DISCUSSION PAPER

# Lessons for Health Equity: Military Medicine as a Window to Universal Health Insurance

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**Health disparities result from multifaceted variables including access to health care and discrimination associated with socioeconomic status, education, social support, insurance, race, ethnicity, and gender.** The purpose of this paper is to identify lessons learned and future research opportunities from the two national health systems that model universal health care: the Military Health System (MHS) and the Veteran's Administration (VA). The concept that insurance and access are the primary factors in health disparities is partially supported in the MHS, yet mental health care remains disparate especially in posttraumatic stress disorder treatment and outcomes in the VA system. The data available from the VA and MHS demonstrate both elimination of disparities and areas where disparities continue despite equal access and resources. Increased focus on these health care delivery systems has the potential to clarify sources and solutions to health disparities.

## Diverse Demographics of Military Members, Their Families, and Providers

The most recent demographics report over 3.6 million military personnel which include Department of Defense (DoD) active duty military personnel (1,326,273), active duty Coast Guard (39,454), DoD Ready Reserve and Coast Guard Reserve members (1,101,939), the Retired Reserve (214,784) and Standby Reserve (13,700), and DoD civilian personnel (856,484) (DoD, 2014). The following total military force demographics represent the 2.5 million members who are active duty and Selected Reserve. The Army accounts for 47 percent of the total military force. The Air Force, Navy and Marine Corps constitute 21, 17, and 12 percent, respectively, with the remaining 2 percent members of the Coast Guard. The total military force is mostly male with 16.2 percent female. The majority are white (71.0 percent), followed by black (16.8 percent), Asian (3.8 percent), American Indian or Alaska Native (1.2 percent), and Native Hawaiian or Other Pacific Islander (0.9 percent). The 2013 demographic report identifies 2.4 percent of the military members as multiracial, with 11 percent identified as having Hispanic ethnicity. The majority of the total military force is married (51 percent), and the largest age group is 25 years or younger (40 percent). There are more family members (2.98 million) than Active Duty and Selected Reserve (2.20 million) members. Active Duty members' children are mostly between birth and 5 years (42 percent), followed by 6 to 11 years (31 percent), then 12 to 18 years (22 percent), and finally 19 to 22 years (4 percent).

There were 9.53 million beneficiaries eligible for DoD medical care including TRICARE Reserve Select , TRICARE Young Adult, and TRICARE Retired Reserve in 2014 (DHA DHCAPE, 2014). Providers who care for military members and their families are required to maintain the national standards for credentialing and certification in all military treatment facilities (MTFs) and

civilian facilities where care is purchased. The quality of care in MTFs is held to the same national benchmarks as in civilian organizations. There are no copayments in the Veteran's Administration (VA) or Military Health System (MHS), and procedure and treatment approvals are based on medical justification. The use of an electronic medical record (EMR) that can share information across the United States and internationally distinguishes care in and out of military facilities and the VA. The racial, gender, and ethnic background of providers in these systems should mirror the national provider demographics. Uniformed providers embody the additional diversity of experience and geographic relocation associated with the mobility of service. Awareness of military service and a positive bias toward military members and their families is a common thread for providers in these systems.

## Two Distinct Systems of Military Health Care

Although frequently confused by nonmilitary personnel, the MHS is separate from the VA health services. MHS primarily serves the active duty population, their family members as well as some retirees, whereas the VA exclusively treats veterans, a generally older cohort. The VA system is part of the Department of Veterans Affairs, and MHS is overseen by DoD. Not all veterans receive their health care through the VA system, and many who are of working age and in good health opt for private health insurance through their employer.

The Senate Appropriations Committee estimates that the Department of Veterans Affairs is responsible for providing care to approximately 48.3 million Americans, or 15 percent of the nation's population. The VA has the nation's largest integrated health care system, consisting of 167 medical centers, 1,018 community-based outpatient clinics, 300 vet centers, and 135 community-based living centers.

The mission of the VA is to fulfill President Lincoln's promise "To care for him who shall have borne the battle, and for his widow, and his orphan" by serving and honoring the men and women who are America's veterans. According to its mission statement:

*America's Military Health System (MHS) is a unique partnership of medical educators, medical researchers, and health care providers and their support personnel worldwide. It is prepared to respond anytime, anywhere with comprehensive medical capability to military operations, natural disasters and humanitarian crises around the globe, and to ensure delivery of world-class health care to all DoD service members, retirees, and their families. The MHS promotes a fit, healthy and protected force by reducing non-combat losses, optimizing healthy behavior and physical performance, and providing casualty care. (Office of the Under Secretary for Personnel and Readiness. Health Affairs Mission)*

The differences in health outcomes are influenced by the different patient populations, organizational structure, and priority. The similarities in decreased disparities are most likely the result of electronic medical record use, similar provider cohorts, and a single insurer.

## Challenges of the VA Health Care Mission

A veteran is defined as anyone who has served in the Armed Forces. The current veteran population is approximately 21 million and expected to decrease to approximately 14 million by the year 2040, while the percentage of minority and female veterans are expected to increase (NCVAS, 2014). The black veteran population is expected to experience the greatest increase, from 12 percent to 16 percent, followed by the Hispanic veteran population growing from 7 percent to 11 percent; other races are expected to grow from 4 to 6 percent by the year 2040 (NCVAS, 2014). Health benefits in either the VA or MTF are prioritized to those who retire from active duty service and those with conditions related to service. Priority at VA facilities goes to veterans with an illness possibly related to their service in combat operations identified within 5 years after discharge and those with greater than 50 percent disability. There is no enrollment fee, monthly premium, or deductibles, and out-of-pocket costs are low or nonexistent (VA, 2015). There are several performance measure topics of interest for the Veterans Health Administration (VHA), including quality, timely access, patient-centered satisfaction and function, equitable community health, and efficient cost-effectiveness (Perlin et al., 2004). Although the VHA has made great strides to improve its services, there are still barriers to health care for veterans, including availability to rural populations and individual perceptions of the quality of care that affect the utilization of services. The distance to services and provider shortage in rural areas have been previously identified as barriers for

veterans seeking health care within the VA system, specifically for common diagnostic services, routine specialty care, and emergency services.

## Health Disparities for Service Members and Veterans

Center for Health Equity Research and Promotion (CHERP) investigators have published over 445 scientific manuscripts in peer-reviewed journals, including at least 241 related to research on improving health quality and equity and care for vulnerable veteran populations since 2009. Mental health care is a known disparity. Military personnel have a high risk of developing psychological problems, especially when exposed to combat, and mental health services are not used by all personnel (Ryan et al., 2007; Kehle et al., 2010). Fewer than half experiencing mental health problems are likely to seek professional mental health care for fear of stigma or other related barriers to care (Ouimette et al., 2011). For example, there is an underuse of mental health care services among Operation Enduring Freedom/Operation Iraqi Freedom (OEF/OIF) personnel, although there is a high prevalence of posttraumatic stress disorder (PTSD) within this population (Vogt, 2011). In 2011, Dawne Vogt conducted a review on empirical articles about mental health beliefs in military and veteran populations and found concerns about public stigma and personal mental health-related beliefs that may serve as important barriers to mental health care use (Murdoch et al., 2003). Military members and veterans have been categorized as underutilizers of mental health services, thought primarily to stem from cultural influences and a pervasive stigma associated with the appearance of being "weak." African American veterans have been far less likely than Caucasian veterans and those of other racial and/or ethnic groups to be classified as PTSD in order to receive medical treatment for a service-connected disorder (Nayback, 2008; Harris, 2011). Similar disparate care in the treatment of African American veterans for cardiac care, laparoscopic cholecystectomy, and carotid artery imaging has also been shown (Conigliaro et al., 2000; Harris, 2011).

## Access to Health Care Eliminates Some Disparity

Traditional definitions of disparities include those differences in outcomes that persist when access is equal. The Institute of Medicine study, *Unequal Treatment*, defined disparities as racial or ethnic differences in health care that were not due to access-related factors or clinical needs, preferences, and appropriateness of intervention (IOM, 2003). Thus, we would expect to see a lack of disparities in the military health care system because it provides universal coverage for all active duty service members, their families, many retirees, and the families of deceased service members. A recent example demonstrating the lack of disparities includes a rigorous look at emergency general surgery (EGS) outcomes over a 5-year period. The study found that risk-adjusted survival analyses found a lack of significant mortality and readmission differences at 30, 90, and 180 days. Although overall morbidity was higher among black versus white patients (HR [95% CI])—30-day HR =1.23[1.13-1.35], 90-day HR = 1.18 [1.09-1.28], 180-day HR = 1.15 [1.07-1.24]this finding seemingly was driven by appendiceal disorders (HR = 1.69-1.70) (Zogg et al., 2015). This lack of disparities in EGS is a situation not reflected in the general U.S. population. Thus, as many minority patients are also uninsured, increasing access to care such as through universal coverage like the MHS is thought to be a viable solution to mitigate inequities.

Ongoing research by the Comparative Effectiveness and Provider Induced Demand Collaboration (EPIC) team at the Uniformed Services University of the Health Sciences and Brigham & Women's Hospital indicates a lack of disparities across a variety of health- and surgery-related access and outcomes including maternal, cancer, and heart surgery procedures. Where racial disparities may be eliminated or insignificant, caution must be taken to search for rank-related disparities that may be unique to the military culture or may be more reliant on health literacy and training.

## Addressing Bias May Further Decrease Health Disparities

Recent evidence of a lack of racial disparities in MHS may reflect the military value of "taking care of our own," which can serve as a unique equalizer among active duty patients and providers in this closed, universal coverage system. Provider variability and geographic variation likely impact health care disparities after eliminating the variables of insurance and access to care.

Cultural factors of disparities arise from gender, religion, race, ethnicity, and any shared group experience (Harris, 2011). Race-based cultural distrust of military medicine is not eliminated immediately upon entering the service. Howard Ross has stated that "Bias is like breathing" to emphasize that everyone has bias (Ross, 2014). Several biases remain in place even after universal coverage eliminates access and resource discrepancies.

The "bandwagon effect" happens when our decisions are influenced by a larger group's decision (Croskerry, 2003). Military medicine is particularly prone to this bias with a culture founded on discipline and standardization. Sick call was once organized by having every sick person report early in the morning between 5:00 and 6:00 a.m., for providers to quickly identify those who were "really" sick. The low compassion and the belief that the majority were trying to miss duty contributed to errors in triage by both nonmedical supervisors and medical personnel and the eventual elimination of the system. Family members may also experience a bandwagon effect when providers see encounters as patients abusing a system that they consider free. For example, during a deployment, children are brought in to be seen more frequently (Gorman et al., 2010) which may negatively influence provider compassion. The transition to the medical home model for beneficiaries may reduce this effect as providers develop continuity with their patients.

Another bias is the clustering illusion, which happens when we see groupings, streaks, or clusters of a condition and apply the condition to a group (Croskerry, 2003). New military recruits, officers, different branches of the service, and units with unique reputations are often seen as homogeneous. When several patients present with a sexually transmitted infection, the racial assumptions apply but also the assumptions associated with their military designation. The military medical system adds another potential categorization to patients that may be grouped together.

Health care providers in a system with universal coverage no longer have the heuristic of poor health caused strictly by being poor without access to health care and may look to personality or behavioral traits to attribute a condition.

## Future Research or Policies

The federal health care system provides an excellent vehicle for objectively exploring the underlying determinants of health disparities. Factors that have been explored in other settings may be verified as dependent upon access. Other areas that continue to demonstrate disparity require exploration of new variables that contribute to health disparities such as rank and service to improve military and veteran health care. Theoretically, the traditional barriers of access, patient and provider economic concerns, and provider shortages should explain disparate outcomes. When differences remain, other sources require investigation. The expansion of telehealth within the DoD and VA to provide care and virtual advanced specialty care is another potential area in which to evaluate disparate outcomes in similar settings. The more subtle, and therefore traditionally less studied, cultural, social, and emotional factors may be playing a more critical role than appreciated. Future exploration is needed of the extent that different subpopulations possess differential health literacy capabilities as well as the influence of patient and provider preconceived expectations and the effects of an illness-oriented system versus a wellness-oriented system. Can universal care shift the focus from treating disease to preventive medicine and healthy life style factors such as sleep, exercise, nutrition, and systematic stress reduction?

## Summary of Lessons Learned

The health disparities assumed to relate to a socioeconomic system that is separate and unequal should resolve in a universal health system like the MHS and VA. Some evidence exists that mandated care such as dental care for service members does eliminate disparities, but other areas remain. The delivery of the care contributes to the quality of the care, such as sick call versus a medical home. Lastly, culture exists outside of the military system and the culture from the military system is more likely to mix with instead of replace the effects of society outside of the military. Treatment and outcome improvement should be seen when care is both available and mandated yet the discrepancies that remain in a universal health system highlight the impact of culture, bias, and a focus on illness rather than wellness and prevention.

## Background

This discussion paper was stimulated by conversations at a meeting on May 11, 2015, convened by the Board on Children, Youth, and Families of the National Academies of Sciences, Enginnering, and Medicine. A number of discussion papers arose from this meeting and will be published as NAM Perspectives throughout 2016. You can access the papers at nam.edu/Perspectives and sign up to the Perspectives listserv at nam.edu/ListservSignUp. To watch the full recording of the May 11, 2015 meeting, please visit nam.edu/SocialJustice. A group of external peer reviewers reviewed the papers. They included: **Brigadier General Clara L. Adams-Ender,** United States Army Nurse Corps (retired), **David Brent, MD,** University of Pittsburgh, **David Britt, MPA,** Sesame Workshop (retired), **Hernan Cervante, BS,** Vera Institute of Justice, **Mark Courtney, PhD,** University of Chicago, **Elena Fuentes Afflick, MD,** University of California, San Francisco, **Amy Griffin,** National Institute of Justice, **Harry Holzer, PhD,** Georgetown University, **Larke Huang, PhD,** Substance Abuse and Mental Health Services Administration, **Jeff Hutchinson, MD,** Uniformed Services University of the Health Sciences, **Ann Masten, PhD,** University of Minnesota, **Christine Ramey, MBA, BSN, RN,** Health Resources and Services Administration, and member of the Academies ' Roundtable on the Promotion of Health Equity and the Elimination of Health Disparities, **Martin Sepulveda, MD, MPH,** IBM, **Melissa Simon, MD,** Northwestern University Feinberg School of Medicine, and member of the Academies ' Roundtable on the Promotion of Health Equity and the Elimination of Health Disparities, **Belinda Sims, PhD,** National Institute on Drug Abuse, and **Mildred Thompson, MSW,** PolicyLink Center for Health Equity and Place, and former member of the Academies ' Roundtable on the Promotion of Health Equity and the Elimination of Health Disparities.

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