practices. We will use best practices in system science and engineering to improve the quality, safety, and consistency of veterans' experience regardless of the site of care. We will also continue to use our health services outcomes research program and "lean" management techniques to improve the effectiveness of our delivery system.

In reimagining the future of VA health care delivery, it is vital to bear in mind the VA's roles in research, education, innovation, and emergency preparedness. We believe our researchers should continue their important work to improve the health of not only veterans but all Americans. And our doctors, nurses, and other providers should continue to train tomorrow's health care professionals.

An audio interview with Ashish Jha is available at NEJM.org

The road ahead is clear, as the VA transforms itself to address future requirements. We need to strengthen our business processes so as to support clinical excellence and accelerate operational improvements to better serve veterans. By rethinking our systems, working with our current partners, and exploring new public–private partnerships, the VA is transitioning from a loose federation of regional systems to a highly integrated enterprise. Although we have requested and are awaiting several legislative changes to allow the VA to consolidate programs for care in the community and to have greater flexibility in spending for services provided by the private sector, much work has already begun, and we are engaged in intensive planning for the changes that require Congressional approval. Failing to execute a plan that supports strong and enhanced core services within the VA would have serious consequences for U.S. veterans. A well-run VA health system is essential to the nation and to U.S. medicine. The stakes are high, but we believe this vision is the best path toward delivering on President Abraham Lincoln's promise to care for those who have "borne the battle."

Disclosure forms provided by the author are available with the full text of this article at NEJM.org.

From the Department of Veterans Affairs, Washington, DC.

1. Trivedi AN, Grebla RC, Wright SM, Washington DL. Despite improved quality of care in the Veterans Affairs Health System, racial disparity persists for important clinical outcomes. Health Aff (Millwood) 2011;30:707-15.
2. Nuti SV, Qin L, Rumsford JS, et al. Association of admission to Veterans Affairs hospitals with mortality and readmission rates among older men hospitalized with acute myocardial infarction heart failure, or pneumonia. JAMA 2016;315:582-92.
3. Comparison of quality of care in VA and non-VA settings: a systematic review, September 2010 (http://www.hsrd.research.va.gov/publications/esp/quality.pdf).

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Health Care Tax Inversions — Robbing Both Peter and Paul

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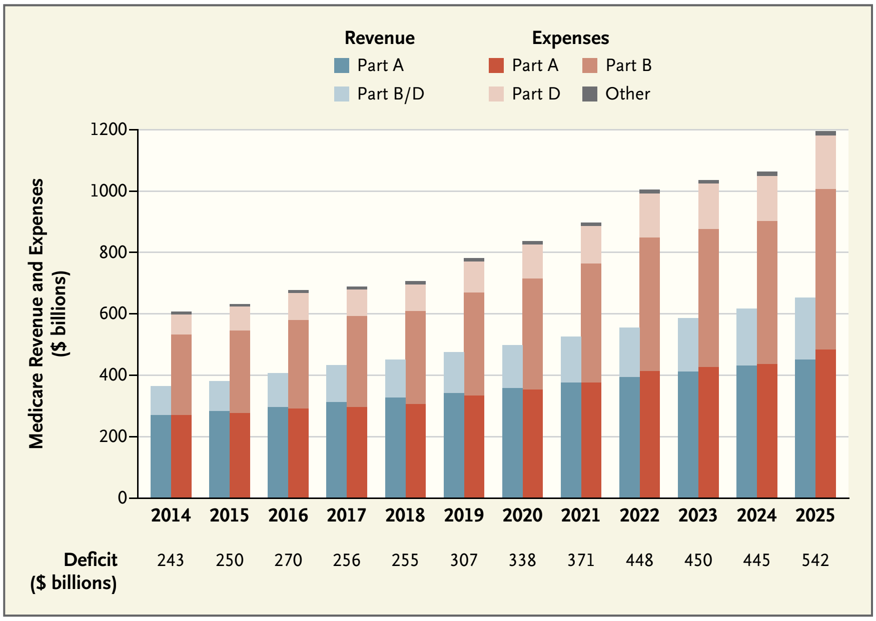
On November 23, 2015, Pfizer announced that it would merge with Ireland-based Allergan. The resulting organization, valued at about $160 billion, will be the largest pharmaceutical company in the world.

The chief motive for the merger is financial: to avoid paying higher corporate taxes, U.S. companies have started to merge with smaller companies based in countries with lower tax rates to effectively become foreign companies. This strategy is known as "corporate inversion" or "tax inversion," and it's become particularly attractive for health care companies.

The United States has one of the highest corporate tax rates in the world, at 35%.[1] Most companies, however, never pay the full tax rate. Pfizer, for example, made $12 billion in pretax profit in 2014 but paid only $3.1 billion in taxes because of its tax-management practices. Ireland has the second-lowest corporate tax rate in the world, which will bring Pfizer's effective tax rate to 7.7% after the Allergan merger.[1] Medtronic was previously the largest U.S. health care company to successfully "invert," through its takeover of Covidien, which started as a U.S.-based company before it inverted to Bermuda and subsequently moved to Ireland. Another large U.S. pharmaceutical company, AbbVie, failed to merge with Ireland-based Shire after being deterred by the Treasury Department: the Obama administration introduced last-minute regulations that imposed new taxes on the overseas cash AbbVie was hoping to use to fund the deal, a move made specifically to prevent in-



Trends in Medicare Revenues and Expenses

Data from the Congressional Budget Office reveal rising Medicare expenses without a matching increase in offsetting receipts. This deficit is funded by general tax revenues. Medicare Parts B and D accounted for 55% of Medicare expenditures in 2015 and are projected to account for 59% in 2025.[2]

versions. These regulations, however, did not deter Pfizer from undergoing tax inversion.

Although corporate inversion has been roundly criticized, critiques haven't focused on the special issues that are raised when a U.S. health care company pursues this strategy. Pharmaceutical firms benefit from the favorable tax treatment of health insurance in the United States, which includes premiums that are tax-free to employers and employees. Such firms also generate substantial revenue from purchases made by Medicare, Medicaid, and the Veterans Health Administration. These programs are supported by revenue from federal taxes — precisely the taxes companies are trying to avoid by inverting — and require a massive amount of funding each year. Our analysis of data released by the Congressional Budget Office in March 2015 showed that Medicare required $250 billion from general tax revenues, and its need will grow to $542 billion by 2025 (see graph).[2] The parts of Medicare that pay for most prescription medications, Parts B and D, received 76% and 80%, respectively, of their funding from federal general tax revenues in 2015.[2]

Like most pharmaceutical firms, Pfizer makes a substantial profit from federal health programs, selling its brand-name pharmaceuticals in the United States at prices higher than anywhere else in the world. In 2013, the mean unit prices for the Pfizer drugs Enbrel (etanercept) and Celebrex (celecoxib) were $2,225 and $225 in the United States, respectively, according to commercial claims data.[3] The same drugs were available for about half those prices in the United Kingdom: $1,117 and $112, respectively.[3] Health care companies pursuing inversion want to minimize their tax payments, which support federal health programs, while continuing to aggressively price their products in the lucrative U.S. market.

The increasing migration of life-sciences companies to foreign shores may also affect the industry's relationship with the U.S. government. The government has long viewed pharmaceuticals as a domestic industry and has dug deep to protect its interests. Most recently, in December, Congress made permanent a tax credit granted to pharmaceutical companies for research and development. In negotiations over the Trans-Pacific Partnership trade agreement approved in October and currently under review in Congress, the United States was accused of going out of its way to secure intellectual-property protections for pharmaceutical companies. The government has also supported the pharmaceutical industry in other agreements, such as the Agreement on Trade-Related Aspects of Intellectual Property Rights administered by the World Trade Organization. Continuing support of these policy approaches would be challenging if the United States became a net importer of biomedical technology.

One important question is whether corporate inversions, or even repatriation of offshore profits, would have any effect on investments in innovation by the life-sciences industry. Given our global economy, this question is difficult to answer. Life-sciences companies typically have research centers located in many different countries, and the location of a company's headquarters isn't essential to its decisions about investments in innovation. From a funds-management perspective, clinical trials — the most expensive part of clinical development programs — are a global enterprise, so repatriated dollars would need to be sent back offshore to fund these efforts. Finally, there's the question of whether the effective tax rate would affect investment decisions, since additional funds could be available to firms with lower tax rates. These dollars could be invested in research, or they could be returned to shareholders through dividends or share-buyback programs. There are empirical data to address this question: the United States gave corporations a repatriation holiday in 2004, letting overseas cash return to the United States with a 5.25% effective tax rate. Pfizer repatriated $35.5 billion, the largest amount brought back by any single company. This repatriated cash didn't result in increased research funding in subsequent years. Rather, the company proceeded to cut 11,748 U.S. jobs between 2004 and 2007.[4]

We believe the government needs to devise policies that discourage companies from pursuing tax inversion, while ensuring that it doesn't inadvertently punish those that don't invert. Some experts have suggested, as a first step, that the government determine the home country of multinational pharmaceutical and medical device firms, and then offer to accept the same prices in the U.S. market that the firms charge to government purchasers in their new tax havens.[5] This strategy, which would not apply to companies that were never based in the United States, could blunt corporate interest in tax inversion, yet it wouldn't disadvantage companies that choose to remain based in the United States. Implementing this suggestion would require Congress to pass new federal legislation to empower the Centers for Medicare and Medicaid Services (CMS) to negotiate prices directly with manufacturers. Another option would be to allow reimportation of drugs produced by inverting firms, which could be accomplished through authorization by the secretary of health and human services.

The government could also consider altering Food and Drug Administration (FDA) policies to prevent inverting companies from qualifying for priority review of new drugs or from using or receiving priority-review vouchers, and it could potentially restrict such firms' access to FDA expertise in regulatory review meetings. CMS could require products produced by these firms to undergo National Coverage Determination review before they become eligible for Medicare reimbursement. Of course, these approaches could hinder patients' access to new therapies. More directly, Congress could address inversions by making changes to U.S. tax policy — for instance, by levying exit taxes on inverting companies.

Developing new therapies — not avoiding taxes — remains the most durable way for pharmaceutical companies to remain profitable. Life-sciences companies gain substantial benefits from continuing to be based in the United States, including access to funding from the National Institutes of Health and participation in a regulatory structure that is tremendously advantageous to industry. Firms that flagrantly manipulate this environment through inversions jeopardize their long-term growth.

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1. Pfizer's Allergan deal is an even bigger tax dodge than it's claiming. Fortune. November 24, 2015 (http://fortune.com/2015/11/24/pfizer-allergan-taxes).
2. Congressional Budget Office. Medicare baseline. March 9, 2015 (https://www.cbo.gov/sites/default/files/cbofiles/attachments/44205-2015-03-Medicare.pdf).
3. International Federation of Health Plans. 2013 Comparative price report: variation in medical and hospital prices by country. 2013 (http://static1.squarespace.com/static/518a3cfee4b0a77d03a62c98/t/534fc9ebe4b05a88e5fbab70/1397737963288/2013+iFHP+FINAL+4+14+14.pdf).
4. U.S. Senate Permanent Subcommittee on Investigations. Repatriating offshore funds: 2004 tax windfall for select multinationals. October, 2011 (https://www.gpo.gov/fdsys/pkg/CPRT-112SPRT70710/pdf/CPRT-112SPRT70710.pdf).
5. Bach P. Why the U.S. should pay Irish drug prices if Pfizer wants to pay Irish tax rates. Washington Post. December 7, 2015 (https://www.washingtonpost.com/news/wonk/wp/2015/12/07/why-the-u-s-should-pay-irish-drug-prices-if-pfizer-wants-to-pay-irish-tax-rates).

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