effectiveness of new technologies.

The potential for adverse selection also discourages health plans from competing over the scope of technologies they cover. The ACA prohibits insurers from discriminating on the basis of health status (with modest exceptions for age and smoking status). Because patients can switch plans when they become sick, plans with more-comprehensive coverage would be likely to attract less-healthy patients, which would in turn lead premiums for those generous plans to skyrocket. Standard risk-adjustment approaches are unlikely to address this problem (see Box 2). Other potential solutions are either impracticable or unappealing. For example, risk-rating (that is, adjusting the premiums to reflect consumers' health risks) would mitigate adverse selection. But it would run afoul of the ACA's prohibition on charging sicker patients more for their insurance (42 U.S.C. §300gg et seq.). Alternatively, plan-switching could be prohibited or discouraged. Locking consumers into plans for long durations, however, would undermine competition among insurance plans. All told, a stable, market-based approach to health-care technology management is not feasible without some strong regulations that depart considerably from existing norms and from the ACA.

To the extent that consumers would prefer cheaper health plans that exclude expensive treatments of marginal clinical value, this is a market failure. Government has not offered a solution. Although Medicare can decline to cover treatments that are "not reasonable and necessary for the diagnosis or treatment of illness or injury" (42 U.S.C. 1395y(a)(1)(A)), Medicare has read that language to prevent it from taking costs into account in deciding what to pay for. Since insurers generally follow Medicare's lead on coverage determinations (Chambers, Chenoweth, Thorat et al. 2015; Frakt 2015; Wulff, Miller, and Pearson 2011), Medicare's permissiveness signals to technology manufacturers that they need not factor cost-effectiveness into their investment decisions.

In addition, Medicare lacks the resources or the statutory authority to actively review the vast majority of new technologies that are adopted into clinical practice and to restrict coverage for those that lack sufficient evidence of effectiveness. Even in the rare cases when Medicare has issued a national coverage determination—there were just 213 such determinations from 1999 to 2012—the data on which those determinations rest are often quite poor (Neumann, Kamae, and Palmer 2008).

Why have employers not demanded more-sophisticated plans—for example, plans that impose higher cost sharing for technologies with a dubious evidence base, or deductibles that increase with income? Single employers, even Fortune 50 employers, are likely too small to initiate changes in plan design in a marketplace where plans are much larger than individual firms. Any single employer that invests in developing a successful alternative likely will see its plan promptly copied by its competitors, in much the same way insurers typically copy Medicare. Here again, the collective-action problem leads to a market failure. Consolidation in the insurance industry, which reduces competition and thus the incentive to offer inexpensive or novel plans, will exacerbate the problem.

BOX 1.

How Plans Are Currently Allowed to Differ

Although health plans do not typically compete over the scope of health services that they cover, they compete vigorously along other dimensions. On the ACA's new exchanges, for example, plans compete on their actuarial value (AV)—the extent to which premiums are expected to cover medical costs, with the rest made up by cost sharing. Offered plans must fall into one of four AV categories: bronze (60% AV), silver (70% AV), gold (80% AV), and platinum (90% AV). While many consumers believe that "metallic tiering" is tied to the generosity of benefits, the reality is that it is tied only to the decision to pay out of pocket or through a premium. Plans with a higher AV reduce the risk of high out-of-pocket spending, but they cover the same roster of medical services as do plans with a lower AV. Because all plans cover expensive innovations over the stop-loss, competition over AV is unlikely to encourage innovation that accurately reflects consumer demand for new technologies. The "if you build it, we will pay for it" signal still prevails.

Health plans also compete over the size and composition of their networks. Such differentiation, however, is also unlikely to affect the innovation rate and mix. Medical ethics and malpractice risk encourage providers to offer all modes of care that have even the slightest chance of providing a benefit. Insurers, in turn, are effectively compelled to cover most treatments that clinicians judge to be medically necessary, whatever the value of those treatments.

BOX 2.

Why Health Plans Cannot Differentiate on Coverage

To see the near-impossibility of competing on the scope of coverage, consider the market described in Korobkin (2014), where insurers compete on the cost-effectiveness of the medical technologies they cover (see also Pauly 2005 and Einav et al. 2014). Under Korobkin's "relative value health insurance" scheme, plans would cover health-care technology up to one of several maximum values of cost-effectiveness, as measured by cost per quality adjusted life year (QALY). QALYs convey how many years a given intervention is expected to extend a person's life, adjusting for the quality of life experienced in those years. A cost-per-QALY ratio is thus a measure of a treatment's cost-effectiveness. A high ratio implies that the treatment costs a great deal given its anticipated benefits, whereas a low ratio implies that the treatment has an especially good value.

In Korobkin's (2014) market, plans differ in their coverage of technology up to different cost-per-QALY levels, permitting plan tiering over the scope of coverage. Consumers would thus confront the cost-effectiveness of health-care technology for which they are willing to pay at the point of sale of insurance—and before they fall ill. The most expensive (highest premium) plans would cover all technologies, including those with the lowest cost-effectiveness (the highest cost per QALY), as most plans do today. The most inexpensive plans might cover technologies with cost-effectiveness up to, say, $150,000 per QALY. Other plans might fill in the mid-range. Under this approach, no one would be denied the opportunity to select a plan with expansive coverage. But consumers who wished to pay less for insurance could forgo access to low-value technologies.

Although elegant in theory, a market based on plan differentiation over the scope of coverage is unlikely to emerge because of severe adverse selection. Consider, for example a young, married couple with no children with a modest demand for technology, both because they're healthy and because they value exotic vacations more than exotic treatments. They select the low-technology (high cost-effectiveness) option and use the savings to travel abroad. Now suppose that they have a child who needs treatment for cystic fibrosis. Novel therapies for this condition have an incremental cost-effectiveness ratio in the hundreds of thousands of dollars (Whiting et al 2014). The family may rationally want to switch from their plan with stingy coverage rules to an expansive plan that covers high-cost therapies with low cost-effectiveness. Since the reason for the parents' plan switch is to offset the cost of a particular therapy, the plan to which they switch will incur its cost with certainty. Because the parents' change in technology preference is intimately linked to a change in diagnosis, applying standard, diagnosis-based risk adjustment approaches would spread this additional cost to low-technology plans. Forcing low-technology plans to pay for the expensive technology they exclude would destroy the entire point of this kind of market. Thus, alleviating this adverse selection would either require (1) locking the family into a plan for a lengthy period of time, which would reduce market competition, or (2) allowing health plans to limit coverage for pre-existing conditions. Either step would represent substantial and unappealing departures from the ACA.

C. TAX EXEMPTION FOR EMPLOYER-PROVIDED HEALTH INSURANCE

By excluding employer contributions toward health coverage from income, the tax code encourages compensation packages that are skewed toward insurance rather than wages. The exclusion is regressive: an employee in the 40 percent marginal tax bracket with a $10,000 tax-free policy receives $4,000 in tax relief, whereas one in the 15 percent tax bracket gets only $1,500. The exclusion also fuels excessive demand for health care by favoring health-care spending relative to wages. This in turn spawns inefficient health plans that cover more technologies than they otherwise would (Baicker and Chandra 2015). In particular, the tax subsidy for expensive employer plans has driven the use of low-cost-sharing plans, which in turn encourages patients to use health care that has little clinical benefit.

Yet the inefficiencies generated by the tax exclusion run deeper than is conventionally understood. Employer contributions are excluded from employees' taxable income only where employers do not discriminate "in favor of highly compensated individuals" in setting eligibility rules or prices (26 U.S.C. §105).[2] The nondiscrimination rule encourages firms to offer the same health plans, at the same prices, to most of their workers, whether in the C-Suite or on the factory floor. But well-paid executives and low-wage employees likely have different preferences for health insurance. If the employer offers only one health plan (or only a few plans), workers with a preference for excluding low-value technologies will be pooled together with workers who prefer to include them. For workers who believe that their employers pay for most of the costs of expensive coverage, this may seem like a good deal. Economists have long understood, however, that employees pay for their fringe benefits by taking home lower wages (Baicker and Chandra 2006). In all likelihood, lower-paid employees suffer disproportionately because they bear the full costs of plans that they value less than their higher-wage colleagues (Havighurst and Richman 2006).

Some have argued that low-wage workers will successfully demand higher wages to offset the fact that they do not value a fully loaded health plan to the same extent as higher-income workers. It is not clear, however, why high-income workers in a competitive market would be willing to bear some of the costs of low-income workers' health insurance. Employers may instead respond by moving low-income workers to contract jobs or to part-time jobs—effectively segmenting the labor market into firms with high and low wages (Scott, Berger, and Black 1989). If high-wage workers at some firms do subsidize the health insurance of low-wage workers, the very existence of that cross-subsidization implies that all workers, both low-wage and high-wage, cannot make the wage-benefit trade-off that they would make in a well-functioning market.

D. REIMBURSEMENT METHODS AND TECHNOLOGY ADOPTION

Perhaps the primary explanation for high rates of inefficient use of medical technology is widespread use of reimbursement methods that encourage a high volume of care without regard to its value. While providers grimace at the suggestion that they respond to financial incentives, rigorous empirical analysis shows that this is in fact the case. For example, Clemens and Gottlieb (2014) find that a 2 percent increase in physician payment rates leads to a 3 percent increase in care provision. The effect is larger for elective procedures (such as cataract surgery) than it is for services that are less discretionary (such as open-heart bypass surgery).

Fee-for-service reimbursement, in which providers are paid for each service provided, is the least sensitive to value. Payments based on diagnosis-related groups (DRGs)—a form of bundled payment—do not perform much better, especially given that many surgical DRGs are determined after the surgery has been completed. Fee-for-service and DRG-based reimbursement account for the overwhelming majority of Medicare payments and are also common in private plans. These value-inattentive forms of payment overstate the public demand for low-value care. Innovators respond accordingly.

Chapter 3. Proposals to Change the Innovation Signal

A. REPLACE THE TAX EXCLUSION FOR EMPLOYER-PROVIDED HEALTH INSURANCE WITH A TAX CREDIT

If innovation reflected consumer preferences, the value gained from spending one additional dollar on health-care technology would equal that lost from spending one fewer dollar on the consumption of all other goods and services. Both types of marginal benefits vary by income and are thus not the same for high- and low-income people. Yet we tend to develop health policies based on the assumption that they are.

A1. Proposal

Making innovation sensitive to the preferences of consumers requires addressing the differential demand for the coverage of health-care technology between high- and low-income employees. Recognizing the likelihood that employer-sponsored plans (and, therefore, their premiums) reflect the preferences of high-income employees, we propose to undo the implicit cross-subsidy that occurs when lower-income employees pool their demand with their higher-income counterparts. To achieve this, Congress should replace the tax exclusion for health insurance with a tax credit for employer-sponsored insurance—a fixed amount that each taxpayer could subtract from her overall tax liability—that phases out as income increases. Less radically, the tax exclusion could itself phase out with income. Either way, high-income employees would no longer be able to purchase their insurance on a tax-preferred basis.

Our proposal differs from the current "Cadillac Tax," which is insensitive to a worker's income and imposes a 40 percent tax on all individual plans with a premium in excess of $10,200 or family premiums in excess of $27,500 (in 2018, indexed to inflation thereafter). Under our proposal, in contrast, only lower-income workers would continue to buy health plans on a tax-preferred basis. For a single individual, for example, the tax credit could be set equal to 40 percent of the average cost of premiums ($6,025 in 2014), but would start to phase out at, say, $52,500 (roughly the income of the median American). The credit would be unavailable to those with incomes above, say, $85,000 (the cut-off for the top income decile). For families, a separate tax credit and phase-out schedule would be developed. (A cap on the exclusion could be structured along similar lines.) These values could vary regionally to reflect geographic variation in the cost of care.

A2. Benefits for Managing Technology Innovation

In revising the tax code, the key is to put a damper on the inaccurate signal to health care technology manufacturers that arises under demand pooling. Forcing lower-wage workers to purchase more generous coverage that their higher-wage colleagues prefer artificially expands demand for high-cost, low-value technologies. Eliminating or capping the tax exclusion would give employers greater incentives to fashion plans that excluded low-value treatments. To be clear, we believe that ending the tax exclusion for employer-sponsored insurance is worth doing for other, independent reasons. For one thing, the exclusion artificially increases health-care consumption relative to non-health-care consumption. For another, it is regressive: the exclusion is larger for individuals in higher tax brackets than for those in lower tax brackets. But the inefficiencies arising from demand pooling in the employer-sponsored market provide an additional—and, to date, largely overlooked—justification for rethinking the exclusion.

A3. Challenges

Converting the existing tax exclusion to an income-sensitive tax credit could either raise revenue relative to the status quo or be revenue-neutral, depending on how the tax credit is structured. But under any plausible scenario, our proposal would increase the tax liability of high-income people, generating predictable political headwinds. It would also disrupt firms' ongoing efforts to prepare for the Cadillac Tax, although the change could be phased in to ease that disruption.

B. STRENGTHEN MEDICARE'S COVERAGE DETERMINATION PROCESS

In American health care, insurers and consumers are rarely attentive to the cost-effectiveness of medical treatments. A variety of steps could address this problem, but the most complete step would be to strengthen Medicare's process for deciding what treatments to cover.

B1. Proposal

Although Medicare's coverage-determination process has become more rigorous over the past decade (Chambers, Chenoweth, Cangelosi et al. 2015), the program has the resources to scrutinize only a handful of the technologies that come online each year. Congress should supply CMS with new resources that

would enable the agency to superintend new technologies more effectively. At the same time, better data about the comparative effectiveness of treatments would allow Medicare to distinguish between those treatments that are worth the price and those that are not (Neumann, Kamae, and Palmer 2008). Investments in Medicare's coverage process should thus be coupled to a large increase in government funding for comparative-effectiveness research, whether through the Patient-Centered Outcomes Research Institute, the Agency for Healthcare Research and Quality, or the National Institutes of Health.

In addition, Congress should give Medicare the authority to decline to cover treatments whose costs dwarf their benefits. As it stands, Medicare excludes coverage for care that is "not reasonable and necessary for the diagnosis or treatment of illness or injury" (42 U.S.C. §1395y(a)(1)(A)). Although it is possible to read that language to authorize Medicare to find that a given treatment is "not reasonable and necessary" on account of its cost, Medicare's past attempts to do so have ended in failure (Foote 2002). In 1980, for example, when controversy erupted over Medicare's temporary refusal to cover heart transplants, Medicare moved to develop policy guidance detailing the factors—including cost—that it would consider in making national coverage determinations. The provider community fiercely opposed Medicare's initial proposal, and plans to issue a coverage policy were tabled when President Reagan took office. The controversy flared again when Medicare, to settle litigation over its refusal to cover an angioplasty procedure, agreed to offer public guidance on the coverage process. In accord with the settlement, Medicare proposed a rule that would have enabled the consideration of cost-effectiveness in making national coverage determinations. Yet, even as the program moved to finalize the proposed rule, the secretary of the Department of Health and Human Services, caving to pressure from provider groups invoking fears of government rationing, killed it in 1992. In the mid-1990s Medicare attempted again to define "not reasonable and necessary." This time Medicare pivoted away from overt cost-effectiveness analysis and proposed using comparisons with the efficacy of existing technologies to inform national coverage determinations. Concerned that this reflected an effort to smuggle in cost considerations, industry groups mobilized and again thwarted any rulemaking. Medicare's coverage process thus remains formally cost-blind, although concerns about cost appear to influence what treatments it decides to review (Fox 2011).

Medicare's failed efforts to introduce cost as a factor in its coverage decisions, as well as lingering questions about the legality of doing so, suggest that Congress, not CMS, will have to take the lead (Bagley 2013). If explicit consideration of cost-effectiveness is too big a political lift for Medicare, the states should experiment with requiring plans to take cost-effectiveness into account, either in their Medicaid programs or in their exchange plans. To avoid the selection problems that would accompany allowing plans to differentiate on cost-effectiveness, the states would have to prohibit health plans from providing coverage for therapies shown to be insufficiently cost-effective.[3] Enrollees would be free to pay out of pocket for those treatments, but they would no longer be obliged to insure themselves for their costs. Organizations like the Institute for Clinical and Economic Review, which synthesizes effectiveness data and conducts cost-effectiveness analysis, could be instrumental in providing the evidence necessary for this process.

B2. Benefits

Because private insurers often follow Medicare's lead when it comes to the scope of coverage, invigorating Medicare's anemic system for evaluating new technologies could have powerful effects on private coverage decisions. That, in turn, could mitigate the collective-action problem that discourages insurers in the commercial market from devoting sufficient resources to developing coverage policy. In addition, it could encourage the states to stitch Medicare's cost-effectiveness determinations into their Medicaid programs. A different set of signals—from Medicare, private payers, and Medicaid—would motivate manufacturers to channel their investments toward higher-value treatments and away from treatments that offered only marginal improvements at exorbitant cost. The regime would also encourage manufacturers to fund and disclose effectiveness data about their products.

B3. Challenges

The political challenges to introducing cost as a factor in Medicare coverage are formidable. The furor surrounding the "death panels" during the ACA debates and Oregon's failed attempt to introduce cost-effectiveness into its Medicaid program are both instructive. Nor will an invigorated coverage process guarantee that manufacturers receive the right signals about which technologies to pursue. If the key problem is that patients have different demands for health care, then a reformed coverage process will improve matters only if the current scheme is too generous relative to average demand for health care, as we believe it is. But a coverage-review process still imposes a one-size-fits-all decision on enrollees, whose differences in demand span the full range of incomes and preferences. Beneficiaries who are willing to pay more for less-effective therapies would not have access to coverage for such therapies, unless Medicare were also to allow for balance-billing on technologies—where it pays for the covered technology, and beneficiaries pay for the top-up. At that point, this approach starts to converge towards reference pricing, which we discuss next.

C. EXPERIMENT WITH REFERENCE PRICING FOR CERTAIN THERAPIES IN MEDICARE

Under the type of reference pricing most familiar in the United States, plans set the price they will pay for a specific service or episode of care (e.g., a knee replacement), tying it to the amount

charged by a particular provider. Policyholders that receive the service at a higher price must pay the difference. It is akin to a tiered network, where patients' liability is the marginal price (the last dollar), and not the first dollar, as with copayment. With reference pricing, consumers have a disincentive to select expensive therapies or providers because they are liable for the marginal price, which could be very high.

These schemes thus hold the reference price constant across providers, which means that patients have to 'shop' for care. We believe that they are only feasible for nonemergent needs, in markets with adequate competition, and where prices and quality are sufficiently transparent. According to one study, these constraints limit the potential scope of reference pricing to no more than 5 percent of health-care spending for existing therapies (White and Eguchi 2014). Alternative pricing schemes, however, in which the reference price is constant across technologies for a given condition, but may vary by provider, hold promise for a larger proportion of care. The extent to which newer and existing therapies are amenable to this kind of reference pricing has not been considered in the literature, but it is plausible that far greater than 5 percent might be. For those therapies, policyholders' desire to stay within the reference price will put pressure on every provider to adopt low-cost treatments, which will in turn encourage manufacturers to develop such treatments.

C1. Proposal

We propose that Medicare experiment with reference pricing in small-scale demonstration projects by modifying a proposal in Pearson and Bach (2010). In their proposal, Medicare would classify treatments based on effectiveness (but not *cost*-effectiveness): a new treatment might be superior relative to existing therapies, equivalent to them, or of uncertain benefit. For the superior therapies, payment would be calculated using cost-based formulas that Medicare currently uses. For the equivalent therapies, payment would be the same as for the equally effective reference therapy. For those of uncertain benefit, for three years Medicare would pay as if the technology were effective and then reevaluate the technology. At that point, unless there was evidence of superior effectiveness, Medicare would decline to pay more for the technology than the reference price. For treatments that are shown to be less effective than the reference therapy, Pearson and Bach suggest that Medicare "could reevaluate whether the service was reasonable and necessary" (p. 1799). But a less-effective treatment might still provide a clinical benefit; if so, Medicare would be obliged to cover it under its current cost-blind standard.

Critically, under the Pearson-Bach proposal, the prices paid to treat a particular condition will vary by provider because Medicare will still calculate those prices using its standard methodology. The prices are, however, capped at the price level of the less-expensive alternative for therapies that have not been shown to be clinically superior. The Pearson-Bach approach thus contrasts with conventional reference pricing in which a single reference price is held constant across providers.

We fully endorse the Pearson-Bach approach. One key advantage is that it will foster the development of effectiveness data on new treatments. When it comes to managing technology development, however, the Pearson-Bach approach will only discourage the development of treatments that are clinically equivalent to less-expensive existing therapies. The Pearson-Bach proposal will not discourage the development of treatments that offer tiny clinical benefits at disproportionately high costs (Chandra, Jena, and Skinner 2011).

To foster cost-effective innovation, we propose that Medicare combine the Pearson-Bach proposal with a cost-effectiveness threshold. Under this approach, Medicare would follow Pearson-Bach, just as we described above, but would pay for any therapy only up to a predetermined cost-effectiveness threshold. It would then allow beneficiaries who wanted a therapy that cost more than Medicare was willing to pay to fund the difference out of pocket (balance billing). For example, if the threshold is $150,000 per QALY, then Medicare would not pay more than $150,000 for a therapy that improves QALY by one year. If a new therapy that is expected to add one QALY to a recipient's life costs $200,000, then a beneficiary could receive the expensive treatment only by paying $50,000—the difference between the therapy cost and the threshold—out of pocket.

Sometimes the same treatment is used to treat different medical conditions, and in this case the cost-per-QALY threshold should be applied to each treatment-condition combination. To illustrate, consider a scheme that Peter Bach recently proposed for U.S. pricing of cancer drugs (Bach 2014). Bach recognized that, for the same monthly price, the same cancer drug is used to treat different cancer conditions. But the duration of treatment and the duration of a cancer drug's benefit vary across cancer conditions—that is, both the expected cost of treatment and the benefits to treatment will vary by cancer type. Bach thus proposed a variation on reference pricing that accounts for the interaction between treatment and condition, which Bach calls "indication-specific pricing." Take the drug Tarceva, for example. Because of the differences in treatment duration and survival gain, its cost per year of life gained is $182,104 when used for first-line treatment of metastatic, non-small-cell lung cancer but $650,885 when used for pancreatic cancer, as shown in table 1. Under our scheme, if reimbursement for the reference therapy cannot exceed the threshold of $150,000 per QALY, patients who want Tarceva for lung cancer would pay the $32,104 difference between the drug's cost per QALY and the threshold. Patients who want Tarceva for pancreatic cancer would pay a higher price—the $500,885 difference between the cost-per-QALY and the threshold.

The threshold willingness to pay for a QALY is the key parameter that Medicare needs to set. This threshold should go up as average income grows: as Americans get wealthier, society's willingness to pay for health care should increase. And the threshold need not be hard and fast across treatments. The clinical needs of particular subgroups, together with other ethical considerations—such as whether the treatment is for an underserved population or in an emerging, high-need area—might counsel for higher or lower thresholds in particular cases. (This flexible approach is applied both by the United Kingdom's National Institute for Health Care Excellence and by the Institute for Clinical and Economic Review in the United States.) We recognize that a QALY-based threshold may not adequately pick up every dimension of value and that there may be richer alternatives. Our proposal is flexible enough to accommodate these alternatives; indeed, the National Academies could be tasked with picking the appropriate unit of value. Whatever the particular unit of value, however, our proposal would limit the extent to which Medicare pays for therapies whose cost-effectiveness is substantially out of line with what Americans can afford at current levels of income.

For this proposal to actually reduce spending, Medicare would need to prohibit supplemental insurance from picking up the marginal difference between the reference amount and the amount determined by Medicare's formulas so that consumers face the marginal cost of choosing a low-value treatment. The proposal would also require the introduction of balance billing for treatments that exceed the cost-effectiveness threshold, which is not difficult to implement but is a departure from how

TABLE 1.

Comparison of Incremental Survival Improvement and Cost of Treatment for Several Cancer Drugs across Different Approved Indications

			2014 dollars				
Drug and indication	**Median survival gain (years)**	**Typical treatment duration (months)**	**Typical treatment cost**	**Median cost per year of life gained**	**Current monthly price**	**Monthly price based on indication with most value**	**Monthly price based on achieving value of $150,000 per year of life gained**
nab-Paclitaxel (Abraxane)							
Metastatic breast cancer	0.18	4.16	25 990	145 288	6255	6255	6458
Non-small-cell lung cancer	0.08	4.16	29 988	399 840	7217	2622	2708
Pancreatic cancer	0.15	4.00	27 065	180 433	6766	5448	5625
Erlotinib (Tarceva)							
First-line treatment of metastatic non-small-cell lung cancer	0.28	8.20	51 596	182 104	6292	6292	5183
Pancreatic cancer	0.03	3.90	21 696	650 885	5563	1556	1282
Cetuximab (Erbitux)							
Locally advanced squamous cell carcinoma of the head and neck	1.64	1.39	14 292	8706	10 319	10 319	177 798
First-line treatment of recurrent or metastatic squamous cell carcinoma of the head and neck	0.23	4.16	42 875	190 556	10 319	471	8123
Trastuzumab (Herceptin)							
Adjuvant treatment of breast cancer	1.99	12.00	64 941	32 645	5412	5412	24 867
Metastatic breast cancer	0.40	10.00	54 118	135 294	5412	905	6000

Source: Bach (2014)

Note: Data on survival gain and median treatment duration come from the FDA label and accompanying publications. Treatment costs include only direct costs of the drug. "Monthly price based on indication with most value" assumes the price of the drug in its most effective setting is the appropriate reference price.

Medicare currently operates. And the proposal would have to apply to Medicare Advantage plans at the same time as it applies to traditional Medicare. Otherwise, sicker patients will select which option will provide higher reimbursement for reference therapies, raising the very same problem described with respect to plan competition according to cost-effectiveness of coverage (see Section 2B and Box 2). In other words, if traditional Medicare experiments with our proposal, but Medicare Advantage plans do not, then sicker patients will gravitate toward Medicare Advantage plans.

Whether our proposal should be extended to exchange plans and large-group commercial plans should be left to states and employers, respectively. On the exchanges, avoiding adverse selection would require each plan to adopt the same reference price for a given treatment. Once the willingness to pay for a QALY is set, everything else could be imported from Medicare's effectiveness ranking. State exchanges and large employers would be free to select a willingness to pay that is substantially higher than that used by Medicare, or different from that used by other states or competitors.

The legal changes necessary to adopt the proposal are modest. The administration has already clarified that the ACA's caps on out-of-pocket spending will not prevent employer-sponsored plans from experimenting with reference pricing (U.S. Department of Labor 2014). For the individual and small-group markets, the rules governing essential health benefits could probably be adjusted to achieve the same result, although regulators have yet to address the question.

C2. Benefits for Managing Technology

Reference pricing has been applied by the California Public Employees' Retirement System (CalPERS) to selected surgical procedures (Robinson and Brown 2013; Robinson, Brown, and Whaley 2015) and has been more widely applied for prescription drugs (Aaserud et al. 2006; Morgan, Hanley, and Greyson 2009). With respect to CalPERS, health-care experts (Robinson and Brown 2013; Robinson, Brown, and Whaley 2015) examined the impact of reference pricing on the market for cataract surgery and for knee and hip replacement surgery, for which it was associated with large price reductions (e.g., 20 percent lower per knee and hip procedure) relative to a comparable plan that did not implement reference pricing.

CalPERS-style reference pricing is different from Pearson-Bach or our variant, however. Under the CalPERS approach, the payer offers a single, fixed bundle for an episode of care and expects individuals to pay out of pocket if the provider's price exceeds that bundle. If CalPERS-style reference pricing were used for early-stage prostate cancer, for example, the bundle might be keyed to the average price of intensity-modulated radiation therapy (IMRT). For patients that received prostate cancer treatment at providers that were more expensive (either because their IMRT price was higher or because they used costlier technology, like proton beam therapy), patients would have to pay the difference out of pocket.

We, and Pearson-Bach, would instead set reference prices within providers and for classes of therapies that have similar effects. In doing so, we would stick with current payment formulas, which allow for different payments across providers. The payments, however, would never exceed a cost-effectiveness threshold. To return to the prostate cancer example, Medicare would cover either the (low) costs of watchful waiting or the (higher) costs of IMRT, depending on what the particular patient received. But Medicare would pay for proton-beam therapy only up to the cost of an equally effective alternative (here, IMRT) or a cost-per-QALY threshold, whichever was lower. The patient would have to bear additional costs only if he wanted proton-beam therapy or any other equally or less effective technology that exceeded that threshold.

Put another way, CalPERS references prices across providers, even within technologies. We propose reference pricing across technologies, even within providers. In this way, our approach is much closer to the reference pricing of pharmaceuticals in Europe, which peg reference prices within classes of drugs with similar therapeutic effects (Danzon and Ketcham 2004; Lee et al. 2012). Studies show that these approaches have reduced insurer costs by between 14 and 52 percent (Robinson 2015; Lee et al. 2012).

One additional benefit of our proposal is that for most people it will increase the value of insurance. After all, insurance would still cover cost-effective therapies. It just would not cover the full costs of certain cost-ineffective care that lots of people do not value. Insurance value would go down only for those who would prefer to buy plans that cover care that most people do not think is cost-effective. And it is not clear why those who do not value cost-ineffective therapies should be forced to pay for them for those who do. Our proposal would eliminate such cross-subsidization of cost-ineffective health-care technology.

Although still in its infancy in the United States, reference pricing holds substantial promise. With our modification, it would discourage the use of therapies that have small clinical benefits relative to their costs, but it would still allow people who truly value the therapy to get it. Innovative therapies that are superior to existing therapies would be covered, but reimbursement would not exceed a societal willingness to pay. That would in turn send a powerful signal to technology manufacturers about the size of the market for new technologies. Fewer resources would go toward the development of expensive therapies that promise only marginal health improvements. Instead, manufacturers would invest in the development of therapies that could meet the cost-effectiveness threshold (or, what amounts to the same thing, price their innovations accordingly).

C3. Challenges

The key and underappreciated challenge with reference pricing, as with all forms of competition related to technological generosity, is that it will lead to adverse selection if insurers are free to set their own reference prices. In other words, competition on reference prices is analogous to competition on technology in an unregulated market. The reference-price threshold would thus have to be set by a regulator, and not through plan-level market negotiations. Ameliorating the adverse selection associated with reference pricing thus requires a partial abandonment of the principles of managed competition, though only for reference-priced services.

Of greater concern, reference pricing could foster exploitation if patients (particularly elderly or vulnerable patients) are pressured into selecting care that exceeds the reference price. In Medicare, beneficiaries could be protected somewhat by requiring that the program receive the best price for a particular treatment. Similar rules already exist in the ACA. Nonprofit hospitals, for example, can retain their tax-exempt status only if they charge low-income uninsured people "not more than the amounts generally billed to individuals who have insurance" (26 U.S.C. 501(r)(5)). The rule could be adapted and extended to ensure that any price that exceeds the reference price is not exorbitant relative to the costs of the underlying treatment. Even with that protection in place, however, diligent oversight to prevent abuses would be essential. The possibility of such abuses counsels in favor of small-scale experiments rather than immediate, nationwide adoption. Because of the vulnerabilities of the patient population, experimentation with Medicaid should be off-limits for the time being.

To be sure, informational deficits will challenge efforts to ascertain the cost-per-QALY ratio for a broad range of therapies. But we already have decent data on pharmaceuticals and will assuredly learn more about the cost-effectiveness of medical interventions in the future. The success of reference pricing for pharmaceuticals in some European countries offers reason for cautious optimism.

A means by which traditional Medicare could introduce reference pricing may already exist. Historically, Medicare has been obligated to pay providers for their reasonable treatment costs, and not for the costs of an alternative treatment they opted not to provide. For that reason, prior to the ACA the courts did not look kindly on Medicare's tentative efforts to set reference prices (*Hays v. Sebelius* 2009). But the ACA established the Center for Medicare and Medicaid Innovation (Innovation Center), which is empowered to waive most Medicare rules in order to experiment with novel payment methodologies that may save money and improve the quality of care. The Innovation Center should use that authority to adopt reference pricing for select interventions. The Innovation Center, for example, recently introduced mandatory bundled payments for knee and hip replacements in seventy-five different geographic areas. The Innovation Center should adopt a similar approach to experiment with reference pricing to reduce the use of high-cost but less-effective therapies in traditional Medicare. We recommend starting with cancer treatments, followed by orthopedics and imaging, in selected regions.

If the pilots are successful, reference pricing could perhaps be expanded on a nationwide basis. But the Innovation Center is prohibited from expanding a demonstration project if the expansion would "deny or limit the coverage or provision of benefits" (42 U.S.C. 1315a(c)(3)). Whether reference pricing would count as a denial or limitation of coverage is an open question, suggesting that congressional intervention might be necessary before making reference pricing the national norm.

Chapter 4. Conclusion

Health economists have long made the case that technology is the long-term driver of health costs. But a mature understanding of that insight has not informed policy design, where efforts to shift financial risk to providers are the norm. However valuable for reducing waste and inefficiency, these approaches are not, by themselves, equipped to manage the rate and composition of health-care technology *innovation*, nor have any initiatives moved to address the fact that people with different incomes and preferences demand different levels of technology. The welfare consequences of making people buy the same health plan are perhaps even larger than making them purchase the same cars, computers, or colleges, which nobody would consider realistic and few would consider desirable.

We outlined a number of ways in which insurers can relax the current degree of technology demand pooling, while paying close attention to the tremendous scope for adverse selection that arises when competition over technology is allowed. Direct competition between plans that cover technology to different levels of cost-effectiveness appears to be a nonstarter, closer to science fiction than plausible policy. As a result, managed competition—the centerpiece of the ACA's new insurance reforms—may be a poor policy instrument for fostering innovation that reflects what consumers value. But second-best approaches—reforming the employer-based insurance tax exclusion, making Medicare's coverage decisions reflect cost-effectiveness, and adopting reference pricing that is sensitive to the cost-effectiveness of medical technologies—would represent marked improvements over the status quo.

We recognize the political and cultural challenges facing the policy changes we propose. Attempts to moderate health-care spending in general, and technology-driven spending growth in particular, have missed the mark for as long as policymakers have been considering them. Such a pervasive and difficult problem is not likely to have a simple, uncontroversial solution. Almost by definition, any approach likely to work will appear distasteful to many and challenge some fundamental views about what health care is and how it ought to be financed. Ours is no exception. We do, however, take some comfort in the fact that we seem to be entering an age in which consideration of cost-effectiveness is becoming more commonplace, even if it remains rare. Hospitals and integrated delivery systems increasingly are demanding and weighing data on costs, along with measures of effectiveness, for the drugs and devices they use (Lee 2014; Robinson 2015). Moreover, new cost-effectiveness based evaluation efforts are underway by organizations such as the Institute for Clinical and Economic Review, Sloan-Kettering, and others.

We cannot anticipate the precise changes to health-care technology, spending, and markets that would result from the adoption of our proposals. We can anticipate, however, that the pace and mix of technological development would more closely reflect diverging consumer preferences about the desirability of insuring against the risk of using expensive, low-value care—preferences that are, at present, largely ignored.

Chapter 5. Questions and Concerns

1. Why is more technological innovation in health care not always better?

Innovation that improves health is great, but it is not free. At a given price, consumers will make varied decisions about whether innovation is worth it. Because of demand pooling, however, we are behaving as if there is no cap on the price we will pay—that it is effectively infinite. That is obviously the wrong average value; people aren't willing to forgo consumption on everything else to pay for health care. It is also probably not the case that your price is the same as mine.

Technology manufacturers respond to how the market behaves. When they make decisions about how to spend their scarce investment dollars, they naturally look to the size of the market for new medical technologies. Because insurers generally cover all medically necessary care, and because medical necessity is cost-blind, manufacturers have incentives to devote those investment dollars to expensive new technologies that offer tiny clinical improvements over existing alternatives. They have fewer incentives to develop technologies that achieve the same clinical outcomes at much lower cost.

As health care becomes more expensive without becoming much more effective, consumers have little choice but to insure themselves against the risk of needing expensive and technologically sophisticated health care. Some of those consumers—especially lower-income consumers—may prefer to insure themselves against the risk of needing less-expensive health care of comparable effectiveness. That option is unavailable in the market, however.

2. Would adopting your proposals discourage the development of the next Harvoni or Sovaldi—drugs that are very expensive but appear to essentially cure hepatitis C?

No. The pace and mix of innovation is problematic only to the extent that manufacturers develop new technologies that consumers do not value to the same extent as alternative technologies that might have been developed. The cost-effectiveness of a treatment is a good guide, albeit a rough one, to its value: almost no one would spend a million dollars for an extra minute of life, but almost everyone would spend one dollar for an extra day. Manufacturers, however, have incentives to develop technologies that do poorly on conventional measures of cost-effectiveness. Proton-beam therapy for prostate cancer is very expensive, for example, but it has not been shown to be clinically superior to less-costly alternatives. In contrast, Harvoni and Sovaldi appear to be cost-effective, at least for an identifiable class of patients: these drugs may be expensive, but their benefits are so large that they are worth paying for, even at current prices. Our proposals aim to discourage investments in therapies that are low value (like proton-beam therapy) beyond a socially sensible level, and to encourage more investment in those that are high value (like Harvoni and Sovaldi).

3. Does the recent slowdown in health-care spending make the proposals of this paper less urgent?

A number of factors have likely contributed to the recent deceleration in the pace of health-care spending growth, including the recession, increased rates of patient cost-sharing, and reforms in the ACA. But, given that all countries experienced a slowdown, it can't be fully explained by developments in the United States. Some believe that a temporary reduction in the breakneck pace of innovation was a key driver in the recent slowdown, suggesting that spending growth will increase as innovation picks up. Indeed, spending growth is already creeping back up, and historical experience—together with the absence of revolutionary changes in the basic structure of the health-care system—suggests that such growth will consistently outpace inflation in the coming years (Chandra, Holmes, and Skinner 2013). The recent slowdown is probably a lull in the storm, not the new normal.

4. Why can't ACOs and bundled payments discourage low-value innovation?

First, payers and providers exist in a legal regime that supports, and sometimes requires, the provision of all medically necessary care. But if payments escalate to accommodate any new technology that is deemed to be medically necessary, regardless of its cost-effectiveness, shifting risk to providers only weakly constrains the adoption of high-cost but low-value technology. Experience with Medicare's DRG system is telling. When an expensive new treatment becomes the standard of care, new DRGs are created, or the payments attached to old DRGs are increased to account for the costs of that new treatment. If the pattern holds with other types of bundled

payment, their prices will increase to accommodate whatever expensive innovations become the standard of care, regardless of their cost-effectiveness. Asking providers to assume risk without addressing the underlying legal and market factors that have escalated technology-driven spending growth is thus unlikely to be a full solution.

Second, because ACO payment models are built on a fee-for-service chassis, and because the pass-through of savings from the ACO payment models to providers is incomplete, ACOs have weak incentives to limit services with large profit margins. For example, if a new hip replacement is reimbursed at $20,000 and costs the ACO only $10,000 to provide, an ACO facing a 50 percent shared savings rate would receive only $10,000 for every such procedure it discouraged. From a financial perspective, the ACO will be indifferent as to whether to provide the procedure. ACOs thus have weak incentives to limit the use of technologies that are reimbursed well in excess of their costs, as is commonly the case with new technologies. The decisions of ACOs in turn send a strong signal to manufacturers to innovate without regard to cost-effectiveness. These challenges may partly explain why neither the Congressional Budget Office (CBO; 2008, 2010) nor the CMS actuary credited ACOs with substantial savings in budget projections (Foster 2010). A recent study did find that ACOs saved some money, but provider attrition is high and the modest savings were largely offset by program costs (McWilliams et al. 2015).

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Endnotes

1. HCPCS stands for Healthcare Common Procedure Coding System. We used the carrier (physician) and outpatient files for this analysis. Therefore, our analysis misses many drugs covered under Medicare Part D, as well as technologies that are adopted by hospitals and exclusively reimbursed by the diagnosis-related group (DRG) system (although we pick up these technologies to the extent that physicians bill for delivering them in the carrier file—the form submitted for reimbursement).
2. First enacted in 1980, the nondiscrimination rule originally applied only to self-insured firms; by 2014, those firms employed 61 percent of all covered workers (Kaiser Family Foundation 2014). Although the ACA extended the rule to all group health plans (42 U.S.C. § 300gg–16), the IRS has indefinitely delayed issuing rules to implement the provision.
3. For the non-Medicaid market, this would require amending the regulations governing essential health benefits so that health plans in the small-group and individual insurance markets would not have to provide all the benefits available in existing small-group plans, as is currently the case. For their Medicaid programs, states would have to secure a federal waiver.

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Highlights

Technology adoption accounts for 30 to 50 percent of health-care spending growth. Nicholas Bagley of the University of Michigan, Amitabh Chandra of Harvard University, and Austin Frakt of the Department of Veterans Affairs propose three policy reforms to encourage developers to pursue high-value technologies that make substantial improvements to health at lower cost.

The Proposals

Tax Treatment of Employer-Sponsored Health Insurance. Congress would replace the tax exclusion for employer-sponsored health insurance with a tax credit that phases out with increasing income. The aim of this reform is to make health insurance, and ultimately medical innovation, more sensitive to the preferences of low-income employees, who currently provide an implicit cross-subsidy to their high-income counterparts for the coverage of inefficient medical technology.

Medicare Coverage Determination Process. Medicare would no longer be required to cover treatments with extremely low cost-effectiveness. In addition, the Centers for Medicare & Medicaid Services would allocate resources to strengthen Medicare's coverage determination process and Congress would increase funding for comparative-effectiveness research. Better comparative effectiveness data would help Medicare identify those treatments that have huge costs but insignificant health benefits compared to existing alternatives.

Reference Pricing with a Cost-Effectiveness Threshold. For select treatments and regions, the Center for Medicare and Medicaid Innovation would undertake small-scale demonstration pilots in Medicare and Medicare Advantage to explore reference pricing with a cost-effectiveness threshold.

Benefits

Health insurance plans in the United States—both public and private—cover virtually any medical technology, often with poor evidence of clinical effectiveness, and with little regard to cost. As a result, Americans are constrained to buy coverage for some highly inefficient technologies regardless of their willingness to pay. This lack of choice, in turn, sends a distorted signal to medical technology developers—that society is willing to pay practically any price for treatments that offer uncertain health benefits over existing technology. Consequently, manufacturers and drug companies have weak incentives to innovate in ways that drive down costs while maintaining or improving clinical outcomes. The authors' three proposals aim to encourage medical technology developers to pursue high-value innovations.

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