report

A behavioral blueprint for improving health care policy

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abstract

Behavioral policy to improve health and health care often relies on interventions, such as nudges, which target individual behaviors. But the most promising applications of behavioral insights in this area involve more far-reaching and systemic interventions. In this article, we propose a series of policies inspired by behavioral research that we believe offer the greatest potential for success. These include interventions to improve health-related behaviors, health insurance access, decisions about insurance plans, end-of-life care, and rates of medical (for example, organ and blood) donation. We conclude with a discussion of new technologies, such as electronic medical records and web- or mobile-based decision apps, which can enhance doctor and patient adherence to best medical practices. These technologies, however, also pose new challenges that can undermine the effectiveness of medical care delivery.

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Core Findings

What is the issue?

Simply increasing the share of resources devoted to health care does not guarantee successful outcomes. Behavioral science can offer insights and interventions that complement traditional policies to better manage disease and lifestyle; improve the administration of insurance; counter inefficiencies in care; increase medical donations; improve end-of-life care; and navigate new technologies.

How can you act?

1) Corporate wellness programs should incorporate behavioral insights, be evidence-based, and should ideally incorporate experimental components that expand evidence concerning best practices
2) Health insurance should be simplified and standardized, and the design of enrollment interfaces should be informed by behavioral insights
3) Inefficient medical practices should be discouraged through greater use of second opinion programs and through differential insurance reimbursement to encourage provision of high value care.
4) Defaults and active choice should be harnessed to improve end of life decision making as well as organ and blood donations.

Who should take the lead?

Policymakers, Insurance companies, healthcare providers, and employers

Providing access to affordable and quality health care is perhaps one of the most important objectives of an enlightened modern society. As the recent experience of the United States has shown, however, simply increasing the share of resources devoted to health care does not guarantee better outcomes. The United States, compared with other wealthy countries, spends a far greater fraction of its national income on health care, yet its residents have a lower life expectancy at birth, a higher infant mortality rate, and a comparatively high prevalence of obesity and chronic diseases like diabetes.[1] Although outcomes are not uniformly poor, the money that is spent is not helping everyone equally. Longevity and other health outcomes vary substantially between different demographic groups and, for low-income individuals, differ sharply across geographic regions.[2,3] These disparities stem at least in part from poor access to health care: an estimated 28 million nonelderly individuals lack health insurance, and many health services are beyond their reach.[4]

To address the high costs and seemingly low returns on health care spending in the United States, we explore ways that behavioral science can help policymakers improve health outcomes while also containing health care costs. We know the U.S. health care system best, but many of our proposed remedies could help other nations combat similar policy challenges. Although the United States is an outlier in per capita health care spending, health care consumes a substantial fraction of national income in all developed countries. Consequently, long-term cost-reducing strategies, such as those that combat obesity, are of broad interest. We organize our discussion around six key challenges: (a) encouraging healthier lifestyles; (b) expanding enrollment in health insurance; (c) aiding insurance companies in designing, and consumers in choosing, insurance plans; (d) discouraging inefficient medical practices; (e) improving end-of-life care; and (f) encouraging organ, blood, and other medical donations. We also address the potential, as well as the pitfalls, of new informational technologies such as electronic medical records and web- and mobile-based decision aids.

Insights from behavioral science have delivered significant gains in areas outside of health, such as consumer finance, through surprisingly straightforward innovations. For instance, firms that adopt automatic enrollment in 401(k) plans increase plan participation. Finding similar low-hanging fruit in the medical area has proven more challenging, however. Health care is much more complicated because it involves an unusually wide range of often competing interests, including those of patients, employers, providers, and insurers.[5] Moreover, choosing an optimal health plan is significantly more complex than choosing an optimal retirement plan. In health insurance there is no equivalent to a target date or index fund.

Nevertheless, by drawing on research across the behavioral sciences, we have identified several promising health policy interventions. Wherever possible, we rely on evidence from administrative data or field studies to forecast how these recommendations might affect the real-life behavior and welfare of patients and doctors. Field studies are rare, however, when it comes to health policy, because they face regulatory barriers and are difficult to implement. We therefore also rely on lab experiments and economic modeling to guide our recommendations.

Disease & Lifestyle Management

Many of the health problems facing the United States, as well as other nations, can be traced at least in part to unhealthy behaviors. Habits such as smoking,[6–8] following a poor diet, and leading a sedentary life[9,10] account for up to 40% of premature deaths in the United States, whereas deficiencies in health care delivery account for only 10%.[11,12]

Researchers have tested behaviorally inspired interventions to deal with these problems, including programs that strengthen incentives to exercise,[13] quit smoking,[14–16] and make healthy dietary choices.[17–20] These efforts have yielded some benefits, but the successes have generally been short-lived. One program that was successful in producing substantial short-run weight-loss using behaviorally informed incentives, for example, yielded no long-term benefit,[17] although another that provided group-based incentives (in which all individuals in a group who lost a target amount of weight each month shared a fixed prize amount) did show a lasting benefit.[21] Other interventions have focused on nudges that do not change incentives, such as nutritional labeling,[22] strategically designed cafeterias,[23] trayless dining, and packages and plates shaped and sized in specific ways[24] (reviewed in a recent meta-analysis).[25]

One promising development in recent years has been the spread of health and wellness programs in large American firms. These employee programs typically feature a mix of initiatives for chronic-disease management, health screening, and lifestyle improvement. They draw heavily on behavioral insights, including the power of small economic incentives, marketing campaigns, and rewards programs, to encourage employee engagement.[26] Although the details of program design, implementation, and take-up vary considerably across firms, the introduction of wellness programs is correlated with increased exercise, healthy eating, smoking cessation, and weight reduction among employees, and some evidence indicates that wellness programs lead to improvements in employee productivity.[27] Researchers conducting future studies should focus on finding the optimal design of initiatives for effecting sustained and cost-effective behavioral change.

We suspect that optimally designed wellness programs and health policies involve coordinated interventions that have the potential to disrupt deep-seated behaviors through a mix of education, habit formation, and social change. For example, there is little evidence that, in isolation, warning labels and educational efforts reduce cigarette use. But in the United States, when these approaches were combined with cigarette taxes, restrictions on advertising, and bans on public smoking, cigarette smoking declined substantially. Seat belt usage also became more widely adopted through such coordinated efforts.[28] Addressing other policy problems grounded in deep cultural and social norms (such as excessive drinking and unhealthy eating) may require a sophisticated coordination of traditional economic policies, including regulations and taxes, with behaviorally informed strategies designed to educate and nudge. Rather than studying the effects of individual interventions, researchers should test interventions that combine behavioral and standard economic elements using large-scale randomized controlled trials.[29]

Health Insurance Coverage & Plan Choice

Improving the administration of health insurance—making it easier for consumers to sign up for the most appropriate policies—offers perhaps the most direct example of how policy based on behavioral science could enhance medical care in the United States.

Insurance Take-Up

A basic problem with access to American health care is that a significant share of people eligible for subsidized health insurance coverage fail to enroll. One-third of eligible adults do not claim Medicaid benefits, and studies have shown that half of those who qualified for coverage from marketplaces established by the Patient Protection and Affordable Care Act (ACA) failed to sign up, opting either to forgo insurance entirely or to enroll in unsubsidized individual plans outside of the exchange.[30–32] Traditional economic models imply that people decide to not enroll because the social stigma and financial costs associated with applying outweigh perceived program benefits. However, recent research offers evidence that barriers to making competent decisions may be responsible for a substantial share of nonparticipation, particularly among the poor.[33] Millions of individuals may forgo potentially valuable insurance coverage because they are unaware of programs, are uncertain that they are eligible, or feel overwhelmed by complex bureaucratic procedures.

Behavioral research offers several strategies for increasing enrollment and take-up of available credits and subsidies. These include simplifying the enrollment process, more aggressively communicating program benefits and eligibility criteria, and providing personalized one-on-one assistance to consumers interested in signing up. Programs could also rely on defaults,

in 2016 **$1 trillion dollars** in healthcare spending is estimated to have been unnecessary

28m

non-elderly individuals who lack health insurance

40%

premature deaths related to poor lifestyle habits "one radical form of simplification would be to eliminate deductibles and coinsurance"

automatically enrolling people in health insurance unless they opt out.[34] The exchanges of the ACA were designed to simplify plan enrollment and verification of eligibility. These design features may have contributed to shrinking the ranks of the uninsured, but considerable room for improvement remains.[35]

A more structural approach to increasing enrollment in Medicaid, the Children's Health Insurance Program (better known as CHIP), and other health plans available through the government is to create a universal portal that could identify programs individuals are eligible for (by asking them a series of targeted questions) and through which individuals could enroll in federal and state benefit programs. A single, intensively marketed gateway could dramatically increase applications and enrollment for several benefit programs, particularly those available to the poor. Such a portal might resemble https://www.benefits.gov, an existing umbrella site for federal benefits.

Health Plan Choice

A second policy problem is that those who do enroll in insurance programs often make financially disadvantageous choices. Consumers are increasingly being directed toward exchanges that require comparisons across plans differing in financial cost sharing (deductibles, coinsurance, copayments, and maximum out-of-pocket expenses) as well as in nonfinancial dimensions (such as the breadth of the network of eligible providers and the insurer's reputation for processing claims). The evidence suggests that many consumers do not grasp the fundamental building blocks of insurance, and hence cannot possibly make an informed decision.[36] A number of studies have documented that in both employer- and government-sponsored exchanges enrollees often choose plans that either cost too much or provide too little insurance coverage given their circumstances.[37–39] Other studies hint that consumers may not recognize that the *bronze, silver, gold,* and *platinum* labels used in the exchanges of the ACA were designed to communicate differences in the degree of cost sharing rather than differences in the breadth or quality of coverage (that is, a bronze plan may be optimal for someone who is healthy). As a result, such choice architecture may not help enrollees choose optimal plans.[40,41] The economic consequences of potential mistakes in plan choice are significant, borne disproportionately by those with low incomes, and largely avoidable.[33,38]

Behavioral research offers strategies for helping consumers better navigate the complex decisions required for selecting the best insurance plans. These approaches include decision aids that consumers are strongly encouraged to use, clearer interfaces that highlight the tradeoffs inherent in choices, or even personalized "smart" defaults (for instance, automatically enrolling individuals in a plan with a deductible level appropriate to their needs).[42] A more promising approach, however, is to make the plans sufficiently simple that even poorly informed consumers can understand them.[43] This goal could be achieved through regulations mandating simplification and standardization of policies, much as credit card statements were changed by recent financial reforms.[44]

One radical form of simplification would be to eliminate deductibles and coinsurance, the two aspects of health insurance that most confuse consumers. The resulting copay-only plan would have fixed prices for different services, which is closer to the setup that consumers encounter when shopping for most other goods. (Such a plan would also incorporate an out-of-pocket maximum.) There is, of course, a concern that individuals insured by policies lacking deductibles will consume too much health care, leading to higher premiums for the insurance pool as a whole. But at least one health insurance company has been selling such policies for years—a sign that this route is financially viable.[45]

Efficient Use of Medical Care

The fee-for-service system of medical reimbursement, which is dominant in the United States, leads to overprovision of services by doctors and hospitals because it creates incentives for providers to perform more tests and procedures.[46] Unnecessary tests and treatments are estimated to account for nearly 1 in 3 dollars spent on medical care in recent years.[47] This implies that in 2016 alone, roughly $1 trillion of health care spending was wasted through overuse. Moreover, likely tens of thousands of patients were needlessly subjected to anxiety, invasive procedures, and the risk of medical complications.[48]

Currently, there is no consensus on how to limit unnecessary and inappropriate medical care. Many ideas have been proposed, but few seem likely to have a large impact. High-deductible health plans, for example, are widely used and have been shown to lower total spending. However, they are blunt instruments directed at consumer behavior and do not necessarily target the procedures most prone to overuse by physicians or least useful to patients.[49,50] More promising are accountable care organizations (ACOs), which, among other characteristics, are paid on a per capita, rather than per procedure, basis for a defined group of patients. ACOs have, however, experienced challenges in implementation[51] and so far have realized only modest savings.[52] They have, nonetheless, yielded improvements in quality measures and patient satisfaction and have reduced the number of procedures performed.[53–55] In the remainder of this section, we focus on three alternative possibilities for health cost reduction that we believe can be informed by behavioral strategies: reducing provider conflicts of interest, increasing the use of second opinions, and analyzing the costs and benefits of treatments and tests.

Provider Conflicts of Interest

Although correcting misaligned incentives created by fee-for-service arrangements is a daunting challenge, there is considerable scope for eliminating or reducing conflicts of interest among physicians. Current regulations that limit sales visits (a practice known as *detailing*) by representatives of pharmaceutical and medical device companies do not go nearly far enough in restricting such practices. Pharmaceutical firms continue to spend heavily on marketing, and the large majority of American physicians receive some sort of financial benefit from the industry (often in the form of food in the workplace).[56] Ample research finds that even small gifts can distort decisions, in part because physicians are not aware of their influence.[57] Essentially all researchers working in this area agree that such gifts should be prohibited.[58,59] Indeed, both Vermont and the Veterans Affairs health system ban pharmaceutical and medical device companies from providing meals to physicians. Recent data show that policies that constrain gifts have their intended effect: physicians subject to such regulations are less likely to prescribe off-label and more likely to prescribe generics.[60,61]

Improving transparency is another tactic that can have a significant impact. Research suggests that individuals who are forced to disclose conflicts of interest are less likely to accept gifts or compensation that they would be required to disclose.[62] Transparency policies often also have unexpected benefits, such as enabling scientists and the press to do more comprehensive investigations. However, no research has shown that patients benefit directly from receiving information about physician conflicts and, indeed, the opposite may be the case.[63,64] Targeted transparency rules may thus require disclosure not directly to patients but to a centralized database, which could be automated and not take up valuable physician time.

Increased Use of Second Opinions

Second opinion programs (SOPs) offer a potentially quick, simple, and economical way to reduce inappropriate and unnecessary medical care in the United States. SOPs were popular for surgical procedures in the 1970s and early 1980s but fell out of favor despite promising evaluations.[65–67] However, technology that has since become available, such as electronic medical records, has the potential to vastly increase the efficacy and cost-effectiveness of SOPs. These programs rely in part on the idea that most people would prefer not to undergo surgery that is, at best, unlikely to benefit them and, at worst, harmful. Moreover, SOPs can be implemented quickly and independently of other reforms.

A successful SOP would target tests and treatments that studies suggest are often of questionable value.[68] Obvious candidates would be costly surgical procedures such as knee or back operations,[69,70] which appear to offer medical benefits only in a fraction of the cases for which they are performed. Most SOPs have been entirely voluntary, resulting in low usage rates. One way to encourage more patients to obtain second opinions would be to schedule them by default for specific tests and procedures and to offer incentives for taking advantage of them (for example, waiving the copays for the second opinion and perhaps providing a discount on premiums). To minimize conflicts of interest and tacit collusion among health professionals practicing together, second opinions, where feasible, should come from physicians outside of the provider network of the original doctor recommending the test or treatment.

In the Netherlands, a program mandating double evaluations of mammograms (by two independent experts, with a procedure for adjudicating disagreements) has led to a false positive rate half that of the United States—and with very few false negatives.[71] This SOP has resulted in substantial cost savings from avoiding unnecessary follow-up testing and treatment and spared women from needless anxiety and surgical intervention.

Evaluating the Merit of Tests & Treatments Using Cost–Benefit Analysis

Perhaps the most obvious approach to reducing excess health care utilization is for public and private insurance to stop covering tests and treatments of dubious value. In the United Kingdom, the National Institute for Health and Care Excellence (NICE) publishes guidelines that determine the National Health Service's coverage of health care technologies for specific diseases and conditions. Such an agency is essential for making impartial, credible decisions that trade off costs and quality. In the United States, the Agency for Healthcare Research and Quality (AHRQ) played a similar role after its creation in 1989, but it encountered stiff opposition from pharmaceutical companies and physician groups when it put forward proposals that would have limited funding for certain procedures and drugs. The agency today focuses primarily on the safety and quality of medical services, rather than the efficacy of specific treatments.

Any NICE-like agency in U.S. medicine should seek to avoid some of the mistakes that can occur when decisions rely only on cost–benefit analysis. For instance, making cost–benefit analyses based on QALY (quality-adjusted life year, a measure that assesses the value of medical interventions) can produce recommendations that are widely viewed as misguided.[72] A QALY analysis might suggest that one health condition is 10 times as bad as another. Applying these numbers to policy suggests that if costs to treat each condition are similar, policymakers should judge it equally valuable to treat 10 people with the milder condition or one person with the more severe condition. Yet, given a choice between these two alternatives, an overwhelming proportion of survey respondents expressed a preference for treating the smaller number of people with the more severe condition. Behavioral science can contribute to better decisionmaking by providing tested ways to elicit public and expert input as to which tests and procedures should be covered, as well as refined methods of converting such inputs into policy recommendations.

End-of-Life Care

By one composite measure of the quality of end-of-life care, the Quality of Death Index, the United States ranks ninth out of 80 examined countries.[73] Although the United States scores well on several dimensions of quality of death (for example, in the availability of palliative care professionals), affordability is an issue in this domain of health care as well. Large numbers of patients end up receiving treatments that are both more costly and more burdensome than desired or expected.

Many terminal patients do not want to undergo painful and unpleasant life-extending measures. When advance directives default to comfort care (versus extending life regardless of the “communication failures during the terminal stages of illness are a well-documented source of patient anxiety”

discomfort), people tend to choose limited treatment options.[74,75] Avoiding extreme life-saving measures, however, can be hindered by a number of barriers. For instance, health professionals may be reluctant to provide information to patients about end-of-life care if they are uncertain about the accuracy of their prognoses.[76] They also often deliver prognoses that are too optimistic, overestimating the length of survival,[77] and these overoptimistic prognoses discourage patients from opting for comfort options even when the possibility of recovery is remote. In addition, advance directives are only meaningful if physicians adhere to them, which they often do not, in part because many view prolonging life as their professional role. Families, too, may overrule the decisions of the patient, and patients themselves may not update their recorded wishes to reflect changes in goals of care over time.[78,79] Finally, physician–patient communication failures during the terminal stages of illness are a well-documented source of patient anxiety, family distress, and physician burnout.[80]

Behavioral research points to several interventions that could potentially improve end-of-life care. For example, electronic medical records could be programmed to provide prompts that trigger advance care planning discussions between doctors and patients with serious illnesses. Health care systems could provide incentives to increase the number of conversations between doctors and patients about treatment preferences and goals of care. Medicare currently does pay physicians for advance care planning—specifically for discussing with patients advance directives and living wills—although such consultations still appear to occur relatively rarely.[81] In addition, health care systems could further expand the number of physicians trained in palliative care. Regulating bodies could also urge the development of medical school curricula that train doctors in how to best communicate prognostic information and engage in conversations that make patients and family conscious of the emotional pain that can come with highly invasive life-extending measures.

Medical Donations

Donations of blood, plasma, bone marrow, other tissues, and organs can save lives,[82] improve health outcomes,[83] and decrease medical costs.[84] This area is particularly ripe for policy informed by behavioral research, because the logical alternative—financial incentives for donation—is deemed repugnant for many types of donations, and is thus, in many cases, prohibited.[85,86]

For blood donations, studies have shown that social recognition for frequent contributions encourages regular donors to give more often.[87] Gifts and the elimination of financial disincentives for donating (for example, by providing free, convenient parking) also lead to more contributions.[88,89] For organ donation, allocation rules that prioritize giving organs to registered donors or to the next of kin of deceased donors have been shown to lead to more registrations and an increased rate of next-of-kin consent.[90–94]

An opt-out system—in which individuals are presumed to be registered organ donors unless they decline that option—can dramatically increase the number of registered donors,[95] and ultimately, the rate of transplantation.[96] Such a system is common in many countries and was most recently adopted in Wales in 2015.[97] However, an opt-out system raises ethical concerns and the possibility that relatives may be more likely to oppose organ donation if the deceased’s wishes remain unclear. Requiring people to make an active choice when they visit the Department of Motor Vehicles might seem to provide an ethical and practical compromise approach, but was found to lower sign-up rates in California.[98]

Further experiments could explore different ways to frame the active choice to become an organ donor. In *enhanced active choice,* for instance, the desired option is worded in a way that encourages choosing that option.[99] In a field experiment in the United Kingdom, emphasizing reciprocity was shown to increase registration rates compared with a no-reciprocity condition and other framings.[100]

New Technologies to Improve Medical Care

New technologies, such as electronic medical records and digital decisionmaking aids, are taking root in American medicine. These tools can be enlisted to change doctor and patient behaviors for the better.

Electronic Medical Records

Electronic medical records, which are increasingly used by doctors during patient visits, provide a unique opportunity to intervene constructively and systematically in the provision of medical care. They offer relatively easy ways to implement defaults in patient care, although one study found that defaults mainly affected the provision or nonprovision of services that were of marginal value.[101] In an approach somewhat more heavy-handed than a simple default, when the electronic medical record system was set up to request a short, written justification for what was likely to be an inappropriate antibiotics prescription, the incidence of such prescriptions fell by 75% (a mere prompt, by contrast, did not have an effect).[102] Regulations requiring electronic medical record systems to flag inappropriate prescriptions, and asking doctors to provide justifications for their actions, would likely not impose much of a burden but could substantially reduce the number of deaths (and the costs) associated with antibiotics resistance. Physicians have also been found to prescribe generic medicines more frequently when generics are the default in the electronic medical record system, allowing patients and insurers to save costs.[103]

Electronic medical record systems could also help patients comply with their treatment plans. Such systems, for example, can provide alerts to physicians if prescriptions are not filled on schedule (which suggests a lack of adherence to a drug regimen). Electronic medical records could also be used to send automatic notifications to patients, such as a message defaulting them into a particular appointment time, allowing them to opt out or reschedule. This approach has been shown to increase vaccination rates compared with a letter asking patients to make an appointment.[104] In addition, checklists used during interactions between physicians and patients have been shown to reduce adverse outcomes, including death.[105–108] Integrating checklists with electronic medical records may thus reduce errors.

Electronic medical records are, however, an enormous source of physician dissatisfaction,[109] and interventions of this type should be used judiciously. Like other behaviorally inspired interventions, those that work well in isolation might be less effective or even have perverse effects when combined (for example, excessive numbers of alerts might lead physicians to ignore all alerts).[110] These concerns show the need for extensive field testing of interventions so that such problems can be identified before a new policy is rolled out widely.

Beyond their ability to influence physician behaviors, electronic medical records may also provide information that could be analyzed using big data methods to obtain new insights on diseases and treatments. Such applications are currently stymied by the proliferation of different systems that cannot talk to one another, as well as by barriers to data access caused by privacy regulations. Electronic records also offer patients direct access to information such as test results that, in theory, can aid in the self-management of chronic disease and preparation for clinic visits. Unfortunately, many existing patient portals to electronic medical records are not sufficiently user friendly to enable large numbers of patients to access information effectively.[111]

Nonetheless, we believe that physician adoption of information technology, including electronic medical records and diagnostic systems, may turn out to be crucial to the efficient provision of health care services. To date, there is still limited empirical research examining the effectiveness of information technology and how it might be modified to fit the needs of different physicians, patients, and organizational structures. Some research has shown that information technology improves outcomes for certain patients with complex health problems (but not simpler cases).[112] Other work indicates that the adoption of information technology is correlated with improved process-based care (such as management of diabetics) and that it reduces overtesting.[113] One key issue that remains unanswered is whether information technology's overall impact is productive (for instance, helping physicians perform their jobs more effectively) or nonproductive (for instance, allowing physicians to better take advantage of existing financial incentives without improving the quality of care).

Digital Decision Aids

Web- and mobile-based decision aids—which enable patients to better understand the available treatment options and help doctors explain them—could overcome a long-standing obstacle to optimal treatment: reluctance to question doctors' recommendations. Patients are often unaware of how medical decisions could depend on their personal preferences, partly because they commonly view clinicians as authority figures.[114] Yet, patients who are not adequately informed or engaged in the decision-making process may receive unwanted treatment or overtreatment.[115–117] Moreover, both patients and doctors have cognitive and affective biases that can impair the processing of information and decisionmaking.[118–120] Physicians are often not trained to engage in shared decisionmaking, risk communication, and emotion-focused conversations, and hence they may have difficulty involving patients in these activities, even when they are conscious of the need to do so.[121 122]

Patient decision aids, which provide consumers with treatment options in easy-to-understand language, are a promising tool. They have been shown to increase patient knowledge, improve the accuracy of risk perceptions, align patient preferences with treatment, and strengthen patient engagement.[123] Seven states (California, Connecticut, Massachusetts, Maine, Minnesota, Oregon, and Vermont) now mandate or incentivize (by reducing provider liability) the use of certified, high-quality decision aids—a model other localities should emulate. Additional strategies for improving patient decisionmaking involve providing telehealth or e-health options as spaces for patients to ask questions of providers after having had time to reflect on information they received during an appointment. Other opportunities include the development of systems that automatically trigger appropriate decision aids for patients (for example, e-mailing the patient a relevant link when a diagnosis is entered into the electronic medical record), public recognition of providers for generating and implementing best practices in shared decisionmaking, training of medical students and residents in patient engagement, and efforts to make shared decisionmaking billable and reimbursable for clinical time.[121 124]

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Conclusions

In this article, we highlighted several of the most promising applications of behavioral science to health policy and health care. These proposals target a range of health stakeholders, from consumers and practitioners to the broader insurance system, and emphasize solutions that are feasible in the near term or have long-term potential for improving health outcomes and reducing health expenditures.

In the domain of consumer finance, understanding of how individuals might respond to behaviorally informed policy has benefited greatly from the proliferation of randomized field experiments. The recently created Consumer Financial Protection Bureau (CFPB) has, for example, worked with an issuer of a prepaid debit card to improve savings among those who may not have access to traditional bank accounts.[125] The CFPB's ability to pretest policies has benefited from the authority it has been granted to confer regulatory exemptions to firms that facilitate research on consumer protection.

Such public–private research collaborations are a highly promising development that can bring in substantial resources and expertise at little or no cost to the government. A similar institution in the health domain could greatly extend health policy research by granting regulatory exceptions when warranted. Such an organization could offer waivers to insurance firms, health care providers, and pharmaceutical companies so that these groups could develop randomized controlled trials that explore the effects of policy changes. For example, an insurer might be permitted to recommend insurance plans to customers on the basis of their personal health data, or a drug manufacturer might offer incentives and patient outreach to promote adherence to drug regimens.

Although there is scope for improving the quality of patient and provider decisions through low-touch interventions, such as digital decision aids, simpler information displays, or consolidated enrollment portals, the most promising behaviorally informed health reform will take the form of structural changes inspired by a deep understanding of psychological mechanisms. Examples that we discussed are simplified medical insurance policies (without deductibles and coinsurance), mandated second opinion programs, and active-choice organ donation programs. Such ambitious interventions require significant buy-in by political leaders, health care professionals, and the general public and will necessitate broad engagement among these stakeholders. If buy-in can be realized, however, the proposed set of policies could substantially contribute to improving the health of the public. Our article has emphasized challenges in the U.S. health care system, but many of these proposals should be equally effective in other countries and are independent of the specifics of how health care is organized and funded. Although incentives for physicians and a requirement to obtain a second opinion may be easier to achieve with a nationalized health provision system (as in the United Kingdom), a competitive market of insurance companies (as in the United States) may be better adapted to providing novel patient-engagement tools and corporate wellness programs.

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