

Deployment Health Research including Women Veterans

Growth in VA deployment health research has stemmed in large part from HSR&D solicitations seeking to meet demand for information on the needs of Veterans returning from Operations Enduring Freedom, Iraqi Freedom and New Dawn (OEF/OIF/OND). Most of the projects in the VA Women's Health research portfolio are in this area, perhaps reflecting women's higher representation among younger Veterans. The majority of research conducted by VA investigators in this area is mental health-focused, including efforts to characterize the mental health needs of this cohort, gender differences in health status and healthcare utilization and early efforts to improve mental health screening and engagement in care.

In addition to mental health-focused deployment health research, VA HSR&D Service funded the **Women Veterans Cohort Study**, which has yielded important data on the prevalence of a spectrum of physical and mental health conditions among deployed women Veterans compared to deployed men.¹ This study includes an electronic database cohort of all VA-enrolled Veterans of OEF/OIF/OND conflicts and a prospective Veteran cohort that completed annual surveys for 3 years. Overall, in the first wave of this study, researchers at the West Haven VA found that compared to men, women Veterans of OEF/OIF/OND were more likely to have musculoskeletal and mental health conditions (depression or adjustment disorders) and less likely to receive management for cardiovascular risk factors. They also had higher rates of outpatient utilization and costs for pharmacy and outpatient care. A complete list of the nearly 30 published papers from this work is available from the Principal Investigators.² VA HSR&D Service has since funded an additional 4-year effort to leverage this work longitudinally.

Given the larger number of women deployed in OEF/OIF/OND compared to other, older military cohorts, the VA HSR&D Women's Health Research Network (WHRN) developed a Strategic Priority Area focused on deployment health, led by Anne Sadler, PhD, RN, at the Iowa City VA (anne.sadler@va.gov), a marital and family therapist who provides mental health care to women Veterans and their families and a leading researcher in this area of research. She has recently completed a systematic review of deployment health research which should become available in 2016.

RESEARCH HIGHLIGHTS:

- In a VA Connecticut study of over 160,000 OEF/OIF Veterans enrolled in VA care, women had more visits to primary care and mental health, and higher use of community care outside of the VA compared to male Veterans.³ Women had similar rates of physical conditions to male Veterans but higher rates of some mental health disorders (e.g., mild and major depression and adjustment disorder), and, used VA for reproductive health needs.

¹ Haskell SG, Gordon KS, Mattocks K, et al. Gender differences in rates of depression, PTSD, pain, obesity, and military sexual trauma among Connecticut War Veterans of Iraq and Afghanistan. *J Womens Health*. 2010;19(2):267-271.

² Women Veteran Cohort Study (WVCS) Principal Investigators: Sally Haskell, MD (sally.haskell@va.gov), Cynthia Brandt, MD, MPH (Cynthia.brandt@va.gov) and Kristin Mattocks, PhD (Kristin.mattocks@va.gov).

³ Haskell SG, Mattocks K, Goulet R, et al. The burden of illness in the first year home: Do male and female VA users differ in health conditions and healthcare utilization. *Women's Health Issues*. 2011;21(1):92-97.

- In a VA Minneapolis study of over 800 National Guard soldiers deployed to Iraq or Afghanistan, men reported greater exposure to combat situations than women, while women reported greater sexual stressors during deployment than men. Exposure to combat's aftermath (e.g., witnessing injured/dying people) did not differ by gender. Women reported more severe PTSD symptoms and higher rates of probable PTSD after deployment than men, even after accounting for pre-deployment symptoms, prior interpersonal victimization, and combat-related stressors.⁴
- Researchers at the Iowa City VA found high rates of combat and duty-related sexual violence with consequent high rates of post-deployment mental health and readjustment problems among female Reserve & National Guard Servicewomen.⁵ These Servicewomen reported barriers to mental health care, including stigma and lack of knowledge about VA women-specific services. Researchers responded by developing a new online intervention so women could confidentially complete post-deployment mental health screening at a time and place of their choosing, and receive education tailored to their own mental health needs.
- Both male and female OEF/OIF Veterans have complex, co-existing health problems that extend beyond the more commonly known PTSD, traumatic brain injury and pain. These include other mental health problems, substance abuse, sleep problems, and chronic diseases.⁶ VA South Texas researchers identified clusters of complex conditions (including polytrauma) to help VA design improved approaches to these Veterans' care coordination.
- OEF/OIF Veterans presenting to integrated care clinics in VA (combination of primary care, mental health and social services working as a team) were evaluated for mental health and social services faster than those seen in urgent care.⁷
- Among nearly 160,000 OEF/OIF Veterans with PTSD, researchers at the San Francisco VA found gender differences in healthcare utilization.⁸ For example, women had higher mental health, primary care and emergency care use. Women with PTSD *and* depression were 12.5 times more likely to have a mental health hospitalization compared to women without depression and twice as likely to be admitted compared to men with the same conditions.

⁴ Polusny MA, Kumpula MJ, Meis LA, et al. Gender differences in the effects of deployment-related stressors and pre-deployment risk factors on the development of PTSD symptoms in National Guard soldiers deployed to Iraq and Afghanistan. *J Psychiatr Research*. 2014;49:1-9.

⁵ Sadler AG, Mengeling MA, Torner JC, et al. Feasibility and desirability of web-based mental health screening and individualized education for female OEF/OIF Reserve and National Guard War Veterans. *J Traumatic Stress*. 2013;26:1-5.

⁶ Pugh MJ, Finley EP, Copeland LA, et al. Complex comorbidity clusters in OEF/OIF Veterans: The polytrauma clinical triad and beyond. *Med Care*. 2014;52(2):172-181.

⁷ Seal KH, Cohen G, Bertenthal D, et al. Reducing barriers to mental health and social services for Iraq and Afghanistan Veterans: Outcomes of an integrated primary care clinic. *J Gen Intern Med*. 2011;26(10):1160-1167.

⁸ Maguen S, Cohen B, Cohen G, et al. Gender differences in health services utilization among Iraq and Afghanistan Veterans with PTSD. *J Womens Health*. 2012;21(6):666-673.