Untangling the Complex Interactions of Open Burn Pit Exposure and Health Outcomes: Response to Brumage et al

To the Editor: We thank Brumage and colleagues[1] for their commentary on our case report of an open burn pit (OBP)–exposed veteran.[2] The authors highlight the nuances involved in the OBP exposure, its relationship to medical comorbidities, and their varied clinical presentation. We agree with the authors on the complexity of clinical presentation in this patient cohort, the lack of current evidence linking veterans' deployment exposures to an increased risk of contracting COVID-19, and that reliable resources should be used to allay veteran's concerns.

The Veterans Affairs (VA) Airborne Hazards Open Burn Pit Registry (AHOBPR) is a great resource for veterans to document their open burn pit exposure and health problems.[3] However, by the end of fiscal year 2020, only 232,849 veterans and service members had completed the questionnaire from an estimated 3 million of those exposed.[3] Much work is needed to reduce hesitancy to enroll in the registry. Most recently, the Under Secretary for Health with the Department of Veterans Affairs, Richard A. Stone, MD, sent an open letter to the Veterans Health Administration encouraging enrollment in the AHOBPR. While such efforts are underway, clinicians across the VA system grapple with veterans presenting with unexplained respiratory, metabolic, neurologic, and psychiatric symptoms.

In summary, the long-term effects of burn pit pollution on veterans' health are largely unknown. There is some evidence suggesting that burn pit exposure may have caused bodily accumulation of heavy metals, consequent genetic and epigenetic changes, and long-term health problems.[4–6] Carefully designed studies are needed to establish the relationship between burn pit exposure and potential adverse health outcomes and to uncover novel molecular biomarkers for exposure and diseases. We expect that close working relationships between clinical researchers in the field and the VA office of Post Deployment Health Services and the Post-9/11 Era Environmental Health Program will lead to better characterization of the medical comorbidities and biological consequences of OBP exposure.

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Response to Burn Pit Exposures and COVID-19

To the Editor: Thank you for publishing the case report by Padala et al "Open Burn Pit Exposure and Concern About the COVID-19 Pandemic."[1] We applaud the authors' concerns for veterans exposed to open burn pits. We hope this letter clarifies the current state of the science on veteran exposures to burn pits and particulate matter and health.

Exposure concerns in the Southwest Asia theater of operations include burn pits and other airborne particulate matter, such as dust and sand. The authors[1] describe health concerns for veterans with burn pit exposure; however, a recent National Academies report[2] demonstrated limited and insufficient scientific evidence regarding burn pit exposures and respiratory health outcomes. No current evidence links veterans' deployment exposures to an increased risk of contracting coronavirus disease 2019 (COVID-19). Some subgroups of veterans experience a high prevalence of comorbidities recognized to increase the risk of a poor outcome for any person infected with COVID-19 such as advanced age, smoking,[3] type II diabetes,[4] or obesity.[5,6]

The authors[1] generalized that veterans are experiencing increased stress because of open burn pit exposure but offer no evidence to support this statement. The pandemic may provoke concern among people with known risk factors, veterans and nonveterans alike. Providers should be aware of these concerns and be prepared with fact-based responses and reassurance and take actions to mitigate known risks and support protective measures recognized to minimize exposure to infection.

The case report[1] details accurately reflect the complexity often presented by the veteran patient: complex pathophysiologic comorbidities and coexistent stressors. The authors[1] state that social isolation and distrust of the government are especially acute for individuals with a history of burn pit exposure but offer no evidence to support that these feelings are more common among burn pit exposed than other veterans.

There are reliable resources available for providers and veterans on (deployment) hazardous exposures and COVID-19. Registration in the Airborne Hazards and Open Burn Pit Registry (AHOBPR) is an online process, and eligible veterans are encouraged to participate.[7] The Veterans Administration has used the AHOBPR to communicate COVID-19 information to enrolled participants, an action the authors[1] suggested. Other resources available to providers include specific online training courses through the War Related Illness and Injury Study Center[8] that address airborne hazards and other postdeployment health topics including how to conduct an environmental exposure assessment. Information on COVID-19 is available from many sources including the Centers for Disease Control and Prevention[9] and the US Department of Veterans Affairs.[10]

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