redesign efforts to ensure that imaging is appropriate for all care pathways. Although stewards are the most important component of any imaging outreach strategy, CDS can convey additional advantages. Tools embedded in CDS systems can educate ordering physicians regarding the relative radiation dose and approximate cost of each test. And appropriateness profiles can be analyzed to target specific knowledge gaps for educational interventions.

Implicit in this model is the idea that imaging stewards will be able to leverage content that's based on peer-reviewed evidence and expert consensus and contained within order-entry and other systems. Professional society guidelines embedded in CDS rule sets provide a scalable, updatable mechanism for diffusing best practices and establishing standards and benchmarks for scoring the appropriateness of each order. We believe that the more service-oriented components of stewardship — such as directly engaging referring physicians regarding orders and ordering patterns — are best maintained at the local level.

Health care organizations can master stewardship and create value at the point of care by determining the appropriate blend of centralized and decentralized resources to support their provider communities. In locations where value-based contracting is prevalent, providers with mature stewardship capabilities may request that payers delegate imaging utilization management directly to them, waive RBM preauthorization, and consider alternative payment arrangements. Having local ownership of utilization management should allow providers to streamline imaging workflows for different patient populations. Providers in areas where fee-for-service payment remains dominant may choose to focus early stewardship efforts on selected at-risk populations or those for whom imaging is currently unmanaged, to avoid adding a new layer of administrative burden.

Ultimately, health system leaders, referring physicians, and imaging specialists may take the concept of stewardship in new directions, developing a more robust stewardship model that encourages the use of imaging technology to improve patient outcomes and more reliably create value at the point of care.

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Reforming the Veterans Health Administration — Beyond Palliation of Symptoms

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The Veterans Health Administration (VHA) is one of the largest health care delivery systems in the United States, with 9.1 million enrollees, 20,000 physicians, 1600 facilities, 288,000 employees, and a $59 billion budget. In response to highly publicized concerns regarding delayed access to care, preventable deaths in patients awaiting care, and falsification of lists to make waiting times appear shorter, Congress passed and President Barack Obama signed the Veterans Access, Choice, and Accountability Act of 2014. In addition to expanding non-VHA treatment options for veterans, this law requires a comprehensive, independent assessment of 12 areas of VHA care delivery and management (see box). Eleven assessments were conducted under the Centers for Medicare and Medicaid Services Alliance to Modernize Healthcare, operated by the MITRE Corporation; the assessment of one area, "Access Standards," was conducted by the Institute of Medicine. An independent blue-ribbon panel of experts was formed to examine

Choice Act Assessments.

- Demographics
- Health care capabilities
- Care authorities
- Access standards
- Workflow, scheduling
- Workflow, clinical
- Staffing and productivity
- Health information technology
- Business processes
- Supplies
- Facilities
- Leadership

and advise on all aspects of data collection and review, best practices, assessments, and recommendations. That panel, which we chaired, unanimously endorsed an integrated report, which was delivered to Secretary of Veterans Affairs Robert McDonald and Congress on September 1, 2015, and publicly released on September 18.[1]

The report contains numerous operational recommendations for the near term, few of which are unexpected. For example, enhanced physician productivity will require more exam rooms, increased staff-to-patient ratios, elimination of administrative silos, and greater authority granted to service chiefs for overall management of resources. The VHA has identified more than $51 billion in total capital needs over the next 10 years, far exceeding any budgetary expectations. We recommend a complete overhaul of VHA facility construction, the costs of which are double those in the private sector; also, the execution times for VHA facility construction are substantially longer than those for both the private and public sectors. Moreover, our report argues that the VHA must adopt a systems approach to solving challenges — and cease viewing each issue as an isolated problem to be remediated.

More important than operational recommendations, however, are the root-cause issues the report identifies that have prevented implementation of reforms already highlighted in 137 previous VHA assessments. At a minimum, the following core issues must be addressed before any significant, sustainable improvements in the VHA can be ensured.

First, the urgent need for strategic vision and dynamic decision making argues for a new VHA governance board that is representative, expert, empowered, and relatively insulated from direct political interactions. In the short term, several models could be used, including some based on the 1955 U.S. President's Commission on Veterans' Pensions or the Defense Base Closure and Realignment Commission. Ultimately, Congress and the President should consider a new structure that approximates a federal not-for-profit corporation and is empowered to improve quality, patient experience, personnel management, data validity, and cost-effectiveness.

The board will have to determine and clearly communicate the future mission of the VHA. In 2014, a total of 9.1 million of the 21.6 million U.S. veterans were enrolled in the VHA, but only 5.8 million were actual VHA patients, and these patients relied on the VHA for, on average, less than 50% of their health care services. Approximately 60% of that reliance was driven by a lack of health insurance — a driver that is now diminishing under the Affordable Care Act and various state initiatives. These trends, combined with historical VHA problems, necessitate reconsideration of whether the VHA should aim to be the comprehensive provider for all veterans' health needs or should emphasize more limited centers providing specialized care, such as the National Intrepid Center of Excellence for traumatic brain injury and psychological health, and should use non-VHA health care networks for the majority of veterans' health care needs. A new board will have to evaluate veterans' needs in the context of regional VHA and non-VHA capabilities; such an evaluation may result in the elimination of some VHA inpatient beds, a shift to VHA outpatient or community resources, an increasing emphasis on non-VHA providers, or some combination of adjustments.

Second, the VHA is experiencing a crisis in leadership because of an organizational environment that's perceived as disempowering, frustrating, and occasionally toxic. The VHA scored in the bottom quartile on every measure of organizational health we assessed. VHA leaders are accountable for quality and patient satisfaction but have little authority or flexibility. Risk aversion and mistrust further inhibit innovation and demoralize otherwise passionate and committed professionals. Administrators' compensation is frequently 70% below that in the private sector. As a result, at the time of our assessment, 39% of senior leadership teams at VHA medical centers had at least one vacancy and 43% of network directors had "acting director" status; 16% of

VHA medical centers lack a permanent director. Moreover, more than two thirds of network directors, nurse executives, and chiefs of staff are eligible for retirement, as are 47% of medical center directors.

The solution, we believe, is multidimensional but starts with immediate changes in practice that will ultimately change culture. It requires pushing decision rights, authority, and responsibilities down to the lowest appropriate administrative level and increasing the appeal of senior leadership positions by pursuing regulatory or legislative changes that create new classifications for VHA leaders. It's important for VHA leadership to foster a ubiquitous patient-centric culture that encourages sharing of best practices (and failures), values feedback, and catalyzes innovation. To enhance continuity, we believe Congress should consider longer terms for key VHA leaders and medical center directors.

Third, the recent growth of the VHA Central Office (by more than 160%) has not improved performance — the VHA scores in the bottom quartile in 35 of 37 management practices as compared with peers assessed for the report — but has added new onerous administrative burdens for professionals who deliver patient care. We call for a shift in VHA focus from central bureaucracy to supporting clinicians in the field and clearly articulating what decision authority resides at each level of the organization. Most important, a systematic approach is needed for identifying and disseminating best practices. The report highlights many examples of leading VHA regional and site-based practices that achieve national excellence in care outcomes and accessibility.

Fourth, the VHA lacks fundamental enterprise systems and data tools that are required to achieve high-quality care and patient satisfaction. Once cutting edge, the Veterans Health Information Systems and Technology Architecture (VistA) electronic health record (EHR) has been stagnant for a decade, and clinicians are frustrated with the lack of integration and mobility and the feature deficits as compared with commercial systems. Moreover, the existence of approximately 130 different variations of VistA impedes system changes and dramatically inflates costs. The lack of interoperability between VistA and the Department of Defense systems introduces unacceptable risk into transitions of care.

VHA systems for patient scheduling, staff hiring, supply-chain management, billing, and claims payment are stagnant, lack automation, and have more limited capabilities than their private-sector equivalents. Data aggregation across the VHA is highly problematic, and data validity is often impossible to verify. Patients consistently complain about the lack of patient-centered navigational tools. We believe that the VHA must provide these fundamental tools to both providers and administrators and should quickly choose between implementation of a commercial EHR and continued custom development and maintenance of VistA.

The blue-ribbon panel is encouraged by the VHA leadership's stated commitment to improving care and access and by passage of the Choice Act, which mandated our review and established a VHA Commission on Care that's currently chaired by Nancy Schlichting, chief executive officer of Henry Ford Health System. These steps are promising, but they will be insufficient unless the core issues we identified are addressed. Although VHA transformation will be a Herculean challenge, the country's current shared sense of urgency and uniform commitment to veterans requires settling for nothing less than high-quality care at sustainable cost and within a culture comparable to that of the best health care organizations.

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From the Health Policy Institute, Texas Medical Center, Houston (B.P.G.); and Project HOPE, Bethesda, MD (G.R.W.). Drs. Giroir and Wilensky cochaired the blue-ribbon panel on the Veterans Health Administration; the other members of the panel were Katrina Armstrong, Debra Barksdale, Ronald R. Blanck, W. Warner Burke, Christine K. Cassel, Peter W. Chiarelli, George Halvorson, Robert L. Mallett, Robert Margolis, George Poste, Robert Robbins, Mark D. Smith, Glenn D. Steele, and Beth Ann Swan.

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