Utilizing Evidence to Address the Health and Health Care Needs of Veterans

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This issue brief focuses on opportunities to address the health needs of our nation’s heroes—service members and veterans who have served the United States in the armed forces. Since the North Carolina Medical Journal (NCMJ) last examined this issue in 2008, the Veterans Affairs (VA) health care system has experienced growth in both the number of veterans served and the number of locations where services are provided. However, there has also been negative attention related to delays in care. Here we summarize the articles in this issue of the NCMJ that describe the resources available to veterans, the unique health needs of veterans, and successful examples of evidence-informed programs and policies that are being undertaken by VA. Because veterans and service members receive care outside of the VA or Department of Defense health care systems and many of the programs described in this issue have promise for improving care in other health systems, as well, the topics addressed in this issue are of great importance for the entire health care community in the United States.

Countries that send their sons and daughters into battle have a special obligation to plan for and provide the best possible care for these veterans when they return home. North Carolina has the 4th largest military population in the United States. There are currently 114,000 active-duty personnel based at the state’s 7 military installations, and more than 45,000 National Guard and reserve personnel are distributed across all 100 North Carolina counties.

North Carolina also has the 8th largest veteran population. Almost three-quarters of a million of the 21.5 million US veterans call North Carolina home [1]. Most North Carolina veterans served during wartime; approximately 38% served during the Gulf War, and 32% served during the Vietnam War. Reflecting the increasing participation of women in the military, 11% of North Carolina’s veterans are women. As was noted in a 2011 issue of the NCMJ, “approximately one-third of the state’s population is either in the military, a veteran, or a spouse, surviving spouse, parent, or dependent of someone connected to the military” [2].

The Veterans Administration (VA) was established in 1930 to consolidate and coordinate government activities affecting war veterans. In 1989, VA became the federal Cabinet-level Department of Veterans Affairs. The Veterans Health Administration (VHA)—drawing its mission from Abraham Lincoln’s eloquent Second Inaugural Address—is the component of VA that implements medical programs.

In North Carolina, VA provides direct health services at 4 VA medical centers, 19 community-based outpatient clinics, and 7 Vet Centers (see Table 1) [3]. In 2014, providers at these facilities saw 214,278 patients [4]. While precise eligibility criteria vary, a veteran must generally have served for at least 2 years (unless injured while on duty) to be eligible for enrollment in the VA health system, and he or she cannot have been dishonorably discharged. Combat veterans discharged from the military since June 28, 2003 are eligible for 5 years of health care services, with eligibility reassessed after that period.

Nationally, almost 9 million veterans are enrolled in the VHA system. In 2013, VHA delivered 86 million outpatient visits and admitted 695,000 inpatients [5]. Sunbelt states, including North Carolina, have growing veteran populations. To serve this population, the number of community-based clinics has also been growing, and more veterans than ever are close to a VA facility. Although resources to serve veterans’ health care needs are expanding nationally and in North Carolina, most veterans receive their health care outside of VA; thus, health care providers in all settings should be attuned to the special needs of veterans and the resources available for this population. More information on VA and veterans benefits, including health care, can be found online at www.va.gov. Additionally, North Carolina veterans can receive assistance accessing VA and other services through the North Carolina Division of Veterans Affairs.

When the NCMJ last visited the topic of VA health care, we noted, “for multiple years running, veterans have been more satisfied with their VHA health care than patients in the private sector” [6]. At that time, VHA was winning accolades for quality of care that met or exceeded that provided in the private sector. However, VA has since experienced challenges and problems affecting the care veterans receive. In 2014, VA’s Inspector General reported that VHA faced organizational challenges to achieve the care veterans were entitled to receive [7].

In response to these challenges, VA is now focusing on improving access for veterans: the department stated it is “on track” to meet its goal of 90% access within 34 days for non-emergency care [8]. We identify several areas where evidence may be useful to inform policy decisions and to improve care for veterans. These evidence-based interventions can serve as prototypes for other health systems, as well, the topics addressed in this issue are of great importance for the entire health care community in the United States.
private sector. As Hoffmann describes in his commentary in this issue [7], VHA has again been in the spotlight since May 2014, but this time not with accolades; instead, there have been disturbing stories of veterans experiencing significant delays in accessing care. These revelations have shaken the public's trust in VA's ability to fulfill its mission and have led to changes in leadership and new legislation to improve veterans' access to health care through non-VA entities and providers. VA is working to respond to this crisis in the context of several challenges: sweeping changes to US health care policy, including the Patient Protection and Affordable Care Act of 2010 (ACA); the development of effective but expensive new treatments (eg, hepatitis C medications); and new screening programs (eg, lung cancer screening).

In this issue of the NCMJ, we highlight VA's response to this crisis and the programs developed to meet the special needs of veterans. Our goals are to focus on health care issues specific to veterans, to describe successful examples of evidence-informed policy making and innovative VHA programs that should be considered for expansion to non-VA settings, and to provide readers with resources to better serve the needs of veterans in North Carolina.

Veterans Health and Health Care Needs

It is estimated that, by 2017, almost 50% of veterans will be aged 65 years or older. As described by Pickett and

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**TABLE 1. Veterans Affairs (VA) Facilities in North Carolina**

| MEDICAL CENTERS | ADDRESS | PHONE | WEBSITE |
|-----------------|---------|-------|---------|
| Asheville VAMC  | 1100 Tunnel Rd. Asheville, NC 28805 | 828-297-9911, 800-932-6408 | www.asheville.va.gov/ |
| Durham VAMC     | 508 Fulton St. Durham, NC 27705 | 919-286-0411, 888-878-6890 | www.durham.va.gov/ |
| Fayetteville VAMC | 2300 Ramsey St. Fayetteville, NC 28301 | 910-488-2120, 800-771-6106 | www.fayettevillenc.va.gov/ |
| Salisbury VAMC  | 1601 Brenner Ave. Salisbury, NC 28144 | 704-638-9000, 800-469-8262 | www.salisbury.va.gov/ |

| OUTPATIENT CLINICS | ADDRESS | PHONE | WEBSITE |
|--------------------|---------|-------|---------|
| Albemarle CBOC     | 1845 W City Dr. Elizabeth City, NC 27909 | 252-331-2191 | |
| Brunswick Outreach Clinic | 20 Medical Campus Dr. Supply, NC 28462 | 910-754-6141 | |
| Charlotte CBOC     | 8601 University East Dr. Charlotte, NC 28213 | 704-597-3500 | |
| Fayetteville CBOC  | 2919 Breezewood Ave. Ste. 101 Fayetteville, NC 28304 | 910-488-2120, ext. 6100/6101 | www.fayetteville.va.gov/ |
| Franklin CBOC      | 647 Wayah St. Franklin, NC 28734-3390 | 828-369-1781 | |
| Goldsboro CBOC     | 2610 Hospital Rd. Goldsboro, NC 27909 | 919-731-4809 | |
| Greenville HCC     | 401 Moye Blvd. Greenville, NC 27834 | 252-830-2149 | |
| Hamlet CBOC        | 100 Jefferson St. Hamlet, NC 28345 | 910-582-3536 | |
| Hickory CBOC       | 2440 Century Pk. SE Hickory, NC 28602 | 828-431-5600 | |
| Hillandale Road Annex | 1824 Hillandale Rd. Durham, NC 27705 | 919-383-6107 | |
| Jacksonville CBOC  | 241 Freedom Way Ste. 1 Midway Park, NC 28544 | 910-353-6406 | |
| Jacksonville II CBOC | 306 Brynn Marr Rd. Jacksonville, NC 28546 | 910-343-5301 | |
| Morehead City CBOC | 5420 US 70 Morehead City, NC 28557 | 252-240-2349 | |
| Raleigh CBOC       | 3305 Sungate Blvd. Raleigh, NC 27610 | 919-212-0129 | |
| Raleigh II Annex   | 3040 Hammond Business Pl. Raleigh, NC 27603 | 919-899-6259 | |
| Robeson County CBOC | 139 Three Hunts Dr. Pembroke, NC 28372 | 910-521-8452 | |
| Rutherford County CBOC | 374 Charlotte Rd. Rutherfordton, NC 28139 | 828-288-2780 | |
| Village Green Annex | 1991 Fordham Dr. Fayetteville, NC 28304 | 910-488-2120, ext. 4020 | |
| Wilmington HCC     | 1705 Gardner Rd. Wilmington, NC 28405 | 910-343-5300 | |
| Winston-Salem CBOC | 190 Kimel Park Dr. Winston-Salem, NC 27103 | 336-768-3296 | |
| Winston-Salem Annex | 2101 Peters Creek Pkwy. Winston-Salem, NC 27127 | 336-761-5300 | |

| DIALYSIS CENTERS | ADDRESS | PHONE | WEBSITE |
|------------------|---------|-------|---------|
| VA Dialysis and Blind Rehabilitation Clinics at Brier Creek | 8081 Arco Corporate Dr. Raleigh, NC 27617 | 919-286-5220 | |
| VA Dialysis Clinic Fayetteville | 2301 Robeson St. Ste. 101 Fayetteville, NC 28305 | 910-483-9727 | |

| VET CENTERS | ADDRESS | PHONE | WEBSITE |
|-------------|---------|-------|---------|
| Charlotte Vet Center | 2114 Ben Craig Dr. Charlotte, NC 28262 | 704-549-8025 | |
| Fayetteville Vet Center | 2301 Robeson St. Fayetteville, NC 28305 | 910-488-6252 | |
| Greensboro Vet Center | 3515 W Market St. Ste. 120 Greensboro, NC 27403 | 336-333-5366 | |
| Greenville Vet Center | 1021 W.H. Smith Blvd. Greenville, NC 27834 | 252-355-7920 | |
| Jacksonville NC Vet Center | 110-A Branchwood Dr. Jacksonville, NC 28546 | 910-577-1100 | |
| Raleigh Vet Center | 1649 Old Louisburg Rd. Raleigh, NC 27604 | 919-856-4616 | |

Note. CBOC, community-based outpatient clinic; HCC, health care center; VAMC, Veterans Affairs medical center. Source: VA Mid-Atlantic Health Care Network (VISN Six). Voices of VISN 6. 2015;5(12):1-12. http://www.visn6.va.gov/images/voicesofvisn6.pdf.
colleagues [8], there is also a large cohort of younger veterans from Operation Enduring Freedom (OEF), Operation Iraqi Freedom (OIF), and Operation New Dawn (OND) who have registered for VA health care over the past 10 years. Compared to age-matched Americans, veterans enrolled in VA are poorer and have more complex medical conditions. Of recent enrollees in VA, more than half received at least a provisional mental health diagnosis. The most common mental illnesses in this population include the signature conditions of recent wars—post-traumatic stress disorder (PTSD) and depressive disorders. In this issue, Hart [9] gives an eloquent first-person account of her experience as a veteran with PTSD and her efforts to help other veterans.

Traumatic brain injury (TBI) is also highly prevalent in this younger cohort of OEF/OIF/OND veterans. TBI often co-occurs with other mental health diagnoses or polytrauma. VA supports a full continuum of care for polytrauma using a hub-and-spoke system of hospitals and outpatient facilities. Howell and coauthors [10] describe VA’s approach to rehabilitation of combat-related injuries. Important principles of this approach include systematic screening for TBI, incorporation of features of the patient-centered medical home (PCMH) into care approaches, and integration of mental health services. Coordination of services is enhanced through VA’s integrated electronic medical record system, and this mechanism for integrating services is increasingly available in the non-federal health care sector. For individuals with severe or chronic illness (typically associated with polytrauma), family support in the form of informal caregiving can be a key to better health outcomes. In 2010, innovative legislation was passed that provides direct financial support for informal caregivers of veterans. Miller and colleagues [11] describe this program and the support it provides for caregivers, who increasingly are young women.

Helping Community Providers Meet the Needs of Veterans

While VA and military health care facilities serve the needs of many veterans and service members, many of these individuals are also treated in the community. Adequately addressing the needs of veterans and service members requires more than knowledge about prevalent conditions and special programs designed for veterans. Clinicians should also have an understanding of military culture, as this knowledge can enhance interpersonal relationships and provide context for clinical care. The commentary by Parker and colleagues [12] reviews free programs and resources on military culture and the American Medical Association’s guidelines for assessing military experience.

An area of evolving research is the concept of moral injury, which has been described as “the lasting psychological, biological, spiritual, behavioral and social impact of perpetrating, failing to prevent, or bearing witness to acts that transgress deeply held moral beliefs and expectations” [13]. As Nieuwsma describes in his sidebar [14], early efforts are underway to better integrate the faith community into the care of veterans with moral injuries, as some veterans who have served in war may be facing spiritual or related struggles as they work through their combat experiences.

Large federal organizations face special challenges due to their size, entrenched bureaucracy, and the constraints of federal rules and legislation. Despite these challenges, big change is possible for large organizations. One such example, described in the commentary by O’Toole and Pape [15], is the VA Program to Address Homelessness. This program has benefited from visionary leadership, evidence-based policies, bipartisan congressional support, and a mission-focused commitment to make rapid and substantial progress towards eradicating homelessness among veterans. When this program began in late 2009, nearly 1 in 3 homeless people were veterans [16, 17]. Strategies to address this situation have included systematic screening for homelessness, the creation of multiple portals through which veterans can access services, housing first policies, and community partnerships. The results have been truly spectacular, with a 33% reduction in homeless veterans since 2010 [18]. Big problems need not be intractable if they are tackled with resourcefulness.

Resources to Better Serve the Needs of North Carolina’s Veterans

The commentary by Parker and colleagues [12] describes resources to help caregivers understand military culture; provides a table where readers can learn more about VA benefits, North Carolina VA health care facilities, Vet Centers, and crisis support lines; and gives information about the Choice Act. Similarly, Pickett and colleagues [8] provide a table with website links to a rich set of VA and non-VA resources, including some programs specific to North Carolina. Finally, resources such as mobile apps can be accessed at the VA App Store [19], and the Veterans Health Library is available through VHA’s patient web portal [20].

Building on Innovations

Health care systems that emphasize adequate provision of primary care show higher quality of care and lower costs—that is, they demonstrate better value. VHA has long emphasized primary care and was an early adopter of the PCMH model. The PCMH model is a conceptual framework for organizing care that aims to address the continuum of patient health needs. It emphasizes a personal provider, team-based care, enhanced access to care, coordinated care across health care settings, comprehensive care, a systems-based approach to improving quality and safety, sustained partnerships, and a personal relationship over time that is oriented to the whole person [21]. Many of the programs described in this issue build upon the evidence-based pillars of the PCMH model as delivered though a VA Patient Aligned Care Team (PACT) [22, 23]. These programs address topics such as care of veterans with polytrauma, described by
Howard and colleagues [10]; integrated primary care and mental health, covered by Pickett and colleagues [8]; tele-health programs, written about by Hoffman [7]; integrating chaplains into the health care team, discussed by Nieuwsma [14]; and enhancing the delivery of programs designed to prevent chronic illness, covered by Kinsinger [24].

Evidence-based policy making is a concept that is ready for prime time. For almost a decade, VA has supported the Evidence-based Synthesis Program, which consists of 4 centers (one of which is in North Carolina) that synthesize research evidence to support policy and clinical decision making. Recent reports have addressed web-based interventions for mental illness, tools to screen for PTSD, the impact of wearable motion-sensing technologies on physical activity, and the comparative effectiveness of proton irradiation therapy [25]. These reports have helped VA leaders adopt evidence-based practices such as PTSD screening while steering them away from practices without a strong evidence base, such as electronic interventions for alcohol misuse. Additionally, a number of the articles in this issue represent the work of key VA programs—many with locations in North Carolina—that seek to enhance the services delivered to veterans in and outside of VA, including the VA Health Services Research and Development Centers of Innovation (HSR&D COINS); the Mental Illness Research, Education, and Clinical Centers (MIRECCs); and the Geriatric Research Education and Clinical Centers (GRECCs).

Kilbourne and Atkins [26] describe unique opportunities to conduct operations research and evaluate new policies, such as the effects of the Choice Act, which was passed by Congress in response to long wait times experienced by some veterans seeking to access VA services. These authors make a strong case for evaluating programs and policies with randomized trials, but they also review newer evaluation approaches such as the stepped wedge design. In recent years, VA has invested heavily in evaluating new policies and developing a cadre of health leaders and researchers who work collaboratively to address the clinical and policy issues most vital to improving VA health care.

Examples of successful operations approaches to research are described in the articles by Atala and Richardson [27], Kinsinger [24], and Hastings and colleagues [28], which detail several quality improvement initiatives. One of these quality improvement programs, the STRIDE program, is a supervised walking program for hospitalized older adults. This program led to a substantial increase in the percentage of hospitalized patients who were discharged home rather than to skilled nursing or rehabilitation facilities. In just 20 months, the program was tested, evaluated, and made a permanent clinical service at the Durham Veterans Affairs Medical Center. This is a remarkably short interval to establish, evaluate, and implement a new program [28].

Technological advances and better data sources are also contributing to innovation. In some parts of the world, mobile phones are more common than landlines or Internet access. According to the Pew Research Center [29], nearly two-thirds of Americans own a smartphone. VA is investing heavily in mobile applications, as described in the commentary by Weingardt and Greene [30]. These mobile apps address some of the highest priority conditions—including PTSD, insomnia, depression, and anger management—as well as general life skills such as parenting and problem solving. Partnering with researchers to evaluate the effects of these mobile apps will be important to guide VA policy and will inform clinicians and decision makers external to the VA.

Conclusion

VHA is facing unprecedented challenges: a growing and increasingly complex patient population, problems in providing timely access to services, diminished public trust, and new complexities introduced by legislative actions. Meeting these challenges successfully will require reforms such as those identified by the Blue Ribbon panel of experts who conducted an independent evaluation of VA [31] and innovations such as those described in this issue. We are hopeful that these challenges will be met. The programs described in this issue share common ingredients for success: veteran-centered care, teamwork, community involvement, and a continuous focus on quality improvement.

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