Health of Veterans – Strengths and Challenges – v.2
JABFM Dedicated Issue
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Since the end of the Civil War in 1865 a unified military force has not only protected the safety of the United States, but also anchored the nation's position as a global power. With this commitment to a military career, those who serve the nation accept exposures that put them at risks that are distinct from their civilian counterparts.

Unique Characteristics of Veterans

A June 2020 report on veterans' population trends between 2000 and 2018 (https://www.census.gov/newsroom/press-releases/2020/veterans-report.html) showed a decline to 18 million during those 18 years such that veterans now make up only about 7% of the adult population. But the most striking finding was the representation of female veterans - 9% of veterans (approx. 1.7 million) and projected to increase to 17% by 2040. A follow-up *American Community Survey* in 2019 revealed that 76.2% of veterans were non-Hispanic white, 12.3 % were Black, 7.2% were Hispanic, 1.8 % were Asian, and 0.8% were American Indian or Alaska Native. Post-9/11 veterans were the youngest with a median age of 37, while Vietnam Era veterans had a median age of 71 and WWII veterans were the oldest with a median age of 93. The percentage of veterans age 65 or older in 2019 is 50.4%. Post 9/11 veterans have a 43% chance of having a service-connected disability – a significantly higher rate than that of veterans from other periods.

Beyond the census data, key perspectives revolve around where veterans receive their care and what the most prevalent conditions are that impact their health. Some areas have been the focus of targeted research projects – such as environmental exposures and post-traumatic disabling conditions, but more focus is needed to identify the entire scope of illnesses impacting the health of those who have put themselves in harm's way to serve the nation.

Fewer than half of all veterans living in the US were enrolled in VHA care according to the Congressional Budget Office. Nearly 1.9 million veterans have used the Veterans Choice Program since its inception in 2014 and more than 474 000 health care professionals and facilities are now contracted to provide care to veterans in the community (Daley J. *Ensuring Timely Access to Quality Care for US Veterans*. JAMA Jan 17, 2018 published on line). Despite these improvements, the Government Accountability Office 2017 report to Congress concluded that timely and high-quality access to care for veterans still needs substantial improvement. Since the financial resources for the Veterans Choice Fund have dwindled, VA has proposed a new model of community-based care to Congress, the Veteran Coordinated Access & Rewarding Experiences (CARE) Program. In contrast to the Veterans Choice Program, the CARE program focuses on the clinical assessment of each veteran by a primary health care professional in the VHA to determine the eligibility of a veteran for community-based care as opposed to receiving care in the VHA. The new CARE Program could potentially help eliminate the somewhat arbitrary administrative criteria of wait times and distance from the veteran's home to VHA care. There is concern that an exodus of veterans to community care could result in a reallocation of clinical resources between VHA and the community in an attempt to secure the best quality services for veterans. Additional questions arise as to whether community health care

professionals and facilities will be equipped to provide the scope and complexity of care that many veterans require.
Unique influential factors –
The mission-orientation imbedded in service members throughout their careers in uniform typically carries over into the lives they live after they remove the uniform. This mission orientation directly influences personal decision-making and health-seeking behaviors.
OEF/OIF/OND veterans who have significant others (eg family members and friends) who support them seeking care and treatment are much more likely to use VA health care services than are veterans who are without these supports.
Greater clarification of the factors influencing how, why and when veterans seek care is needed. Distinctions between health and health behaviors among military service veterans, active duty service members, National Guard/Reserve members, and civilians are essential to targeting improvements that meet the individual needs of each of these populations. Significant national attention has focused on the delays veterans experience in receiving care but more evidence is needed to compare perceived care delays in the VHA versus in populations covered by other types of insurance. One study of more than 10,000 in a nationally representative database found that 17.2% of Americans delayed seeking needed healthcare in 2010-2011, but the figure was 29% for veterans (Lee D, Begley CE. Delays in Seeking Health Care: Comparison of Veterans and the General Population. J Public Health Manag Pract. 2017 Mar/Apr;23(2):160-168. doi: 10.1097/PHH.0000000000000420. PMID: 27115981). Study results suggest a possible link between VA access problems and veterans' behavior in seeking needed healthcare, which may be creating disparities in the effectiveness of care for this vulnerable and deserving population.

Prior primary care visits were identified as a proxy for health seeking behavior for patients with low back pain suggesting the influence of how veterans' care is managed to when and how they access care (Clewley D. Health seeking behavior as a predictor of healthcare utilization in a population of patients with spinal pain. Aug 1, 2018. https://doi.org/10.1371/journal.pone.0201348).

Approximately 200,000 service members leave active duty each year. One study of more than 10,000 veterans found that more than half of respondents found work within three months of leaving the military, and initially felt healthy, but then described a steady decline in the veterans' ability to function well at work, which likely resulted from their health issues. Compared to officers, enlisted veterans were worse off in areas of health, employment and social functioning. Furthermore, veterans who deployed to war zones had more health concerns than those who did not (Vogt D, Tyrell FA, et al. US military veterans' health and well-being in the first year after military service. Am J Prev Med.2020:58(3):352-360 DOI:https://doi.org/10.1016/j.amepre.2019.10.016)
Less than half of the approximately 22 million U.S. veterans (we must decide which total number of veterans we will use (about 9 million) are cared for by the U.S. Department of Veterans Affairs (VA) health care system. Although the VA provides an extensive package of services - primary and specialty care, mental health care, substance abuse treatment, pharmacy services, physical therapy, vision care, home care, musculoskeletal trauma and rehab care, family respite care – all veterans are not be able to receive their care at the VA for a variety of reasons to include nature of their discharge from active duty, proximity to a VA facility, and transportation

constraints. Approximately three-quarters of these enrolled veterans have alternate sources of health coverage (eg Medicare, Medicaid, or private insurance) allowing them to receive portions of their care outside the VA system. What is not known is how much of veterans' care is received where and what quality metrics can be identified to accurately measure their outcomes (Lee, Sanders, Cox. Honoring those who have served: How can health professionals provide optimal care for members of the military, veterans, and their families? Acad Med Sep 2014)

Unique Health and Health Care Concerns of Veterans
1/3 can discuss some unique health concerns - mental health, # chronic issues of

Factors other than referral patterns and access points for care are associated with health disparities among veterans. Data from the U/S. population-based 2010 Behavioral Risk Factor Surveillance Survey of more than 53,000 male veterans showed that in spite of better healthcare access, veterans had poorer health and functioning than civilians and National Guard/Reserve members on several indicators. Veterans also were more likely than those on active duty to report diabetes, smoking, heavy alcohol use and other chronic diseases (Hoerster KD, Lehavot K, Simpson T. Health and health behavior differences US military, veteran, and civilian men. Am J Prev Med. 2012; 43(5):483-9. DOI: 10.1016/j.amepre.2012.07.029)

Data from the U.S. Department of Veterans Affairs Post Deployment Integrative Care Initiative indicate seven health conditions that confront veterans.
Musculoskeletal Injuries and Pain

Veterans are 40% more likely to complain of severe, chronic pain than their civilian counterparts (Nahin RL. Severe pain in veterans: the impact of age and sex, and comparisons to the general population. *Journal of Pain.* November 21, 2016. pii: S1526-5900(16)30313-3. Epub ahead of print), More than half of veterans' post-deployment health visits focus on lingering pain to their backs, necks, knees or shoulders. Approximately 100,000 veterans of the Gulf War describe chronic musculoskeletal pain even 20 years after the war ended.

Mental Health issues
There is a substantial unmet need for mental health services among veterans from all recent conflicts. A review of the many mental health issues that have emerged particularly among veterans of the OEF/OIF/OND conflicts reveals many areas requiring further research to better understand the epidemiology, etiology and risk, prevention, screening, and treatment. In addition the resilience factors for post-traumatic stress syndrome (PTSD), combat stress, depression and suicide, as well as the usefulness of psychotherapy versus drug therapy for treating PTSD need to be identified (Castro, C. A. (2014). The US framework for understanding, preventing, and caring for the mental health needs of service members who served in combat in Afghanistan and Iraq: A brief review of the issues and the research. European Journal of Psychotraumatology).
Environmental/Chemical/Combat related (noise and vibration) exposures
Much remains unknown or poorly characterized relative to environmental exposures for veterans. The Gulf War provides an example of the hazards associated with military

deployments. Not only are occupational hazards anticipated during conflicts, but this engagement revealed a variety of unique environmental and man-made hazards. There was the ongoing threat of chemical weapons exposure, operational temperature extremes, sand and dust storms, and smoke and fire from burning oil wells, and other fires that resulted in compounded potential exposure threats in theater (Dursa et al. JOEM 2016; McCauley L, Ramos KS. Shaping the future of veterans' health care. N Engl J Med 2020;383(19):1801-1804). Exposure to nerve agents such as sarin during the Gulf War has been found not only to have acute toxic effects but also to result in long term heart damage (After the Battle https://livescience.com/8916-battle-7-health-problems-facing-veterans.html).
https://www.dav.org/veterans/resources/military-toxic-exposures/
https://www.va.gov/vetdata/docs/Quickfacts/VA_Utilization_Profile_2017.pdf

PTSD/TBI
Gulf war veterans have been found to have substantially higher prevalence of chronic diseases than OEF/OIF/OND veterans. Interestingly, the prevalence of a positive screen for PTSD in the Gulf Era veterans reported in this study was similar to the prevalence of a positive screen for PTSD in Operation Enduring Freedom and Operation Iraqi Freedom-era veterans (10.9%). This suggests that military service, or the characteristics of those who choose military service, may be associated with increased risk for PTSD. Although speculative, research has identified an elevated prevalence of early childhood adversity and preservice mental health disorders among veterans in the all-volunteer era (Dursa. Physical and Mental Health of Gulf War vets JOEM 2016).
URMs – need summative discussion here – havoing trouble finding the articles I collected 5 years ago – probably on my UPMC drive which I can no longer access! Uggh!
Gender issues –
An online survey examining the mental health characteristics of sexual minority (lesbian, gay, and bisexual, or LGB) veterans noted that LGB veterans were more likely to screen positive for posttraumatic stress disorder (PTSD), depression, and alcohol problems than the comparison sample. Anxiety around concealment of one's sexual orientation while in the service was related to current depression and PTSD symptoms (Cochran, B. N., et al. (2013). "Mental Health Characteristics of Sexual Minority Veterans." Journal of Homosexuality **60**(2-3): 419-435). Mental health indicators also showed frequent mental distress, sleep problems, low social/emotional support, and low satisfaction with life. Health risk indicators included current smoking, overweight, and obesity (Blosnich, J., et al. (2013). "Health Disparities Among Sexual Minority Women Veterans." Journal of Womens Health **22**(7): 631-636. Sexual minority veterans have experienced sexual victimization, both within the military and as children, and struggle with substance abuse and poor mental health at greater rates than their majority counterparts (Mattocks, K. M., et al. (2013). "Sexual Victimization, Health Status, and VA Healthcare Utilization Among Lesbian and Bisexual OEF/OIF Veterans." Journal of General Internal Medicine **28**: S604-S608).

Military Sexual Trauma
In response to growing concerns about sexual violence as an underrecognized traumatic consequence of military service, Veterans Health Administration policy requires universal screening for sexual trauma sustained during military service. Women who experienced military sexual trauma and served in Operation Iraqi Freedom/Operation Enduring Freedom (OIF/OEF)

and sought mental health services at a Veterans' Affairs (VA) medical center had a correlation with greater difficulty with readjustment than those who reported "being injured" and "witnessing others injured or killed" Katz, L. S., et al. (2007). "Women who served in Iraq seeking mental health services: Relationships between military sexual trauma, symptoms, and readjustment." Psychological Services **4**(4): 239-249). Another study examined data for all male (N=540,381) and female (N=33,259) veterans who had valid responses to screens for military sexual trauma in 2005. Compared with negative screens, positive screens were associated with significantly increased rates of post-screen mental health treatment. A more than twofold increase was observed for patients without previous use of mental health. An effective screening program that promotes detection of sexual trauma and access to mental health care can help to reduce the burden of psychiatric illness for those who have experienced military sexual trauma (Kimerling, R., et al. (2008). "Evaluation of universal screening for military-related sexual trauma." Psychiatric Services **59**(6): 635-640).

Homeless Veterans

The persistence of homelessness among veterans remains a troubling dilemma. A substantial proportion of homeless Veterans using VHA services have experienced MST, and those who experienced MST had increased odds of mental health diagnoses. Homeless Veterans who had experienced MST had higher intensity of mental health care utilization and high rates of MST-related mental health care. This study highlights the importance of trauma-informed care among homeless Veterans and the success of VHA homeless programs in improving access to mental health care among homeless Veterans (Pavao, J., et al. (2013). "Military sexual trauma among homeless veterans." Journal of General Internal Medicine **28**(SUPPL.2): S536-S541). Of VA homeless service users, 8% were female compared with 7% among all homeless veterans, 6% among all VA service users, and 7% among all veterans. Of female VA homeless service users, 54% were literally homeless, slightly fewer than the 59% of male VA homeless service users. Comparing literally homeless VA service users, females were younger, 21% more had dependent children, 8% more were diagnosed with non-military-related posttraumatic stress disorder, and 19% to 20% more were referred and admitted to VA's supported housing program than males (Tsai, J., et al. (2014). "National comparison of literally homeless male and female VA service users: entry characteristics, clinical needs, and service patterns." Womens Health Issues **24**(1): e29-35).

Areas Featured in this Dedicated Issue

1/3 can discuss the topics of the articles in the collection but emphasize more research is needed in these areas and more precise info esp are access as well as missing topics

Depression severity and therapy source
Older veterans and declining health
Barriers to homeless services
Clinical pharmacist integration into primary care teams
Sexual dysfunctions discussions in primary care
IPV screening in VHA
Veterans willingness to discuss firearm safety

Veterans' care-seeking at VA v non-VA facilities