The Role of New Media in the Veterans Benefits Arena

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INTRODUCTION

The number of claims for benefits processed by the United States Department of Veterans Affairs (VA) is growing. By 2009 there will be an estimated 872,000 claims filed,² a 51 percent increase since 2000.³ Complicating matters further, both the size and complexity of cases are expanding. In 2007, VA received more than 58,000 claims, and over 25 percent of the original compensation claims received in 2007 contained eight or more disability issues.⁴ VA currently expects to receive a "growing number of complex disability claims" resulting from post-traumatic stress disorder, traumatic brain injury, and complex, combat-related injuries.⁵

From start to finish, a claim for VA benefits can take anywhere from several months to several years. To veterans unfamiliar with the VA claims process, filing a claim for benefits can be daunting and complex. Currently, efforts are underway to minimize the length of time that occurs between the filing of a claim and the issuance of a decision by the regional office (RO) or the Board of Veterans' Appeals (Board). The purpose of this article is to describe how new media, such as Internetbased communication platforms, commercial off-the-shelf databases, and artificial intelligence, can be used to aid in the adjudication of claims. The article begins with a brief overview of the process and procedure behind a claim for benefits. Part II will discuss how VA is currently using technology, such as the Internet and mobile communications, to facilitate the claims process. Finally, Part III will discuss the future of technology and the claims process.

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² See The U.S. Department of Veterans Affairs Budget Request for Fiscal Year 2009: Hearing Before the H. Comm. on Veterans' Affairs, 110th Cong. (2008) (statement of Hon. James B. Peake, M.D., U.S. Sec'y of the Dept. of Veterans Affairs).

³ Id.

⁴ Id.

⁵ Id.

I. THE PROCEDURE

To fully grasp the benefit of using new forms of media in the VA claims process, it is necessary to have a basic understanding of what occurs during a typical claim for benefits. An applicant for VA benefits begins by filing a claim.⁶ Once a "substantially complete"⁷ application for benefits is received by one of VA's 57 regional offices, VA's duty to assist the claimant is triggered, and VA is required to help "obtain evidence necessary to substantiate the claim."⁸

VA's duty to assist a claimant is expansive and entire articles can be devoted to exploring it. In short, VA typically has a duty to obtain relevant records held by the Federal government and to obtain private records identified by the claimant.⁹ Additionally, VA has a duty to provide a medical examination when necessary.¹⁰ However, as with any rule there are exceptions, dependent upon the facts of a particular case. In any claim for benefits, VA will inform the claimant of what he or she is required to do and what VA's obligations are.¹¹

Once proper evidence has been collected, a decision will be issued by the RO with jurisdiction over the claimant's claim.¹² After a decision is rendered, a claimant must be advised of his or her appellate rights, including the right to a personal hearing and the right to representation.¹³

⁶ 38 C.F.R. § 20.3(f) (2007) (defining a claim as an "application made under title 38, United States Code, and implementing directives for entitlement to Department of Veterans Affairs benefits or for the continuation or increase of such benefits, or the defense of a proposed agency adverse action concerning benefits.").

 $^{^{7}}$ § 3.159(a)(3) (defining a substantially complete application as "an application containing the claimant's name; his or her relationship to the veteran, if applicable; sufficient service information for VA to verify the claimed service, if applicable; the benefit claimed and any medical condition(s) on which it is based; the claimant's signature; and in claims for nonservice-connected disability or death pension and parents' dependency and indemnity compensation, a statement of income.").

⁸ See § 3.159(c).

⁹ § 3.159(c)(1).

¹⁰ § 3.159(c)(4).

¹¹ § 3.159(b).

¹² See 38 U.S.C. § 315 (2000).

¹³ 38 C.F.R. § 19.25.

Should the claimant disagree with any part of the RO's decision, there is typically a one-year period of time in which to file a "notice of disagreement."¹⁴

After the claimant (now called the appellant) has indicated an intent to appeal, the RO will issue a statement of the case (SOC) which contains a summary of the evidence relating to the issues with which the appellant disagrees, a summary of the law and regulations, and a readjudication of the issues.¹⁵ Once the SOC has been mailed to the appellant, he or she has the remainder of the original one-year period from the date that notice of the rating decision was mailed, or 60 days from the date the SOC was mailed, to perfect the appeal by filing a VA Form 9 or its equivalent.¹⁶ Once an appeal has been perfected, the RO will certify the appellant's case to the Board¹⁷ where the case will be reviewed anew, on a *de novo* basis.

II. USING EXISTING TECHNOLOGY

At present there are a number of measures being used to make filing and developing a claim for VA benefits simpler, more efficient, and more consistent. The abilities to have medical records accessed remotely, to identify and correct inconsistencies in rating decisions, and to participate in video teleconference hearings with Veterans Law Judges are three of the most important examples of technology currently available.

A. Electronic Records

The availability of electronic medical records is of great benefit to the medical community in treating veterans. By creating an electronic record, treatment records from hospital stays, clinic visits, and specialized services such as physical therapy can become centralized.¹⁸ These centralized, digital records allow health care providers to "make confusing and physically unwieldy masses of data instantly available, portable and

¹⁴ *Id.* § 20.302; *see also* § 20.201 (defining what constitutes a notice of disagreement); § 20.501 (governing time limits for simultaneously contested claims).

¹⁵ See § 19.29.

¹⁶ See § 20.302(b); see also § 20.202 (stating that while a substantive appeal typically consists of a completed VA Form 9, other writings containing particular information may be acceptable). ¹⁷ § 19.35.

¹⁸ David Brown, VA Takes the Lead in Paperless Care, WASH. POST, Apr. 10, 2007, at F1.

searchable."¹⁹ As a result, a doctor, for example, located in Washington, D.C., can find a blood test report for a patient who was treated five years previously at the San Francisco VA Medical Center.²⁰ The benefits to having such a system, however, are not limited solely to the health care community. By accessing medical records electronically, VA claims adjudicators are able to gather quickly those records that would support a veteran's claim and provide a more complete picture of the veteran's disability.²¹

In 1997, VA began using a computerized patient record system (CPRS) "to provide a single, highly graphical interface for health care providers to review and update a patient's medical record and to place orders for various items including medications, procedures, x-rays and imaging, patient care nursing orders, diets, and laboratory tests."²² By linking VA hospitals and medical centers, VA's Veteran's Health Information Systems and Technology Architecture (VistA) allows VA health care providers to "view and edit electronic health records, and provides access to images such as x-rays, photos, or documents throughout VA's 1400 site system." ²³ Additionally, VistA allows veterans to have access to their records and manage their health care through VA's My Health*e*Vet program.²⁴ Currently, veterans have access to "trusted health information, links to federal and VA benefits and resources, [a] personal health journal [and], online prescription refill[s]."²⁵ In time, veterans will

¹⁹ Id.

²⁰ Id.

²¹ See Utilizing the Concepts of Artificial Intelligence to Design a Software Platform and Application to Improve the VA Claims Processing System: Hearings Before the Subcomm. on Disability Assistance and Memorial Affairs of the H. Comm. on Veterans' Affairs, 110th Cong. (2008) [hereinafter 2008 Hearings] (statement of Ned M. Hunter, President and CEO, Stratizon Corp.).

²² Jonathan B. Perlin, et al., *The Veterans Health Administration: Quality, Value, Accountability, and Information as Transforming Strategies for Patient-Centered Care,* 10 AM. J. MANAGED CARE 828, 832 (2004); *see also* U.S. Dep't of Veterans Affairs, VistA Frequently Asked Questions, http://www.innovations.va.gov/innovations/docs/ InnovationsVistAFAQPublic.pdf (last visited June 24, 2008).

²³ See U.S. Dep't of Veterans Affairs, VistA, http://www.innovations.va.gov/innovations/docs/ InnovationsVistAInfoPackage.pdf (last visited June 28, 2008).

²⁴ *Id.*; *see also* U.S. Dep't of Veterans Affairs, My Health<u>e</u>Vet, http://www.myhealth.va.gov/ (last visited June 25, 2008).

²⁵ See U.S. Dep't of Veterans Affairs, My Health<u>e</u>Vet, http://www.myhealth.va.gov/ (last visited June 25, 2008).

be able to view their appointments, co-payment balances, and portions of their VA medical records electronically.²⁶

While the CPRS and VistA systems can provide a higher level of care for patients, VA has a separate, read-only system designed just for its adjudicators. The VA Compensation and Pension Records Interchange (CAPRI) application provides authorized users with access to veterans' electronic health records. Under CAPRI, claims adjudicators can develop medical evidence that would support a veteran's claim and can request and review medical examinations.²⁷ Currently under CAPRI, adjudicators also have access to the Department of Defense's (DOD) electronic health records. As DOD adds other categories of medical evidence to its electronic health records (such as the Armed Forces Health Longitudinal Technology Application), these records will also be available to VA and its adjudicators.²⁸

B. Rating Board Automation (RBA)

In the last several years, VA has adopted a new administrative information system, known as Rating Board Automation (RBA) 2000, which is designed to assist RO rating specialists in preparing decisions on claims.²⁹ RBA 2000 provides this assistance by serving as a clearinghouse for prior rating decision data, which rating specialists can then rely upon to prepare subsequent decisions on similar issues.³⁰ For example, if a rating specialist is making a determination on a service connection claim for a low back condition, the specialist can use RBA 2000 to access prior decisions on that issue, and use prior language which can then serve as a template for

²⁶ Id.

 ²⁷ E-mail from Charles Sener, VA Office of Information Technology, to Emily Deutsch, Associate Counsel, VA Board of Veterans' Appeals (Apr. 17, 2008, 15:04 EST) (on file with author).
 ²⁸ AHLTA—Electronic Health Records, http://www.ha.osd.mil/AHLTA/ (last visited August 24, 2008).

²⁹ See Veterans' Benefits – Despite Recent Improvements, Meeting Claims Processing Goals Will Be Challenging: Hearings Before the Subcomm. on Benefits, H. Comm. on Veterans' Affairs, 107th Cong. (2002) [hereinafter 2002 Hearings] (statement of Cynthia A. Bascetta, Director, Health Care – Veterans' Health and Benefits Issues, U.S. Gen. Accounting Office).

³⁰ See VA ADJUDICATION PROCEDURE MANUAL M21-1, Part VI, "Rating Board Procedures," Change 121 (eff. Oct. 28, 2004), *available at* http://www.warms.vba.va.gov/admin21/m21_1/part6/chg121.doc.

drafting the decision on the current claim. By serving as an instrument to standardize language used in rating claims, RBA 2000 is designed to enhance the consistency of decision-making across ROs nationwide. Moreover, RBA 2000 has been touted as having the potential to identify decision-making inconsistencies among the various ROs, and to provide a basis for conducting studies to determine the underlying causes of such inconsistencies.³¹

C. Video Hearings

While a claim is pending, a claimant has the option of requesting a personal hearing before one of the RO's hearing officers. In the event the claimant decides to appeal, he or she also has the option of a personal hearing before a Veterans Law Judge (VLJ) of the Board.³² Hearings before the Board may be held in Washington, D.C., or in any one of the VA facilities that has adequate resources.³³ While some of these hearings take place at the Board's offices, the majority occur when a VLJ travels to one of VA's ROs.³⁴ If an appellant does not wish to travel to Washington, D.C., and does not wish to wait for a VLJ to conduct hearings at the RO, there is the additional option of participating in a video conference hearing. In this situation, an appellant situated at the local RO, and a VLJ located at the Board's D.C. offices, conduct the hearing through videoconferencing equipment. In 2007, 2,870 hearings were held via video conference, as opposed to 421 held at the Board's central offices, and 6,680 held by VLJs at ROs.³⁵

³² See 38 C.F.R. § 20.703.

³¹ See VA Disability Benefits – Routine Monitoring of Disability Decisions Could Improve Consistency: Hearings Before the Subcomm. on Benefits, H. Comm. on Veterans' Affairs, 109th Cong. (2005) [hereinafter 2005 Hearings] (statement of Cynthia A. Bascetta, Director, Education, Workforce, and Income Security Issues, U.S. Gen. Accountability Office); see also COMMITTEE ON MEDICAL EVALUATION OF VETERANS FOR DISABILITY COMPENSATION, A 21ST CENTURY SYSTEM FOR EVALUATING VETERANS FOR DISABILITY BENEFITS 287 (2007).

³³ See § 20.705.

³⁴ See BOARD OF VETERANS' APPEALS, CHAIRMAN'S REPORT TO CONGRESS (2007), http://www.va.gov/Vetapp/ChairRpt/BVA2007AR.pdf.
³⁵ Id.

III. AUTOMATING AND INCORPORATING ARTIFICIAL INTELLIGENCE IN THE CLAIMS PROCESS

The processing of veterans' claims for disability benefits has already changed dramatically with the onset of new information technology (IT). Nevertheless, the growing claims backlog has created a demand for more IT applications to make the claims process more efficient and consistent. This section explores the practical considerations and legislative mandates driving the development of a "paperless environment" in which to process veterans' claims, as well as the introduction of artificial intelligence (AI) to enhance the development and adjudication of those claims. Additionally, this section looks at specific proposals for automating and applying AI in the claims process, along with potential challenges inherent in such efforts.

A. Automation

The need to fully automate the claims process becomes readily apparent in view of the litany of problems undermining the current paperbased processing system. These problems have prolonged the time it takes to develop and adjudicate claims and have also given rise to excessive disparities in rating disabilities.³⁶

While the current claims processing system allows, and indeed, encourages veterans to file their claims online, it still requires the RO rating team to generate print versions of the claims and associate them in hardcopy claims folders.³⁷ Similarly, while the rating team, in many instances, can view veterans' health records electronically, it must still print them out in hard-copy form before proceeding to the adjudication stage. The requirement to convert electronic claims and health records to print form may seem at odds with VA's goal of moving toward a paperless claims processing system. However, it is a reflection of the current limitations of VA information technology, which does not permit a veteran to submit a claim and related evidence in a form that rating team officials can access

³⁶ See 2008 Hearings, The Use of Technology to Improve the Efficiency of the Department of Veterans Affairs Claims Process, 110th Cong. (2008) (statement of John Roberts, National Service Director, Wounded Warrior Project).
³⁷ Id.

electronically. Under the current system, when veterans submit claims and evidence online, their information is stored in a format that is generally incompatible with the electronic databases containing the veteran's service and VA records.³⁸ These stand-alone databases were custom-built for VA and the various service branches many years ago, with no expectation that they would ever have to share information with one another, much less receive and transmit data between veterans, their representatives, and other interested parties in government and the private sector. Consequently, the only way at present to integrate a veteran's electronic service records and VA records with all the other information applicable to the claim is to print out everything and organize it in a paper-based claims folder.

Once a claims folder is generated, it theoretically becomes available to any RO rating team member. Because of the paper-based format of the folder, however, only one team member can access it at any given time. It is the responsibility of the RO official working on the claims folder to manually update the electronic Control of Veterans Records System (COVERS)39 so that other rating team members will know the folder's location. Theoretically, COVERS is supposed to allow a member of the Triage rating team to quickly retrieve a claims folder that is being worked on by a member of a different rating team and update it with newly submitted evidence. In reality, however, COVERS allows for a high degree of human error. For example, rating team members may neglect to update the system when working on a particular claims folder, making it difficult and time-consuming to later track down the folder and update it with additional evidence. To illustrate the scope of the problem, consider that many large ROs have several hundred rating officials, each of whom may have up to 30 claims folders on his or her desk. Such circumstances render it highly difficult to

³⁸ Id. (noting that the specific RO rating teams include Triage, which handles the incoming claims and evidence; Pre-Determination, which is charged with the initial development of all claims for service-connected disability; Rating, which is responsible for reviewing all available evidence, determining if disabilities are service related, and, if so, the percentage of disability assigned; Post Determination, which is charged with entering awards and generating notification letters to the claimants; Appeals, which maintains all pending appeals submitted by the claimants; and Public Contact, which is responsible for addressing veterans' concerns via telephone and email, and for the conducting of one-on-one interviews with the veterans, dependents, and survivors).
³⁹ See VAADJUDICATION PROCEDURE MANUAL M21-1, Part II, "Clerical Procedures," Section 3.06: Control And Sequencing Of Records, Change 52 (eff. Dec. 22, 2003), available at http://www.warms.vba.va.gov/admin21/m21_1/part2/chg52.doc.

locate a missing claims folder that has not been properly accounted for in COVERS. Given these logistical challenges, numerous pieces of evidence vital to a veteran's claim may not be associated with the appropriate claims folder. Indeed, such evidence may be permanently misplaced, causing an additional burden on the veteran to resubmit the evidence or, in the case of an RO that has requested service or VA records, necessitating duplicative paperwork to obtain those records a second time.

This assumes, of course, that the RO was successful the first time in obtaining the veteran's service and VA records. Such records are often difficult to retrieve, especially when available only in paper form. Although most VA medical records, and many service medical records, dated after the mid-1980s are available electronically in a format accessible by the RO,⁴⁰ the records for many veterans with pending claims are still mostly, if not exclusively, paper-based. The records are housed in large warehouses, where staffing resources are often inadequate to fulfill the requests of hundreds of ROs nationwide in a timely fashion.⁴¹ Indeed, the time required to obtain records from one of these warehouses typically ranges from four months to one year.⁴² Additional time is needed to obtain records for veterans having Reserve or National Guard service. This is because the medical records of those veterans are scattered in a variety of locations depending on their status – for example, active service in the Reserve – at the time of medical treatment.⁴³

In addition to the delays in obtaining records, time is also lost in assembling the service and VA records with the rest of the documents in the claims folder and then sorting through all of the compiled information prior to determining the merits of the veteran's claim. This adjudicatory stage of the claims process, in which a Rating Veterans Service Representative (RVSR) reviews the veteran's paper-based claims folder, weighs the veteran's claimed disabilities in accordance with the applicable evidence of record, arrives at a determination of the merits of the veteran's claims, and renders a rating decision, takes an average of 210 minutes

 ⁴⁰ Interview with Charles Sener [hereinafter *Interview*], VA Office of Info. Tech. (Apr. 8, 2008).
 ⁴¹ 2008 Hearings, supra note 36 (statement of John Roberts).

⁴² Id.

⁴³ *Interview, supra* note 40 (addressing the growing need to access veterans' National Guard and Reserve service records in the wake of the current war on terrorism, and how these records are kept in warehouses apart from those where service records are kept).

or 3.5 hours.⁴⁴ That estimate far exceeds the two to 2.67 hours that VA recommends RVSRs spend working on an individual case. The resulting lost productivity in rating claims has been attributed, in part, to the time required to manually leaf through pages of lay statements and medical records and determine whether any information is missing, before even attempting to match the relevant evidence to the appropriate rating code.⁴⁵

Productivity, however, is not the only casualty of the paper-based claims process. In addition to quantity, the quality of rating decisions may be sacrificed. The time pressures facing RVSRs may prevent them from reviewing the claims folder exhaustively enough to consider every piece of evidence pertinent to a veteran's claim. For example, if one significant page of a medical report is buried within hundreds of pages of irrelevant records, it is understandable, if not perhaps inevitable, that an RVSR may not notice it. As a result, the RVSR may render a rating determination that is wholly different from the one that would have been made if he had noticed the key record. This type of error, which is all but impossible to eliminate in a paper-based system, can give rise to arbitrary discrepancies in rating similar claims. As noted by one former rating official, in any given case, it is possible for multiple RVSRs to review the same file and each come up with a different opinion on how the case should be rated.⁴⁶ Many such disparities, to be sure, are a natural outgrowth of the current state of VA's rating codes, which, with respect to numerous disabilities, may be so open-ended as to allow for differing interpretations of any given claim. For example, when rating a claim for post-traumatic stress disorder (PTSD), it is entirely possible that, after a thorough review of a veteran's claims folder, one RVSR may determine that the veteran's symptoms warrant a 30 percent disability evaluation while another RVSR finds that a 50 percent rating is in order. Both interpretations may be permissible under the current rating guidelines. Other rating discrepancies, however, may be so arbitrary as to suggest that one or more of the RVSRs did not review the veteran's claims folder in sufficient detail, or otherwise erred in adjudicating the claim. Such arbitrary disparities between ratings, moreover, are increasingly transparent to veterans, their representatives, and lawmakers. This is due, in no small part, to the growing frequency

⁴⁶ Id.

⁴⁴ 2008 Hearings, supra note 36 (statement of John Roberts).

⁴⁵ Id.

with which veterans communicate with each other and compare their individual situations.⁴⁷

Critics of the current paper-based claims processing system maintain that many of the delays in preparing veterans' claims for adjudication and in rating claims could be eliminated by switching to an automated system in which the claims and all supporting information are entered and updated electronically in a platform that can be reviewed by several authorized rating officials at one time. One veteran's wife recently testified before Congress regarding the delays and complications that the family went through after the RO repeatedly lost the paperwork she and the veteran had submitted in support of the veteran's claim. She stated that she and the veteran had hoped her testimony would help Congress "understand the obstacles faced by the wounded and their families and inspire all involved to work together to improve the efficiency of this vital system."⁴⁸

Such an automated system was envisioned in the Veterans Claims Processing Innovation Act of 2007, H.R. 3047, a bill that was introduced on July 16, 2007, and referred to the Subcommittee on Disability Assistance and Memorial Affairs of the House Committee on Veterans Affairs. Under H.R. 3047, VA would be required to establish a pilot program at a select RO in which all veterans' benefits claims would be processed electronically.⁴⁹ The pilot program would provide VA with a basis for testing and refining the use of automating technologies at all points of the claims process, from the time a veteran files a claim until the final adjudication by an RVSR.

While H.R. 3047 has remained in committee and not been signed into law, many of its overarching themes have been incorporated in the recently enacted Veterans' Benefits Improvement Act of 2008, S.3023. Section 227 of this new law calls for VA to conduct a formal review of the use of IT in the processing of veterans' claims and develop

⁴⁷ Id.

⁴⁸ 2008 Hearings, Testimony Regarding Personal Experience in Filing a Claim with the Department of Veterans Affairs, 110th Cong. (2008) (statement of Robin Cleveland, wife of Tai Cleveland, Retired U.S. Marine).

⁴⁹ Veterans Claims Processing Innovation Act of 2007, H.R. 3047, 110th Cong. (1st Sess. 2007).

a comprehensive plan to leverage its current and future IT platforms to reduce subjectivity and discrepancies in rating specific disabilities.⁵⁰

In the meantime, VA is already taking steps to comply with lawmakers' ambitious objectives for transforming the claims process. These measures involve coordination within various sectors at the RO level, as well as across other divisions of VA and DOD.⁵¹

One significant effort currently underway is the Paperless Delivery of Veterans Benefits Program ("Paperless Initiative"), which addresses the processing of veterans' data across each of VA's five main benefits areas: Compensation and Pension (C&P), Education, Vocational Rehabilitation and Employment, Insurance, and Loan Guaranty.⁵² The authors of an "Executive Summary" of the Paperless Initiative enumerate goals of the initiative:

> The first is to improve access to veteran services through improved Internet-based platforms. The second is to improve the speed and consistency of delivery of veterans' services. The third is to provide file redundancy, increased flexibility, quicker decision making, and greater control over the acquisition and movement of veterans' data through ROs by implementing "paperless" technologies.⁵³

The ultimate goal of the Paperless Initiative is to create a system of commercial off-the-shelf electronic databases that can share a veteran's claims information throughout VA and the service branches, as well as exchange medical records and other evidence with veterans and their

⁵⁰ Veterans' Benefits Improvement Act of 2008, S.3023, 110th Cong. (2nd Sess. 2008).

⁵¹ See Seamless Transition Initiative: Joint Hearing Before the S. Comm. on Veterans' Affairs and the S. Comm. on Armed Services, 110th Cong. (2007) (statement of Daniel L. Cooper, Under Secretary for Benefits, U.S. Department of Veterans Affairs) (noting that the "highest priority is to ensure that those returning from the Global War on Terror transition seamlessly from DoD military treatment facilities (MTFs) to VA Medical Centers (VAMCs), continue to receive the best possible care available anywhere, and receive all the benefits they have earned through their service and sacrifice in a timely manner.").

⁵² Executive Summary of The Paperless Delivery of Veterans Benefits, (Apr. 4, 2008) (on file with author).

⁵³ Id.

representatives. Such an integrated system, in theory, would obviate the problems that frequently arise out of the current array of custombuilt electronic databases. Those databases, as noted above, are not interoperable and thus require RO rating officials to organize veterans' claims information in paper form, a process that wastes time and too often results in the loss or misplacement of records.⁵⁴

During the upcoming planning and development phases of the program, an assessment of VA's current paper-based and electronic records systems will be performed, and a transition strategy will be formulated for migrating and integrating these legacy systems into a platform for paperless claims processing.⁵⁵

The Paperless Initiative's "scope . . . is broad, encompassing all five business lines and supporting IT systems."⁵⁶ A product team is currently being assembled to manage the multiple phases of the program that are anticipated for the successful implementation of the end state solution. This team will include IT officials across various VA agencies.⁵⁷ It will develop demonstrable milestones and performance metrics for the program. During this time, VA will select the contractor that will design, build, and provide program management support for the Paperless Initiative. Once the Paperless Initiative is functional at the RO level, VA plans to make its resources available intradepartmentally, as well as to other entities such as DOD and private service organizations.

⁵⁴ See Interview, supra note 40 (noting that the various electronic databases that VA and the services currently use to store information pertinent to veterans' claims were all custom-built several years ago and are not engineered to receive or transmit information between other platforms).

⁵⁵ Id.

⁵⁶ Executive Summary of The Paperless Delivery of Veterans Benefits, *supra* note 50.

⁵⁷ The Office of Information and Technology and the Office of Business Process Integration are among VA agencies involved in the product team. *See id.; see also 2008 Hearings, The Use of Information Technology to Enhance Claims Processing Within the Department of Veterans Affairs and Utilizing Data from the Veterans Health Information Technology and Architecture to Assist in the Processing of Disability Claims*, 110th Cong. (2008) (statement of Stephen W. Warren, Principal Deputy Assistant Secretary for Information and Technology, Office of Information and Technology, U.S. Department of Veterans Affairs).

Notwithstanding the strong support expressed for an automated claims processing system, concerns persist about its practicability, security, and reliability. As noted previously, such a system would require overhauling VA's and DOD's existing claims infrastructure to make these custom-built legacy platforms interoperable and capable of receiving data from and communicating with veterans and their representatives. It would also require the conversion of millions of aging service and VA records from paper to electronic form. In this regard, a few concrete proposals have surfaced in recent months for scanning veterans' paper-based data and converting it to a format that would be accessible to any end-user of the automated claims processing system. One such notable proposal, which combines automation with elements of AI, is the Evidence Organizer, discussed in Part IIIB, below.⁵⁸

Once an automated claims processing system is functional, it would require sophisticated security measures to safeguard veterans' claims information. To grasp the scope and severity of this challenge, one needs only recall the consequences of the May 2006 theft of a VA laptop containing electronic data regarding up to 26.5 million veterans.⁵⁹ That a breach involving a single laptop could pose a substantial threat to VA's information infrastructure underscores the vulnerabilities that VA would face by moving to an AI-enhanced automated system in which millions of veterans' confidential electronic records were accessible at any given time to an exponentially magnified number of potential end-users. As noted above, such end-users could conceivably include not only veterans and RO rating officials, but also military and civilian defense personnel, legislative officials, and other parties having a legitimate interest in accessing and reviewing veterans' claims information, for example, veterans' attorneys and representatives, and state and government officials. Ensuring all of these legitimate end-users have the necessary access to veterans' claims information, while at the same time keeping that information secure from hackers and other online threats, would pose a considerable challenge. Finally, such a complex network of claims information, spanning numerous federal, state, and local agencies, as well as

⁵⁸ 2008 Hearings, Testimony Regarding VA Claims Processing: Hearings Before the Subcomm. on Disability Assistance and Memorial Affairs of the H. Comm. on Veterans' Affairs, 110th Cong. (2008) (statement of Marjie Shahani, M.D., Senior Vice President, Operations QTC Management, Inc.).

⁵⁹ See Agency Loses Data Containing Veterans' IDs," Grant Gross, PCWORLD (May 23, 2006), available at http://www.pcworld.com/article/125844.

private individuals and service organizations, would be difficult to maintain on a long-term basis. At the very least, it would require near-constant IT modifications and troubleshooting to keep such a system operational in a digitally secure environment.

B. Artificial Intelligence

In addition to the congressionally mandated push towards a fully automated claims processing system, there is a growing interest in applying AI technology to assist in all stages of the claims process. AI, along with automation, has been embraced as a potential remedy for current flaws in the claims process, many of which are attributable to human slowness, imprecision, and error.⁶⁰ Such flaws include the proclivity of veterans to file disability claims without providing sufficient evidence to rate those claims.⁶¹ Frequently, this problem arises when veterans file for disability benefits without providing evidence of current medical treatment. In such instances, the RO must ask the veteran to supply the requisite medical evidence, or provide information for the RO to obtain that evidence on the veteran's behalf. In any event, this need to contact the veteran for additional information delays the adjudication of the claim. Other sources of delay and error in the claims process may include the tendency of RO rating team members to overlook information in the veterans' claims folders or to ignore certain applicable diagnostic codes, which can result in erroneous rating determinations.

In an effort to address these concerns, lawmakers have proposed that VA, as part of the same bill calling for automation of the veterans' claims process, adopt AI applications to assist veterans and RO rating team members at various stages of the claims process. Section 5109C(a) of H.R. 3047 calls for VA to "develop and maintain a system for processing claims for disability compensation under this title using artificial intelligence" and further requires that "[s]uch system shall use medical and military service data to generate recommendations with respect to disability ratings."⁶²

⁶⁰ 2008 Hearings, supra note 21 (statement of Ned M. Hunter) (noting that "[t]echnology is not to be resisted but embraced.").

⁶¹ Id.

⁶² Veterans Claims Processing Innovation Act of 2007, H.R. 3047, 110th Cong. (1st Sess. 2007).

This next section explores specific examples of proposed AI platforms, including those specifically tailored to the requirements of Section 5109C(a), as well as other potential applications of AI to aspects of the claims process not addressed by this legislation.

i. AI-Enabled Blogs to Answer Veterans' Frequently Asked Questions

AI may have applications with respect to veterans who are uncertain as to how to file for disability benefits or who have general questions about the claims process. For example, veterans may be able to submit questions about the claims process via an online "chat" portal in which an automated expert, or avatar, supplies stock answers on demand. This type of automated question-and-answer approach, which is currently being prototyped in support of military recruiting efforts,⁶³ could save VA time and labor costs in responding to veterans' queries.

Of course, such an approach assumes a relatively sophisticated knowledge of computers, and specifically online applications, on the part of its end-users. For this reason, it may prove particularly useful in assisting the latest generation of veterans, such as those returning from Iraq and Afghanistan who, on average, are considerably more technologically savvy than their forebears. Indeed, it is likely that young soldiers accustomed to playing computer games and frequenting Internet chat rooms may have no qualms about consulting a VA avatar about how to file claims for disability and other veterans' benefits. The avatar could be programmed to provide answers in response to key words. For example, if a veteran types in "how do I request an increased rating for PTSD," the avatar could pull up a stock response from a database based on the key words "increased," "rating," and "PTSD." Moreover, in the event that the veteran asked a question that did not contain enough key words for the avatar to generate a response, the device could prompt the veteran to contact a VA representative for additional information.

⁶³ See Jon Brodkin, The New Army Recruiter who Never Goes to Sleep, NETWORKWORLD (Jan. 1, 2007), *available at* http://www.networkworld.com/news/2007/010407-go-army-sgt-star.html.

ii. TurboVet™ VA Pilot Program

Virginia's Department of Veteran Services, in partnership with the Joint Leadership Council of Virginia, a consortium of 32 veteran service organizations, recently launched a new Internet-based program to expedite the filing of new disability claims and the submission of evidence in support of existing claims.⁶⁴ The program, called TurboVet,⁶⁵ underwent a pilot initiative in 2007 and has received funding for use by veterans statewide beginning in 2008.⁶⁷ It is modeled after commercial software platforms, such as TurboTax, which individuals use to organize and submit personally identifiable information to state and federal agencies in compliance with complex regulations.

TurboVet enables veterans to submit and review claims information online at Virginia.gov.⁶⁸ Upon reaching the Virginia.gov interface, veterans can electronically submit evidence in support of new and existing disability claims by responding to a series of automated prompts.⁶⁹ TurboVet relies on embedded decision logic to react intelligently to veterans' claims information by displaying only those prompts relevant to the particular evidence that a veteran is submitting or trying to validate.⁷⁰ In this way, the system is engineered to eliminate the frustration of redundant and unnecessary questions that veterans frequently encounter when taking action on new or existing claims.⁷¹ In his

68 2008 Hearings, supra note 21 (testimony of Ned M. Hunter).

⁶⁹ Id.

⁷⁰ Id.

⁶⁴ 2008 Hearings, supra note 21 (statement of Ned M. Hunter).

⁶⁵ See Meeting Minutes, Veterans Services Foundation (Nov. 15, 2007), available at http://www.dvs.virginia.gov/docs/VeteransServicesFoundationMeetingMinutes11-15-07.doc.

^{66 2008} Hearings, supra note 21 (statement of Ned M. Hunter).

⁶⁷ See 2008 Hearings, Improving VA Claims Processing Through the Adoption of More Computerized Operations Including Artificial Intelligence Technologies, 110th Cong. (2008) (statement of Tom M. Mitchell, Ph.D., Professor and Chair, Machine Learning Department, School of Computer Science, Carnegie Mellon University) (noting that "an example familiar to many, commercial software for filing income taxes (e.g., TurboTax), illustrates how computerization can improve accuracy, convenience and adherence to regulations when filling out complex forms and applying complex regulations automatically.")

statement before a House Committee on Veterans' Affairs, Ned M. Hunter, President and Chief Executive Officer of Stratizon Corporation noted that: "Federal supervisors in Roanoke have projected that a minimum of 100 days of processing time will be eliminated when the TurboVet system is implemented at only the state level."⁷² Stratizon, the company that developed TurboVet, foresees "improvement and extraordinary cost savings at the state and federal level[s] if veterans' data at the state level could first be 'pre-verified' against 'authoritative' national VA databases and then seamlessly exchanged upon claims submission and during the claims management process."⁷³

In optioning TurboVet, Virginia's goal is to fulfill its part of H.R. 3047 and assist veterans with preparing claims in which all the relevant medical evidence and documentation is properly organized for electronic submission to federal adjudicators for rating. In that way, Virginia is endeavoring to make certain that those claims are calculated fairly and consistently.

Whether TurboVet will find a market beyond veterans in Virginia depends on the support of VA and its contractors. Indeed, while TurboVet itself is a commercial-off-the-shelf (COTS) system that can receive and transmit information between other COTS platforms, it is not currently equipped to interact with VA's custom-built databases. These legacy databases would need to be updated, through such strategies as the Paperless Initiative, before a system like TurboVet could achieve its potential to help veterans file claims and submit evidence that could then be seamlessly integrated with other related claims information in a format ready for adjudication.

⁷¹ See id. (Indicating after a veteran has entered new claims information into the TurboVet system, a list is generated of all state and federal benefits the veteran has earned, with all corresponding documents spanning multiple agencies required for the veteran to submit, thus providing a peace of mind to the veteran. Each document will then be progressively, simultaneously, and perfectly auto-populated with the proper data, thus eliminating data transcriptions errors and numerous processing delays. Finally, the veteran will have the option to save and print each document locally and, at their discretion, electronically submit their data securely to all participating authorities and systems to be processed and tracked fully and completely.).

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⁷³ See id.

iii. Evidence Organizer

QTC Medical Services, Inc. (QTC), a VA contractor which since 1998 has provided examinations to veterans seeking VA benefits, has proposed an approach for upgrading and integrating VA's electronic claims infrastructure that is noteworthy for its use of AI to help rating officials make sense of large amounts of aggregate data. Specifically, QTC has unveiled the Evidence Organizer, a patent-pending software program designed to help rating specialists meet or exceed VA's goal of rating an average of three to four cases per day.

Marjie Shahani, M.D., a senior vice president at QTC, discussed the potential impact of the Evidence Organizer in her January 2008 testimony before the House Committee on Veterans' Affairs, as follows:

The Evidence Organizer decreases the time to rate veterans' claims from 3.5 hours to 2.2 hours, a time savings of 37% per decision, increasing the number of veterans' cases rated from 2 to 3 per day. On an annual basis, this would increase the average number of claims decisions per rating specialist to 711 from the current 533, an increase of 178 decisions per rating specialist or a 33% increase.⁷⁴

Dr. Shahani then proceeded to discuss the Evidence Organizer process, as follows:

The Evidence Organizer can be applied to all stages in the rating process, decreasing time spent per case file by organizing and highlighting all medically related information. The Evidence Organizer works by converting the cumbersome paper-based claim file (c-file) to create an electronic record or file (e-file). This document management process begins with a Technician [at the RO] scanning in the c-file and other handwritten documents through the use of Optical Character Recognition. The software transforms each record into a text searchable digital record. As additional records become available they

⁷⁴ 2008 Hearings, supra note 58 (statement of Marjie Shahani, M.D.).

are also integrated into the e-file.⁷⁵ [As a veteran's records are incorporated in the e-file, a customized] knowledge database identifies, highlights and electronically indexes all keywords and claimed conditions, for example: diabetes, asthma, arthritis, as well as any potential claimable conditions throughout each record, thereby providing the rating specialist with all possible claimable conditions. Once the e-file has been established. each record is reviewed to validate the software's indexing, creating an initial table of contents for the e-file. The next step involves a Reviewer [i.e., an electronic screener] validating the highlighted records and linking the referenced medical evidence to the [applicable VA rating criteria⁷⁶]. PDF scanned records not compatible with electronic screening methods (handwritten records) are reviewed page-by-page by the Reviewer and relevant information is highlighted, extracted, and digitally-indexed and linked to the rating criteria appropriate for the claimed condition or potentially claimable condition. Once all the records have been reviewed the software creates a full and complete e-file with a table of contents listing all claimed conditions. Finally, the complete annotated e-file is electronically available for the VA rating specialist to review and assist in their [sic] rating decision process. The software suite allows the VA rating specialist to: review and search each and every electronic document [in the e-file] at the click of a mouse; review all tagged, annotated and associated data; add the rating specialist's determination of relevance with rationale electronically; identify, tag and index additional information as desired; document the rating decision made with the referenced evidence; and review any additional potentially claimable condition 77

Once a veteran's claims information is completely integrated into an e-file, that information could then be analyzed using various AI tools designed to assist the claims adjudicator. Such tools include case-based

⁷⁵ Id.

⁷⁶ *Id.*; *see also* 38 C.F.R. Part 4 (2007) (setting forth a guide in the evaluation of disabilities resulting from all types of diseases and injuries encountered as a result of or incident to military service).

⁷⁷ 2008 Hearings, supra note 58 (statement of Marjie Shahani, M.D.).

reasoning systems, machine learning and data mining, and rule-based decision aids.

iv. Case-based Reasoning Systems

These AI-enabled tools assist in the resolution of logic-based problems by referring the decision makers to solutions to similar past problems. It is a computer technology widely used today to assist the decision-making of medical insurance call center personnel.⁷⁸

In testimony before the House Committee on Veterans' Affairs, Tom M. Mitchell, Ph.D., of the School of Computer Science at Carnegie Mellon University, described the process, as follows:

> Case-based reasoning systems provide help to human decision makers such as call center personnel, by providing them rapidly with historical cases similar to the one they are currently processing, to help guide them as they process this new case. In the portion of benefits processing that requires human subjective judgments to evaluate the level of disability, it may well be helpful to the claims officer to examine the most similar past claims, as well as the judgments made in those cases. Casebased reasoning is a technology that can quickly locate and deliver the relevant past cases from a database containing hundreds of thousands of historical cases, allowing it to act as an automated assistant to the human decision maker.⁷⁹

As noted in Part II, VA has already adopted the RBA 2000 platform, which can be characterized as a type of case-based reasoning system because it provides RO rating team members with access to language from prior rating decisions involving similar claims. RBA 2000, however, remains a work in progress. Indeed, recent studies from the Government Accounting Office (GAO) have concluded that this platform has not yet been optimally used by rating team members to

⁷⁸ 2008 Hearings, supra note 67 (statement of Tom M. Mitchell, Ph.D.).

⁷⁹ Id.

⁸⁰ 2002 Hearings, supra note 29 (statement of Cynthia A. Bascetta); *Hearings, supra* note 31 (statement of Cynthia A. Bascetta).

produce efficient and accurate decisions that are consistent across ROs nationwide.⁸⁰ Specific problems identified by the GAO studies include a lack of training for RO decision makers in how to implement RBA 2000, which has had the ironic effect of slowing down the very claims process that this case-based reasoning system is intended to expedite.⁸¹ Additionally, RBA 2000 has been faulted as being too imprecise in directing RO rating team members to language from prior rating decisions.⁸² Indeed, rating team members have used the platform to access language from prior cases that are not relevant to the claims being adjudicated.⁸³ This has led some of these officials to draft decisions, are not always accurate in terms of the claim at hand.⁸⁴

v. Machine Learning and Data Mining

Dr. Mitchell of Carnegie Mellon University expounded on another AI tool already adopted by industry to aid decision makers:

Machine learning algorithms and data mining systems that apply them to large databases are often able to discover important statistical regularities in the data that may not be apparent to a person. For example, large historical databases of credit card transactions are routinely mined to determine the features that indicate which future credit card transactions are likely to be fraudulent. In the VA claims database, data mining might be used to discover the pattern of features that indicate a claim will require additional information from the filer of the claim, or that a particular type of medical expertise will be required to evaluate it, or to that the person filing the claim should also seek a particular additional preventative treatment. Data mining methods are widely used for applications where large numbers of historical records are available for computer analysis, from medical outcomes analysis, to telephone fraud detection, to targeted marketing to customers.85

⁸¹ 2002 Hearings, supra note 29, at 5 and 11 (statement of Cynthia A. Bascetta).

 ⁸² Jeffrey Parker, Counsel, VA Board of Veterans' Appeals, Presentation at a Training Seminar Held at the Board of Veterans' Appeals: Inside the RO (June 17, 2008).
 ⁸³ Id.

⁸⁴ Id

vi. Rule Based Decision Aids

Once all the data in a veteran's e-file has been properly accounted for and manipulated using the aforementioned AI tools, rule-based decision aids may help the decision maker at the final stage of the adjudication process. Specifically, rule-based software systems may prove useful to assist with the actual decision-making. Such systems process data by applying it to relevant rating criteria using an "IF-THEN" format. Many of the rules that encompass VA's "Schedule for Rating Disabilities" may be encapsulated in an "IF-THEN" format that a rule-based decision aid can then process. For example, in rating a heart disability a rule-based decision aid may be able to apply the clinical evidence in the veteran's electronic claims folder and prepare a tentative rating based upon the following "IF-THEN" algorithm derived from the applicable VA rating criteria: "IF there has been more than one episode of acute congestive heart failure in the past year, AND no chronic congestive heart failure THEN assign a disability rating of 60."⁸⁶

Proponents of AI maintain that the operational hurdles of incorporating such technology in the VA claims process could be overcome within a matter of months, or as one individual estimated, less than one year "from a purely technical standpoint."⁸⁷ Nevertheless, such proponents warn that AI platforms would be of limited utility until there was a fully automated claims processing system in place.⁸⁸ Indeed, such platforms would not be able to offer intelligent rating recommendations unless the veteran's complete claims information was accessible, which was possible only if that information was available electronically.

But even with the advent of a completely automated claims processing system, AI would not completely replace the human element.

⁸⁵ 2008 Hearings, supra note 67 (statement of Tom M. Mitchell, Ph.D.).

⁸⁶ Id.

⁸⁷ Id.

⁸⁸ Id.; see also 2008 Hearings, Applicability of Biomedical Informatics to Improve the Processes for Determining Veterans' Eligibility for Disability Compensation, 110th Cong. (2008) (testimony of Randolph A. Miller, M.D., Professor of Biomedical Informatics, Medicine, and Nursing, Vanderbilt University School of Medicine).

To the contrary, the limitations uncovered in the RBA 2000 platform, noted previously, should serve as a warning to RO decision makers to refrain from relying too heavily on AI to rate claims. Such tools should function as a guide, and not as a mandate, in making decisions.

The ongoing need for a human element in the claims process becomes readily apparent in light of the fact that many of the VA rating codes, as currently written, require a great deal of discretionary interpretation. For example, unlike the evaluation criteria in the heart disability case noted previously using an "IF-THEN" algorithm, many of the current rating codes rate disabilities according to whether the relevant symptoms are "mild, moderate, or severe."⁸⁹ Such open-ended criteria do not allow for easy processing of clinical data according to a rule-based decision aid framework. Indeed, it is difficult to foresee how an AI tool could make a determination of whether a disability was "mild," "moderate," or "severe" in nature by searching for particular key words, or otherwise performing an automated analysis of a veteran's electronic claims folder. It remains to be seen, moreover, whether future amendments to VA rating criteria will result in regulations that are more inherently objective so as to be of use to analysis using an AI tool. Even then, human decision makers are likely to still be needed to interpret the results of VA and, in particular, private medical examinations, many of which use imprecise language to describe and assess the severity of veterans' disabilities.⁹⁰ Moreover, overdependence on AI would arguably pose a due process problem because veterans are entitled, under current VA regulations, to have their claims reviewed by adjudicators at the agency of initial, or original, jurisdiction, generally the RO, before those claims are subject to appeal.⁹¹ For all

⁸⁹ See, e.g., 38 C.F.R. Part 4, including §§ 4.1, 4.119, Diagnostic Code 8103 (convulsive tics are rated as mild, moderate, or severe); *see also* 2005 Hearings, supra note 31, at 5 (statement of Cynthia A. Bascetta).

⁹⁰ See 38 C.F.R. § 4.2 (noting that "[d]ifferent examiners, at different times, will not describe the same disability in the same language...It is the responsibility of the rating specialist to interpret reports of examination in the light of the whole recorded history, reconciling the various reports into a consistent picture so that the current rating may accurately reflect the elements of disability present.").

⁹¹ See 2008 Hearings, Using Artificial Intelligence to Improve the Department of Veterans Affairs Claims Processing System, 110th Cong. (2008) (statement of Steve Smithson, Deputy Director, Veterans Affairs and Rehabilitation Commission, American Legion).

these reasons, even the staunchest AI advocates concede that "in the end, the disability determination is a judgment call that needs to be made by a person."⁹²

CONCLUSION

As discussed above, the transition from a low-tech, paper-based VA benefits claims system to an automated, AI-enhanced one is unlikely to be either simple or seamless. It is a sea of change that harbors many challenges, including how best to construct an integrated claims system using commercial off-the-shelf technology and how much of the human element to retain in the claims process, particularly at the adjudication stage. Although definitive answers to such questions may not yet be apparent, it is clear that emerging technologies have great potential for revolutionizing the VA claims process. Moving toward a more automated claims process with paperless appeals, with greater reliance on digital evidence, electronic records and AI, will increase the efficiency and productivity of VA and help reduce the amount of time required to adjudicate a veteran's claim. As the number and complexity of claims filed with VA continues to increase, the use of new technologies will allow VA to provide veterans with more timely and uniform resolutions to their claims.

⁹² See 2008 Hearings, 110th Cong. (2008) (testimony of John F. McGarry, Senior Vice President of Benefits, Chief Risk Officer, Unum, Portland, Maine); see also 2008 Hearings, supra note 88 (testimony of Randolph A. Miller, M.D.) (noting that "in the end, it still should be a decision by a human.").