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Implications for informatics given expanding access to care for Veterans and other populations

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ABSTRACT

Recent investigations into appointment scheduling within facilities operated by the US Department of Veterans Affairs (VA) illuminate systemic challenges in meeting its goal of providing timely access to care for all Veterans. In the wake of these investigations, new policies have been enacted to expand access to care at VA facilities as well as non-VA facilities if the VA is unable to provide access within a reasonable timeframe or a Veteran lives more than 40 miles from a VA medical facility. These policies are similar to broader health reform efforts that seek to expand access to care for other vulnerable populations. In this perspective, we discuss the informatics implications of expanded access within the VA and its wider applicability across the US health system. Health systems will require robust health information exchange, to maintain coordination while access to care is expanded. Existing informatics research can guide short-term implementation; furthermore, new research is needed to generate evidence about how best to achieve the long-term aim of expanded access to care.

Keywords: veterans health, medical informatics, health services research, health services accessibility

Recent investigations into appointment scheduling at the Phoenix Veterans Affairs (VA) Health Care System illuminate systemic challenges¹ in meeting the VA's goal of providing timely access to care for all Veterans. In the wake of these investigations, US policymakers enacted the Veterans Access, Choice, and Accountability Act of 2014 (VACAA),² which chiefly expands access to care at VA facilities as well as non-VA facilities if the VA is unable to provide access within a reasonable timeframe or a Veteran lives more than 40 miles from a VA medical facility. While others have discussed a broader set of changes to improve care for Veterans,³ we focus here on the informatics implications of expanded access to care given its central role in the spurious scheduling workarounds in the VA, its focus in VACAA, and its wider applicability across the U.S. health system. We suggest key strategies required to implement expanded access, and the informatics implications of expanded access.

THE VETERANS ACCESS, CHOICE, AND ACCOUNTABILITY ACT OF 2014

Although the new law, signed by the President on August 7, 2014, contains many provisions, its central directive seeks to re-organize the delivery and management of health care throughout the VA system. Here we briefly review key components of the first three sections of the law, which comprise the majority of pages (36/50) and focus on expanding access to care.

Title I of the law directs the Secretary of the VA to furnish care to eligible Veterans who elect to receive care outside the VA when one of two conditions are met: either 1) the Veteran cannot schedule an appointment within established VA wait-time goals or 2) the Veteran resides in an area that makes travel to a VA facility cumbersome, which the law defines in much greater detail. Authorized non-VA providers

include those who either participate in the Medicare program, practice at a federally qualified health center, practice within the Department of Defense, or practice at a facility operated by the Indian Health Service. Title I further directs VA to issue to eligible Veterans a Veterans Choice Card, which must contain the Veteran's name and a unique identifier (something other than social security number). In addition, under Title I, non-VA providers who treat Veterans pursuant to the law will be required to submit "any medical record related to the care or services provided . . . upon the completion of the provision of such care or services." The law encourages medical records to be provided electronically where possible.

Title II directs the VA to conduct an independent assessment of its information technology systems, focusing on clinical documentation, clinical images, and text reports. Section 203 under Title II further directs the VA to establish a task force to review its scheduling system and recommend improvements. Section 204 directs the VA to produce a report to Congress on the use of mobile health and telemedicine with recommendations for increasing telemedicine capacity for mobile vet centers (customized vehicles) and medical centers, to further expand access to care. Finally, Section 206 directs the VA to gather and publish data on wait times, patient safety, quality of care, and outcome measures. These data are to be made available to the public. In addition, some of the data will be available via the Hospital Compare website,⁴ which will facilitate comparisons between the quality of VA and non-VA care.

Title III directs the VA to expand its support of graduate medical education and medical residency programs, especially those in primary care, mental health, and "any other specialty the Secretary determines appropriate." These determinations are to be made based on a series of reports called for in the law that assess VA's current

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clinician staffing and projections of needs in certain areas, including women's health. The law does, however, direct the VA to increase its graduate medical education residency programs by up to 1500 positions over the next 5 years. It further extends and doubles scholarship funding for its health professionals educational assistance program.

INFORMATICS IMPLICATIONS OF THE NEW LAW

Following from the fundamental theorem of biomedical informatics,⁵ which states that “a person working in partnership with an information resource is better than that same person unassisted,” implementing expanded access to care for Veterans will require both informatics and human resources to be broadly deployed across the VA. It will further require greater investment in informatics research. Here we summarize the technical, human, and research implications of the new law for informatics.

Given the critical role that information plays in diagnosis, treatment, and coordination of care, expanding access to care for Veterans will require greater use of informatics. The VA has been recognized as a pioneer for its development and implementation of a comprehensive electronic health record (EHR) platform.⁶ Although its EHR system has been demonstrated to support care coordination across the VA enterprise, a significant proportion of Veterans receive some of their care outside the VA.⁷ In the most recent fiscal year for which such data are readily available (FY13), the VA provided non-VA care to over 1 million Veterans at a cost of \$4.8 billion, which is nearly 10% of the VA's total health care costs.⁸ Expanding access to care for Veterans, especially access to non-VA providers, will increase the number of Veterans who are “dual-users,” or those who receive care both in and outside of the VA system. Therefore, to help health care providers coordinate care across VA and non-VA institutions, the VA will need robust health information exchange (HIE), or the ability to share information electronically with non-VA institutions.

Although there remain reservations about its outcomes and sustainability,^{9,10} the promise of HIE and recent policies, like the U.S. Centers for Medicare & Medicaid Services “meaningful use” policies, has spurred rapid adoption of HIE in the private health sector.^{9,11} In parallel, the federal government has been developing a Virtual Lifetime Electronic Record (VLER) for military service members and Veterans.^{12–14} The VLER Health initiative in the VA established and maintains electronic data exchange with the U.S. Department of Defense as well as 29 private HIE networks across the nation. Clinicians can electronically request information about VA and non-VA encounters. These transactions are facilitated by informatics standards, including Health Level 7 (HL7), Systematized Nomenclature of Medicine (SNOMED), and Logical Observation Identifiers Names and Codes (LOINC).¹² Expanding access to care will require that programs like VLER work well and are broadly available to clinicians, to ensure that as Veterans receive care at non-VA facilities, their health information will follow them out of, and back to, the VA. This may require VA to enhance its systems' support for semantic interoperability¹⁵ among health information systems within and external to the VA as well as the usability^{16,17} that VA clinicians use to request and view a patient's non-VA records.

While previous research and commentary^{3,18,19} provide comprehensive evidence and rationale for the need for an expanded workforce, especially the need for primary care^{20,21} and mental health^{22,23} practitioners, we also perceive a potential need to expand its clinical informatics workforce. The VA currently has a central Office of Informatics and Analytics, which provides support and strategy for VA's informatics infrastructure. Furthermore, many VA medical centers have a Chief Health Informatics Officer who leads informatics

initiatives at the local level. In addition, the VA offers at eight of its medical centers an Advanced Fellowship Program in Medical Informatics, which seeks not only to apply informatics to clinical care within the VA but also to “increase recruitment and retention of medical informatics specialists within VA.”²⁴

Assessment and implementation of scheduling systems, telemedicine capacity, clinical documentation, and the other components of informatics mentioned in the new law may require expansion of informatics leadership as well as informatics competencies among its clinical staff. New efforts to design, build, test, and deploy new informatics infrastructure, in addition to VA's existing efforts to overhaul its EHR and implement systems in specialty care, may stretch its existing human resources at national, regional, and local levels. Given that clinical informatics is an approved subspecialty,^{25,26} and the new law enables the Secretary to expand graduate medical education programs for specialties with a shortage, the VA may wish to consider ways to expand its pipeline of informatics specialists. It should further consider what level of informatics knowledge and skills its general clinician workforce needs, to be successful in using EHR systems. Activities by the Office of Informatics and Analytics to date include a VA-wide informatics training initiative entitled *Introduction to Informatics (101)*, a series of online seminars developed using the curriculum funded by the Office of the National Coordinator for Health Information Technology²⁷ that more than 2500 VA staff have completed.²⁸ Although the program is an excellent start, the VA employs more than 14 000 physicians and 80 000 nurses at its nearly 1000 health facilities. Expanding the pipeline now may be prudent to avoid a shortage of qualified informatics professionals within the VA when they will be needed in the coming years.

Achieving greater HIE, care coordination, and telemedicine capacity will further require application of knowledge from existing informatics research. At the same time, expanding HIE and other technologies to support access to care presents an opportunity to conduct additional informatics research. Although 29 VA medical centers exchange data with private HIE networks today,^{12,14} the VA has 153 medical centers and 909 ambulatory care and community-based outpatient clinics across the U.S. and its territories. Implementation across its various facilities, which vary in size, function, and culture, necessitates greater understanding of the sociotechnical system^{29,30} within VA as well as the outcomes associated with various scenarios involving HIE.³¹ Furthermore, the new law calls for the VA to issue unique identifiers to Veterans for the purpose of accessing non-VA medical care. An observational or pragmatic study on the deployment and use of unique identifiers in the VA may advance our understanding of record linkage¹³ as well as our ability to examine utilization patterns across health systems.³² Finally, the charge to expand telemedicine capacity within the VA presents an opportunity to develop, pilot, and evaluate new mobile health software as well as devices that can facilitate disease monitoring, medication management, and lifestyle changes as patients engage with their broader care team composed of VA and non-VA providers.³³

SIMILARITIES TO ACCESS ISSUES IN PRIVATE HEALTH SYSTEMS

The implications for expanded access to care and information about Veterans' care are similar to those created in the Patient Protection and Affordable Care Act (ACA) of 2010. Whereas VACA expands access without increasing the number of persons eligible for coverage,

the ACA's individual mandate, insurance exchange, and provisions for Medicaid expansion enable coverage for millions of citizens who need access to primary care.²⁰ Although their methods are distinct, both laws create newly engaged health consumers with access and choice which present similar care coordination challenges to health systems. National primary care shortages, for example, may exacerbate challenges to access outside the VA. A key component of the ACA, the accountable care organization (ACO), is designed to manage and coordinate care for a defined patient population. Yet even with ACOs, consumers are able to seek care outside defined ACO networks. For example, an analysis of emergency visits revealed that emergency departments share a significant proportion of patients with other departments both nearby and hundreds of miles away.³⁴ Therefore, ACOs, like the VA, will need access to robust HIE and telemedicine networks, to coordinate care and track population health outcomes as patients with expanded access to care seek and receive care from multiple providers. Research opportunities abound both in and outside the VA, with health services researchers who rigorously evaluate the organization, delivery, and financing of health care.

CONCLUSIONS

Implementing expanded access to care will require new human and informatics resources to be added and configured across a range of health services both in and outside the VA. Resource deployments should be guided by evidence, and their impact should be evaluated for effects on costs, quality, and outcomes.

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COMPETING INTERESTS

Drs Dixon, Haggstrom and Weiner are employed as research scientists within the Health Services Research & Development Service at the Richard L. Roudebush VA Medical Center in Indianapolis, Indiana. As such, they receive at least a portion of their annual salary from the VA.

CONTRIBUTORS

B.E.D. conceived of and led the development of the article. M.W. and D.A.H. provided critical review and editing of the article. All authors reviewed and approved the final version of the article.

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