

Military Occupational Blast Exposure (MOBE): Career-Spanning Risk, Brain Health Diagnoses, and Transition to Veterans Health Administration (VHA) Care

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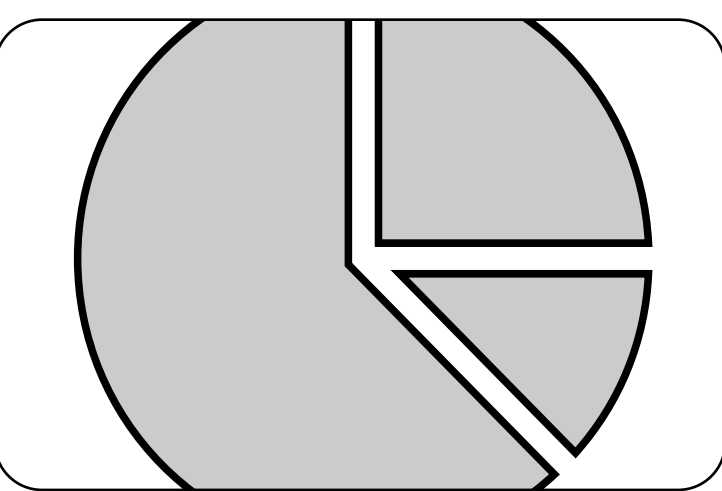
INTRODUCTION

- MOBE is the cumulative, career-spanning exposure to blast overpressure and impulse forces commonly experienced by Service Members (SM) across training & operational settings.
- High-level blast & TBI are linked to psychiatric disorders, chronic neuropathology, and future disability; broader long-term effects of MOBE remain unclear.
- **Objective:** Assess relationship between MOBE, Defense Health Agency (DHA) health outcomes, and transition to VHA among post-9/11 SM.

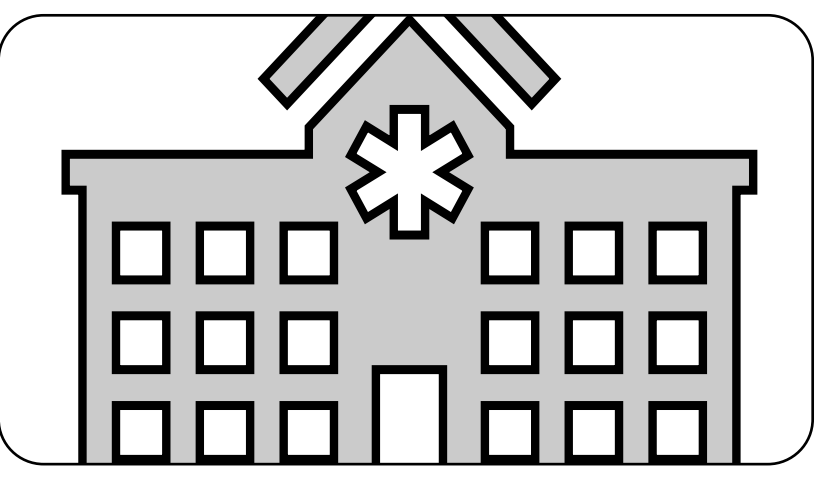
METHODS

- **Participants:** 1,691,605 Veterans
- **Study Design & Setting:** Retrospective cohort study using Veterans Affairs Defense Information Repository (VADIR), VHA, and DHA data for SM with ≥3 years of DHA care (1999-2019).
- **Analysis:** High-risk MOBE (MOBE+) occupations (special forces, ground naval arms, military trainer, rocket artillery, artillery gunnery, missile artillery, combat engineer, armor amphibious, infantry, military police) were identified using VADIR military occupation codes. Other roles were classified as low-risk (MOBE-).
- Logistic regression models adjusted for military characteristics, comorbidities, sociodemographic variables. **Outcomes:** Brain health diagnoses and post-separation VHA care transition.

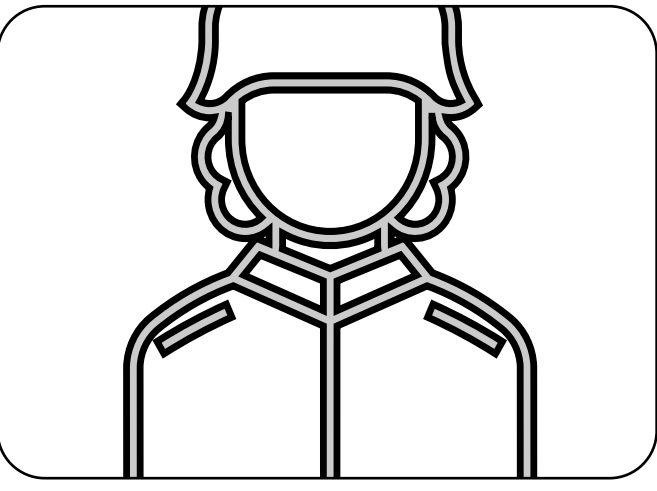
RESULTS



- **23.5%** in MOBE+ occupation
- **65.9%** transition to VHA care
- MOBE+ had **higher proportions of:** All TBI, PTSD, hearing loss, tinnitus, SUD, vestibular dysfunction



- MOBE+ occupation associated with **14% higher odds** of VHA transition vs. MOBE- (OR=1.14; 95%CI, 1.13-1.16) in fully adjusted model



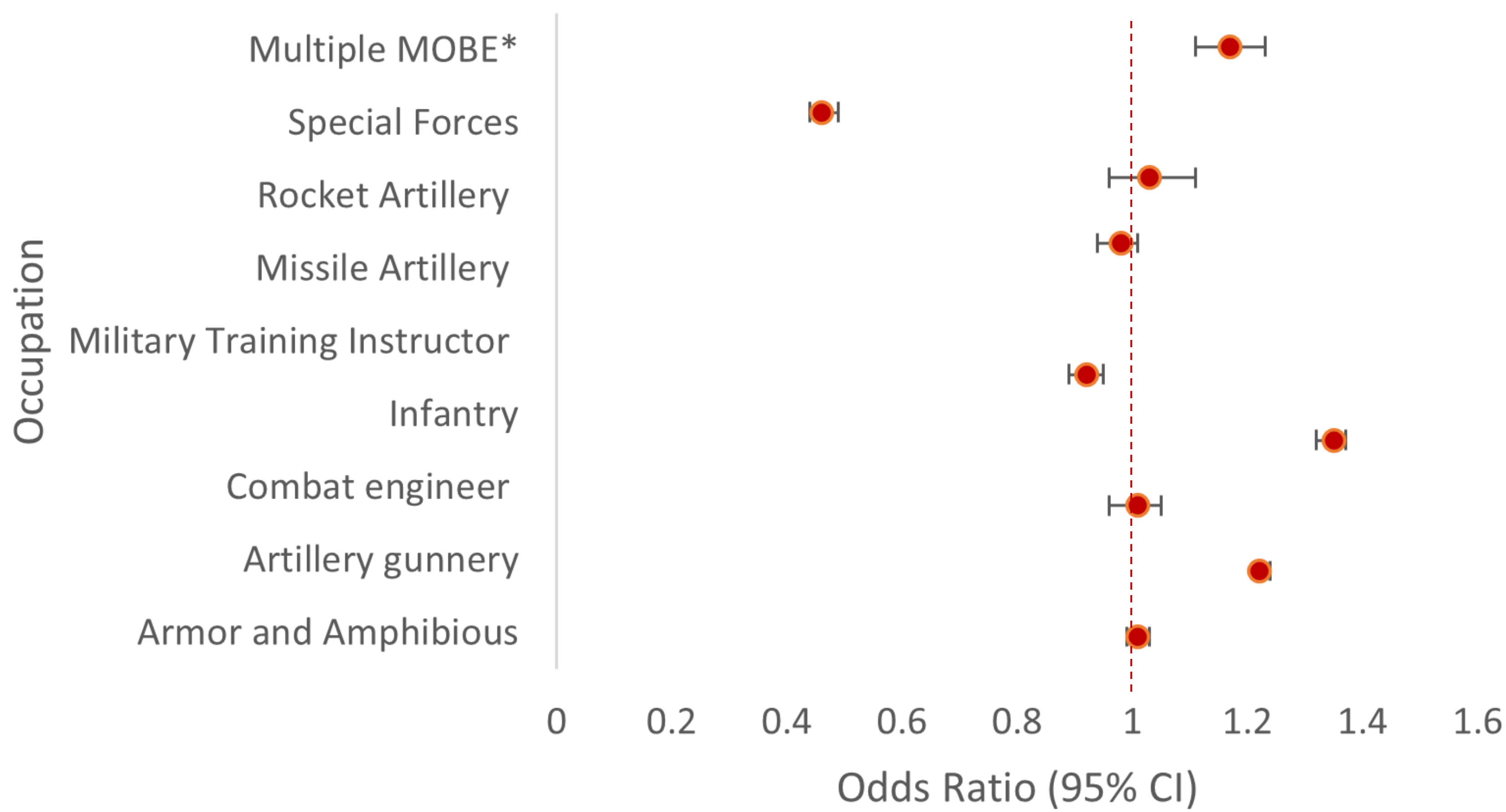
- Different occupations show different VHA transition
- Lower odds: training instructors, missile artillery, and special forces



Soldiers with Battery C, 1st Battalion, 320th Field Artillery Regiment, Task Force Strike, execute a fire mission with an M777 howitzer during operation on August 6, 2016.
Source: US Department of Defense
Image Credit: 1st LT. Daniel Johnson (VIRIN: 160807-N-NG512-001.JPG)

Military training instructor, missile artillery, and special forces occupations have lower odds of post-separation transition to VHA care.

Adjusted Odds Ratio by Occupation



Scan me!

DISCUSSION

- Divergence of post-separation transition to VHA care between military occupational specialty groups supports previous work showing that military occupation can serve as a moderator for subsequent well-being, especially given variability in occupation-related physical and psychological stress.
- Our counterintuitive findings that specific occupations had lower odds of transition to VHA care—specifically military training instructors, missile artillery, and special forces—highlight the possibility that, in addition to occupation-related stress, occupation-related culture could moderate the relationship between occupational specialty and post-separation transition to care.

LIMITATIONS

- Possible misclassification of exposure history: Using military occupational specialty as a proxy for MOBE doesn't account for within military occupational specialty variability, cross-training, or atypical assignments.
- How we define and classify MOBE is an ongoing effort by experts in the field and is likely to change over time.

Acknowledgments

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