

PERSPECTIVE ARTICLE

Mission readiness through equity: Insights into the impact of the COVID-19 pandemic on the United States military

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Abstract

The coronavirus disease 2019 (COVID-19) pandemic magnified long-standing disparities in health care. Among the general population, racial/ethnic minorities often face disproportional barriers, such as poverty, reduced health literacy, a generational mistrust of health-care institutions, and limited access to health care, contributing to the disparities reported in severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) infection and outcomes. Racial/ethnic minorities in the military comprise nearly 43% of active-duty service members and face disproportionate health burdens influenced by systemic and individual factors. As a result, minority service members within the military health system had similar rates of SARS-CoV-2 testing compared to those of white service members. Reports have found that while the rates of testing are similar, SARS-CoV-2 infection remained disproportionately higher among Black and Hispanic service members. This perspective examines disparities in the United States military, focusing on the role of social determinants of health, comorbidities, risk factors, and access to care in shaping COVID-19 health outcomes.

Keywords: Severe acute respiratory syndrome coronavirus-2; COVID-19; Disparities; Military Health System; Comorbidities; Minority; Race; Ethnic

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1. Introduction

In December 2019, a novel coronavirus, known as severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2), was identified in Wuhan, China, presenting with pneumonia-like symptoms and triggering the coronavirus disease 2019 (COVID-19) pandemic. Studies have shown that minority civilian patients are less likely to receive aggressive treatments or advanced care for severe COVID-19 symptoms.¹ Accumulating evidence underscores the role of comorbidities as risk factors affecting the clinical progression of SARS-CoV-2 in minority populations, potentially due to having increased risks of limited or no access to health care.² Among the general population, racial/ethnic minorities often face disproportional barriers, such as poverty, reduced health literacy, a generational mistrust of health-care institutions, and limited access to health care, all of which contribute to the disparities reported in SARS-CoV-2 infection rates and outcomes.¹ Access to and quality of care are significant drivers of health disparities among the general population, not only in terms of eligibility for insurance but also in the acceptance of health recommendations and trust in medical providers.³ Reports have

shown that trust plays an important role in the acceptance of medical counsel, and Black individuals report lower levels of trust in health-care providers than their white counterparts. Of these disparaging areas in health care, the military has mitigated some variables that are purported to provide equality and eliminate certain aspects of racial/ethnic inequity.

2. Social determinants

The military health system (MHS) is a universal health insurance model that provides direct care and private sector care. The prevailing belief is that a universal health-care model mitigates racial/ethnic disparities in the general health-care system by eliminating the driving force of socioeconomic status (SES). Racial/ethnic minorities comprise nearly 43% of active-duty service members (ADSM) and face disproportionate health burdens influenced by systemic and individual factors.⁴ Furthermore, these groups often encounter socioeconomic barriers when accessing and receiving care.³ As a result, minority service members (SMs) within the MHS had similar rates of SARS-CoV-2 testing to those of white SMs.^{2,3} However, reports have found that while the rates of testing are similar, SARS-CoV-2 infection rates remained disproportionately higher in Black and Hispanic SMs.³ Thus, despite equal access to SARS-CoV-2 testing, minority SMs exhibited enhanced rates of viral infections, underscoring that viral infections and the subsequent health outcomes are independent of access to testing. At present, respiratory pathogen testing for military SMs, in garrison, is conducted upon request, following the onset of symptoms. Access to testing in garrison and deployed environments depends on physical factors, whereas the types of testing are dependent on the institution and the diagnostic platforms available. In deployed environments, testing of specific respiratory pathogens may be limited and dependent on the physical distance to medical centers. Specifically in austere environments, testing may require SMs to travel extensive distances to access a medical treatment facility or be inaccessible altogether.

Structural factors, such as cultural barriers, biases, and variations in health-care utilization patterns, have resulted in uneven health outcomes. Minority SMs have reported feeling dismissed or underestimated in their health concerns, leading to delayed diagnoses and suboptimal care.^{3,5} With the immediate alterations to assignments and deployment posts during the pandemic, minority healthcare workers and SMs moved toward high-stress, physically demanding roles, therefore exacerbating chronic conditions.⁶ In addition, ongoing experiences of biases and microaggressions can lead to chronic stress, which

suppresses immune function and increases susceptibility to viral infections.

These disparities were especially prevalent during the COVID-19 pandemic. For example, vaccination uptake among minority groups in the military lagged initially due to historical mistrust and inadequate culturally tailored outreach, resulting in increased infection rates.^{3,5,6} When surveyed regarding COVID-19 vaccine hesitancy, 20–40% of SMs reported concerns about “short-term” or “long-term” side effects, “vaccine effectiveness,” “being infected with COVID-19 from the vaccine,” “worry about misinformation/political agenda,” and “lack of trust in the government.”⁵ Vaccine hesitancy among racial/ethnic groups was found to reflect observations in the civilian population.⁶ Multiple reports have demonstrated reduced uptake of influenza and COVID-19 vaccines among Black individuals, including Black SMs,³ Black beneficiaries,⁵ and the general population.⁷ These findings confirm that interpersonal and societal factors also contribute to vaccine hesitancy among SMs, and are independent of universal access to health care.⁶

Other health disparities within sex and rank have also been described within the MHS. From 2020 to 2021, female SMs reported modestly higher rates of testing, lower risks of infection, and similar risks of hospitalization compared to male SMs.^{3,5} Before COVID-19 vaccine availability in 2021, racial/ethnic minorities in the civilian population were less willing to accept the vaccine.⁶ However, given that the United States (US) Department of Defense (DoD) led a vaccination campaign resulting in 95–99% immunization rates during the COVID-19 pandemic, it is unlikely that vaccine hesitancy solely accounts for this trend.⁶ While the MHS does not have the structural barrier of SES, military rank often correlates with a higher SES. Junior enlisted personnel, often disproportionately composed of racial/ethnic minorities, are younger enlisted soldiers who make up most of the US military forces. In contrast, senior enlisted personnel and military officers are military correlates of higher SES compared to junior enlisted, usually possessing higher education, increased annual income, and occupying significant leadership roles. During the COVID-19 pandemic, officer rank was not correlated with an increased risk of SARS-CoV-2 infection, but rather associated with a 31% lower adjusted risk of COVID-19-related hospitalization.³ Equally prevalent racial/ethnic disparities, such as comorbidities, quality of care, and utilization of resources, may explain this trend.

3. Comorbidities

Multiple reports suggest a correlation between common comorbidities, such as obesity, diabetes, hypertension,

and heart failure, and an increased risk of severe clinical progression of SARS-CoV-2 infections.^{2,3,7} Black individuals in civilian and military populations have shown increased rates of hypertension, diabetes, obesity, and chronic kidney disease, all of which exacerbate SARS-CoV-2 infections and health outcomes.³ Similarly, Hispanic/Latino Americans have an increased prevalence of obesity and type 2 diabetes, whereas native Americans show increased rates of respiratory conditions and diabetes.⁷ A report published in 2021 demonstrated racial/ethnic disparities in SARS-CoV-2 infection and COVID-19-associated hospitalization rates in ADMS.³ These findings were supported by an MHS report that suggested higher rates of SARS-CoV-2 infection associated with comorbidities.² Similar to the MHS, which provides health-care services to ADMS, reserve, and retired military personnel, the Veterans Health Administration (VHA) provides health-care services to US veterans. Veterans are classified as former members of the armed forces who were once ADMS and honorably discharged from service. While the MHS is overseen by the DoD, the VHA is supervised by the Department of Veterans Affairs. A study conducted within the VHA showed substantial disparities in excess mortality, defined as mortality rates that are reported above normal.⁸ The study reported that non-Hispanic white veterans had the lowest excess mortality (17%), whereas native American veterans had the highest (40%) due to SARS-CoV-2 infections. Likewise, a previous report found that excess mortality was the highest among Hispanic and Black veterans, exhibiting a 34% and 32% increase, respectively, compared to their white counterparts.⁹ In general, veterans were shown to exhibit a lower overall excess mortality compared to the civilian population during the COVID-19 pandemic. This attenuation is potentially attributable to the Office of Health Equity striving for a more equitable distribution of COVID-19 vaccines.⁸ These data suggest that minority populations are at greater risk for hospitalization because they have an increased number of untreated medical comorbidities and underlying risk factors. Minority SMs with these comorbidities are more likely to experience severe symptoms, require ventilatory support, or die from COVID-19-related complications. In addition, the prioritization of comorbidities in the early stages of the military COVID-19 response was limited or unavailable, and may explain these disparaging outcomes.

4. Access to care

Utilization of preventative health services is often lower among minorities due to cultural, physical, or systemic

barriers. Regular screenings for chronic diseases, high-risk comorbidities, and implementation of disease management have been reportedly lower in minority populations.⁷ Language barriers in Hispanic and non-English-speaking families have exacerbated these challenges. For example, 80% of the 25.1 million people in the US reported having limited English proficiency (LEP).¹⁰ Within the Hispanic/Latino community, Spanish speakers reported having 44% of LEP and accounted for a disproportionately large percentage of COVID-19 deaths and hospitalizations in New York and Boston in 2020.¹⁰ In addition, language barriers within patient–physician communication were identified as a significant contributor to COVID-19-related health disparities of LEP minorities. These barriers pose concerning risks when accessing care and communicating medical urgency. While professional medical interpreters are recommended, data show that due to increased patient volume and decreased interpreter staffing during COVID-19, providers resorted to less accurate alternatives for emergency health communication (e.g., Google Translate, untrained family members or staff, or linguistically inarticulate providers). Language barriers induce a substantial risk to LEP minorities as patient–physician communication is reduced to non-verbal cues and often results in medical error or misdiagnosis. In the case of remote care, which was highly utilized during the COVID-19 pandemic, technological challenges, delays, and inaccessibility remain significant drivers of care inequity. Medical providers under high-volume patient intake and diagnosis often reported feeling forced to “get by” with their limited skills or with untrained individuals who are readily available.

5. Risk factors

Increased rates of HIV, hepatitis, and other viral infections have been found among Black SM; however, whether these elevated viral infections are associated with comorbidities remains a pertinent limitation of this manuscript.² While ADMS pay grades are standardized, minority SMs are more likely to face financial challenges, impacting their ability to maintain healthy behaviors (e.g., following a nutritious diet, reducing smoking and substance abuse, and accessing mental health-care services).⁴ Moreover, ADMSs from minority backgrounds may face challenges when accessing healthy food options, contributing to obesity and other pathophysiological conditions. Hesitancy to seek care, driven by generational mistrust of medical systems, stigma, and disproportionate access to educational materials, can delay treatment for COVID-19 and related conditions.^{3,5,6,11} In addition, educational attainment has exhibited a negative correlation with COVID-19 vaccine hesitancy.¹¹ Among SMs, SARS-CoV-2 infection rates and

COVID-19-related hospitalizations were reduced when access to educational materials increased. These findings suggest that education aimed at building trust, culturally accessible and appropriate care, and vaccination advocacy may provide an equitable framework for addressing these disparities.

6. Addressing the disparities

Addressing racial/ethnic disparities within the health-care system is complex, as the causes are interrelated and difficult to quantify.³ Targeted interventions, such as screening/prevention, bias training, and improved communication, may foster systemic trust within these vulnerable populations. Implementing mandatory, culturally sensitive screening programs for comorbidities, particularly for high-risk groups, is of vital concern. In addition, enhancing training for health-care providers to recognize and mitigate implicit bias in treatment and preventive interventions may also be useful. Increasing access to providers from similar racial/ethnic backgrounds with patients could also be a useful intervention in increasing trust within the health-care system. Moreover, tailoring public health messaging within marginalized groups, especially within non-English speaking subjects, to address vaccine hesitancy and improve trust is a recommended tactic to ensure equitable access and education regardless of cultural heritage. Furthermore, ensuring equity in deployment and assignment, as well as reducing the disproportionate occupational risks faced by minority SMs, is a practical long-term solution. Finally, involving minority SMs in policy decisions and outreach initiatives can be a defining decision in establishing equity within the MHS and achieving a resilient and effective fighting force.

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Conflict of interest

The authors declare that they have no competing interests.

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