

Prepared for:

Department of Veterans Affairs

Opportunities to Improve the Scheduling of Medical Exams for America's Veterans:

A Report Based On a Review of VA's Scheduling
Practices by the Northern Virginia Technology
Council (NVTC)

Executive Summary



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This document is intended solely for the use and information of the stakeholders to whom it is addressed.



1 Executive Summary

This section provides a brief summary of this Report by answering three fundamental questions:

- Why was this review performed for the Department of Veterans Affairs (VA)?
- What were the findings that informed the Northern Virginia Technology Council's (NVTC's) recommendations to VA?
- What recommendations were rendered by NVTC?

1.1 Why NVTC Conducted This Review

The impetus for NVTC's review is found in Section 203 of the Veterans' Access to Care through Choice, Accountability, and Transparency Act of 2014¹. Section 203 called for a Technology Task Force to perform a review of the scheduling system and software of the Department of Veterans Affairs.

Following the legislation's enactment, NVTC² began working with the VA to develop the plan for a team of NVTC member companies to evaluate the VA's scheduling processes and systems, for the purpose of recommending scheduling improvements. In a Memorandum of Agreement (MoA) signed by both parties on September 11, 2014, VA accepted NVTC as the Technology Task Force required

¹ Public Law 113–146. Signed into law by President Obama on August 7, 2014; the statute's full title is, "To improve the access of Veterans to medical services from the Department of Veterans Affairs, and for other purposes." Besides Section 203, another key provision of this law (Section 101) is relevant to portions of this report because it requires hospital care and medical services to be furnished to Veterans through agreements with specified non-VA facilities if Veterans: (a) have been unable to schedule an appointment at a VA medical facility within the Veterans Health Administration's (VHA's) wait-time goals for hospital care or medical services and such Veterans opt for non-VA care or services; (b) reside more than 40 miles from a VA medical facility; (c) reside in a state without a VA medical facility that provides hospital care, emergency medical services, and surgical care and such Veterans reside more than 20 miles from such a facility; or (d) reside within 40 miles of a VA medical facility but are required to travel by air, boat, or ferry to reach such facility or such Veterans face an unusual or excessive geographical burden in accessing the facility. Section 101 also provides for such care through agreements with any healthcare provider participating in the Medicare program, any federally-qualified health center, the Department of Defense (DoD), and the Indian Health Service (IHS).

² In June 2014, Senator Mark Warner sent a letter to President Obama offering pro bono private sector assistance to address the VA's exam scheduling and workflow challenges. (*The pro bono offer to help VA leveraged a template established in 2010-11, when NVTC, at the request of Senator Warner, partnered with the U.S. Army to help address the serious technology and business process challenges being encountered at Arlington National Cemetery.*)

by Section 203 of the Veterans' Access to Care through Choice, Accountability, and Transparency Act. In a Scope of Work statement, attached to the MoA, the agreed latitude of NVTC's Review was outlined – i.e., for NVTC to examine and propose improvements to:

- The scheduling of a new patient for his or her first visit. This would start with the VA's attempt to arrange exam appointments, and include the activities required to schedule, communicate, and confirm each appointment with the Veteran – concluding with the exam itself and the delivery of requested exam results.
- The scheduling of a specialty consult visit from initial request from a primary care physician through the appointment being scheduled, communicated and confirmed with the Veteran (also concluding with the exam and effective delivery of its results).

In examining these two foundational processes NVTC agreed to an approach that is segmented into an analysis of four domains: people, process, technology, and performance measurement.

The purpose of NVTC's review was to identify improvement opportunities and recommend actions that will enable VA leaders to restore America's confidence in the enduring integrity of VA while servicing the healthcare needs of those who have selflessly served our country. The NVTC Team's approach to this assignment has been to discover root causes of VA's scheduling challenges in an effort to identify ways to help the Department overcome them.

The NVTC Team³ conducted a six-week effort (September 15-to-October 29, 2014) to review VA's current scheduling "systems," which include people, processes, technologies, and performance measures. The findings and recommendations identified in this report were greatly informed by onsite observations at two VA Medical Centers⁴. During these visits, the NVTC Team met with VA staff to not just elicit information from them about the issues and challenges they encounter on the job, but also to listen to their ideas on how Veterans might be better served by making changes to current scheduling processes, procedures, and practices.

³ NVTC selected Booz Allen Hamilton (BAH), HP, IBM, MITRE, and SAIC to serve as the core team for coordinating with other member companies (MAXIMUS, Qlarion, and Provide Consulting) to conduct this Review.

⁴ The two site visits by the NVTC Team were graciously hosted by the VAMC Directors at the VA's Medical Centers in Richmond and Hampton, Virginia.

During the two site visits the NVTC Team was able to make, it met with many dedicated leaders, healthcare providers, schedulers and other specialists – all of whom were remarkably cooperative, clearly dedicated to providing high-quality services to Veterans, and quite generous in terms of the amount of time and information they readily shared with NVTC Team members. The NVTC team also observed a number of practices that had been put in place in the last six months to improve the timeliness of patient appointments. Additional opportunities for improvement still exist, however.

In addition to the two day-long site visits, NVTC team members also examined a library of scheduling related information⁵ – provided by VA – to gather additional insight on the challenges and issues addressed in this report.

While this report is based on site visits and data from only two VA Medical Centers, we are reasonably confident that the findings are generalizable to many other VA medical facilities. We make this assertion because the findings of this Report are very similar to the findings of an older but more comprehensive Wait Times study done by Booz Allen Hamilton in 2008. That study was much larger and included longer site visits to 25 VA Medical Centers and many of their Community Based Outpatient Clinics. The recommendations of this Report echo those of the earlier Wait Times report and suggest that the issues identified are representative and enduring. We feel that this significantly enhances the power of the NVTC Report and the recommendations that have been made⁶.

It is the consensus of the NVTC Team that the recommendations in this report will take a significant amount of time to be fully implemented, assuming they are accepted. Indeed, incremental but sustained improvements, based on a comprehensive plan of action will be needed – subject to persistent monitoring and periodic assessments – to ensure that initial gains in accountability and performance quality actually lead to results that consistently satisfy the healthcare access and delivery needs of America’s Veterans.

NVTC is pleased to present this document with its findings and recommendations for improving the scheduling of medical exams for America’s Veterans.

⁵ From the “vendor library,” available on the Federal Business Opportunities (FedBizOps, to support VA’s solicitation to procure a new medical appointment scheduling solution:
<https://www.fbo.gov/index?s=opportunity&mode=form&id=6672c05c6f046cf98d178d8981884d94&tab=core&tabmode=list&>

⁶ Final Report on the Patient Scheduling and Waiting Times Measurement Improvement Study, Booz Allen Hamilton, July 11, 2008 (hereinafter referred to as the 2008 Booz Allen Hamilton Wait times report)

1.2 What NVTC Found

Through its on-site observations and analyses of current business processes, available technologies, and a review of industry and government best practices, the NVTC Team identified a number of findings and recommendations designed to help VA leaders address their most critical challenges. During that review period, a common theme emerged from the Team's analyses that can be summarized as follows:

VA's exam-scheduling processes are insufficiently enabled by state-of-the-art technologies or (consistently applied) standard operating procedures. This situation has resulted in a counterproductive and error-prone working environment that has frustrated staff members for years, thus fueling a persistent staff-retention problem – the net effect of which has contributed in no small part, it appears, to the gradual erosion of public confidence in the Department's ability to provide Veterans with timely access to needed healthcare services.

NVTC's Team confirmed what VA already acknowledges – that the current scheduling processes do not adequately meet the needs of Veterans, healthcare providers or scheduling staff members⁷. Clinic grids are inflexible, productivity cannot be accurately measured, not enough scheduling resources (staff, rooms, equipment, etc.) are available, and linkages among scheduled appointments and ancillary appointments (e.g., lab and radiology) are not established. In the latter instance, the absence of such links results in appointment cancellations and re-bookings, additional travel costs, and higher levels of Veterans' dissatisfaction.

Though the findings of the NVTC Team may not be all that different from those already documented in VA it is hoped that, with the recommendations that follow, VA leaders will better understand how issues in one deficiency area (e.g., staff retention) actually cause (or exacerbate) persistent issues in other areas (e.g., the non-standard usage of scheduling processes and procedures). Other examples of this cause-and-effect relationship is the impact of inflexible clinic grids on the tendency to over-book scheduled appointments – or the impact of a scheduler's inability to simultaneously view the schedules of multiple providers (a technical resource issue) on the ability of a scheduler to appropriately sequence ancillary appointments (often perceived as a human performance issue). Yet another is the

⁷ Business Blueprint for VHA Medical Appointment Scheduling Solution, Department of Veterans Affairs, May 2014

impact of placing too much managerial emphasis on metrics that do not have the effect of driving desired scheduling behaviors.

NVTC Team members also hope that the insights derived from their analyses of VA's longstanding scheduling issues will shed a different light on the relative weight of individual issues, in terms of their respective impacts on scheduling activities, end-to-end. Also, some of NVTC's key recommendations may prove to be somewhat more innovative than others received by VA leaders in the past.

At a minimum, the NVTC recommendations should provide a useful framework for tackling near term challenges and issues, while at the same time motivating VA leaders to work with maximum urgency, to significantly enhance the experiences of Veterans served by the Department, which will lead to a steady rebuilding of public trust in both the timeliness and quality of healthcare being provided to America's most deserving heroes.

1.3 What NVTC Recommends⁸

As a result of its analysis of VA's scheduling processes, technologies, people, performance measures, and industry best practices, the NVTC team derived a total of 39 recommendations from its multi-dimensional review of VA's current medical exam scheduling operations. These 39 key recommendations – each of which is identified in the body of this Report – are associated with the following 13 groups of identified, key issues:

- Appointment Scheduling (Process)
- Appointment Metrics (Process)
- Patient Capacity (Process)
- Communications (Process)
- System Usability (Technology)
- Systems/Data Integration (Technology)
- IT Infrastructure Support (Technology)
- Recruitment/Hiring (People)
- Training/Development (People)
- Staff Retention (People)

⁸ Consistent with findings and Recommendations of 2008 Booz Allen Hamilton Wait times report

- Staff Management (People)
- Patient Wait Times (Performance)
- Management Data Usage (Performance)

More than half (i.e., 20) of the Team’s 39 recommendations were derived from the four People-related groups of key issues: Recruitment/Hiring, Training/Development, Staff Retention, and Staff Management.

The other 19 recommendations were fairly evenly distributed among the Process, Technology, and Performance dimensions of NVTC’s Review.

The fact that 51.3 percent of the Team’s recommendations align with “people” issues should not be misinterpreted by readers of this Report. More to the point, it must not be seen as an adverse reflection on the schedulers, healthcare providers, and other VA staff members currently engaged in scheduling activities at VA’s medical facilities, who work quite hard – indeed, much harder than should ever be necessary – in their creative efforts to compensate for all the issues driving the 19 other process-, technology-, and performance-related recommendations made by the NVTC Team.

Furthermore, when it comes to cross-cutting issues discovered as a result of this Review, the evidence suggests that virtually all of the 19 issues driving the process-, technology-, or performance-related recommendations (in Section 4 of this Report) demonstrably impact, either directly or indirectly, at least one of the people-related issues/recommendations.

Consider – for just one example – the issue identified as “Additional Exam Rooms” under the Patient Capacity group (in subsection 4.1 of the full Report):

- The NVTC Team found that at least two exam rooms per provider are needed to allow rooming a patient while providing other team members (or providers) co-visiting opportunities. And, larger rooms would more readily permit efficient engagement of multiple team members in real time. Yet, it appears that only one exam room is provided in many situations observed at the medical centers visited by the NVTC Team during the course of this

Review. This process-related issue, which resulted in a recommendation that additional exam rooms be provided, has a direct impact on one of the People-related issues identified (in subsection 4.3 of the full Report), having to do with schedulers and providers working together as a team (for the benefit of Veterans). It also impacts the productivity of healthcare providers at most VA medical facilities. More significantly, a search of related VA documents provided to the NVTC Team revealed that a short supply of exam space is a critical infrastructure challenge for many facilities. Many sites indicate that primary care and specialty providers almost never have two exam rooms during clinic sessions, and site leadership commonly noted that one of the most significant interventions they can make to improve the timeliness of care is to increase available exam space.

Following a thorough analysis of all 39 of its key recommendations, to discover the cross-dimensional (or cross-cutting) implications of each of them, NVTC rendered the following set of 11 synthesized recommendations to VA:

Recommendation # 1 – VA should aggressively redesign the human resources and recruitment process. From General Schedule (GS)-5 clerks to senior clinicians, the hiring of needed staff proceeds too slowly. The causes are complex, but much of the delay can be traced to redundant, inconsistent, and inefficient hiring processes. There should be a system-wide focus on improving these processes as soon as possible. Measures that capture performance from the customer perspective should be carefully monitored. Such measures may include the time from a request for a position to be filled to the time the hired candidate actually begins work.

Recommendation # 2 – VA should prioritize efforts to recruit, retain, and train clerical and support staff. In many cases, clerical and support staff should be hired in anticipation of need rather than after vacancies are realized. Job stress, which contributes to turnover, should be reduced through careful study of workflow processes; for example, separating the call function from the frontline clerk function appears to be a prudent strategy. In many instances, “role creep” results in clerks performing functions that may be beyond their job descriptions and GS levels. An inventory of functions should be carefully mapped to appropriate GS levels so that individuals are properly positioned—and compensated. Better retention will improve the impact of training, which should be

another area of focus. Training should be based on a more standardized and frequently updated curriculum, and placed within a more clearly defined management infrastructure to support professional growth. A multi-modality approach to training should include case-based distance learning that leverages a learning management system and permits monitoring both at the facility and individual level. Overall, these measures will help to ensure that each physician has adequate support from clerical staff, which will help to maximize provider productivity.

Recommendation # 3 – VA should develop a comprehensive human capital strategy that, based on projected needs, addresses impending healthcare provider shortages. In addition to the current shortage of nurses, shortages of nurse practitioners, primary care providers, and specialty physicians are projected or already realized. VA needs to undertake an aggressive strategy that includes increasing provider efficiency (e.g., more support staff and exam rooms), using alternate types of providers (e.g., family practitioners, doctors of nursing practice, care coordinators, coaches), and developing its own aggressive recruitment pipeline (e.g., starting the recruitment process in high school, providing aggressive tuition forgiveness). Mid-level practitioners, especially nurse practitioners, have proven particularly valuable in providing or augmenting scarce specialty resources. There should be an immediate focus on recruiting, training, and retaining mid-level practitioners. Finally, there should be a deliberative effort within this human capital strategy to support team medicine, further enabling non-physicians to partner with physicians to directly accommodate patient needs.

Recommendation # 4 – VA should create a stronger financial incentive structure. This is especially critical for a location like Hampton, VA – where the VA must compete head-on with DoD in the healthcare provider marketplace. VA should explore the use of more aggressive incentive structures in compensation packages, especially for providers. VA should develop supply and demand projection models so that future staff needs—particularly for specialty physicians—can be anticipated. Recruitment cycles for physicians are often very long. Waiting until demand has exceeded supply will inevitably lead to chronic delays in care. Staffing needs, especially for specialty physicians, should be anticipated based on an understanding of how much supply is required to meet changing patient demand, and appropriate supply models should be created and used across the enterprise.

Recommendation # 5 – VA should accelerate steps to improve the agility, usability and flexibility of scheduling-enabling technologies that also facilitate performance measurement and reporting functions⁹. Another example of the cross-cutting effect of multidimensional issues is provided by IT, which – when optimally designed and deployed – is a critical enabler of human processes. However, IT that is not well-aligned to scheduling processes (as suggested by the System Usability group of key issues detailed in the body of this Report) causes costly, stressful human workarounds, and undermines system efficiency. The current scheduling software, which was first created in the time of paper records, has a non-intuitive “roll and scroll” interface that can be described as cumbersome, at best, to use. From a scheduling perspective, it is outdated; from a measurement perspective, it is inadequate—it was never intended to perform measurement functions. Nonetheless, the VA currently must rely on this tool to schedule tens of millions of Veterans’ appointments each year.

Recommendation # 6 – VA should take aggressive steps to use fixed infrastructure more efficiently. Facilities should use projection models to anticipate needs for increased exam space and plan more strategically regarding building and/or leasing additional space. Facilities should use demand projection models to anticipate changing outpatient demand and should plan to increase space as necessary. Failure to use such approaches results in chronic undersupplies of space and human resources.

Recommendation # 7 – VA should evaluate the efficiency and patient support gained by centralizing the phone calling functions in facility-based call centers with extended hours of operation. While it is recognized that the best place for a patient to make a follow-on appointment is when leaving a clinic, a majority of the appointments made in VA are by patients calling for an appointment or receiving a call from the VA to schedule an appointment. Since the location of in- and out-bound patient scheduling calls differs among VAMCs, this evaluation would determine the most beneficial placement of the call center function and allow for sharing of lessons learned from individual Medical Centers VA-wide. Removing the in- and out-bound call requirement from the clinic scheduler’s responsibility, if appropriate for the individual clinic's needs, will

⁹. There are a number of COTS scheduling packages on the marketplace that might help meet VA’s scheduling needs either by themselves or in concert (see, e.g., <http://www.capterra.com/medical-scheduling-software/>); VA would need to evaluate them to determine whether they satisfy the intent of NVTC’s Recommendation # 5.

increase efficiency of communication with Veterans and reduce stress on frontline clerks in clinics.

Recommendation # 8 – VA should invest in more current and usable telephone systems and provide adequate space for call center functions.

Although most facilities have call systems that can track hold times, call abandonment, and other key measures, a number of questions were raised about these systems. Given the importance of efficient phone communications, a standard for functionality should be established and all facilities should be required to meet that standard. Centralized call centers improve the efficiency of communications significantly. In addition to enhanced technology, call centers should be provided adequate space and resources. Robust multi-modal communications infrastructures are important to support the frequency of contact essential to the Patient Aligned Care Team (PACT) concept of continuous healing relationships.

Recommendation # 9 – VA should take aggressive measures to alleviate parking congestion because it appears to have some impact on the timeliness of care. While less important than exam space, parking space was found to be in short supply at many VA facilities. Obstacles to parking may discourage Veterans from keeping their appointments and cause Veterans to be late for their appointments. Late arrivals can disrupt clinic flow for the rest of the session.

Recommendation # 10 – VA should engage frontline staff in the process of change. Successful process redesign requires behavior change. To sustain such change, those who do the work must be engaged in redesigning the processes that influence their work and behaviors. This is the critical, and often weakest, link between people and processes, and if it is not made, process improvement will not be optimized or sustained. A culture of innovation must be created in which everyone sees improving his or her job, and the processes associated with it, as part of his or her job. Success requires a critical nexus between leadership, culture, process redesign techniques, and employee engagement.

Recommendation # 11 – VA must embrace a system-wide approach to process redesign because this is the means by which many other recommendations may be successfully executed. Processes, the intermediate steps by which goals are achieved, often determine whether goals are achieved efficiently, or at all. To be successful in improving the many complex and interrelated processes that influence the timeliness of care, sound systematic approaches must be used. An integral dimension of success will be to engage Veterans in process redesign. Even

when conducted in a rigorous fashion, process redesign is not always successful. The most common sources of failure are related to poor staff acceptance, failure to actually change behaviors, and inadequate leadership. VA faces unique challenges in scaling change across an enterprise of its size, which stands alone in U.S. healthcare. As mentioned earlier, one of the key elements of success will be engaging frontline staff in the redesign and change process, which will increase the probability that processes will be properly redesigned and the likelihood that frontline staff will modify their behaviors.

1.4 Conclusion

Improving the timeliness of Veterans' care depends upon the readiness, willingness, and organizational and personal commitments to improve multiple dimensions of a complex, system-of-systems challenge. All aspects of the VA enterprise must be considered, and proven approaches to "systems" engineering and redesign must be implemented and scaled across the entire Department. This will require strong leadership and engagement of staff who have been empowered to effect real and lasting change.

However, improving the timeliness of care may be viewed in a broader context that extends beyond examination of VA's scheduling operations. Indeed, it goes to the intent of the Department's attempts to institutionalize, since 2010, a different relationship with the patient – with the launching of an initiative to transform the primary care system into a team-based care model (Patient Aligned Care Team, or PACT). The PACT system of care shares many features with patient-centered medical homes (PCMH). In addition to improving chronic disease management, the VA initiative aims to increase Veterans' accessibility to their primary care providers, improve continuity with the primary care team, intensify preventive health services, integrate mental and behavioral health into primary care, and enhance coordination of care as Veterans transition between primary and specialty care providers, hospital and ambulatory settings, and VA and private healthcare systems. The PACT model is meant to be proactive, personalized, and Veteran-driven, focusing not just on the management of disease but also more holistically on the Veteran's physical, psychological, social, and spiritual well-being. The model requires effective communication and coordination among team members for acute, preventive, chronic, and end-of-life care to achieve improved continuity and efficiency – an aspirational goal in itself that remains unfilled across parts of the enterprise.

Such intensely Veteran-focused care would be delivered in many forms—not just through face-to-face visits. In this paradigm, the healthcare system would be responsive 24 hours per day every day, whether by phone, e-mail, e-consults, telemedicine, expanded use of personal health records, or other means. This vision is expected to include individual and group visits as well as an expanded role for team medicine that includes the coordinated efforts of physicians, mid-level practitioners, care coordinators, and care coaches. Assessments of access in this paradigm would not be limited to traditional VA measures of wait times and drive times.

While this model is still somewhat aspirational, it is an aspiration that VA is uniquely positioned to achieve. Yet, full accomplishment of this objective is what will be needed, at a minimum, to restore America's trust in the VA's ability to serve the healthcare needs of its Veterans.

NVTC is reminded that VA has a strong history and longstanding tradition of innovation—its enterprise-wide electronic health record; mail-order pharmacy system; clinical quality measurement and improvement programs; barcode drug dispensing system; telemedicine efforts; home-based care programs; and a broad array of clinical care innovations for special populations such as blind rehabilitation, post-traumatic stress disorder (PTSD) care, spinal cord injury care, and prosthetic expertise are but a few examples.

In the past, however, emphasis on innovation has, understandably, been more typically geared toward clinical processes. That emphasis must be sustained. At the same time, a similar focus must be also be placed on innovations that support customer-centric process redesign.

This will require excellence in executive leadership distributed broadly and deeply across the enterprise; correspondingly, this will require appropriate levels of empowerment conferred from the top-down.

Only by persistently staying the course will VA be positioned again, to blaze new trails for other healthcare systems to follow.