

Complex Chronic Conditions/Long Term Care & Aging among Women Veterans

Complex chronic conditions/long term care and aging have major impacts on quality of life and cost. Research in this area is especially salient for the large cohort of aging women Veterans from the Korean and Vietnam Wars¹ who will be requiring long term care at levels not previously seen in VA. Fortunately, VA is a leader in geriatrics and palliative care. VA must also prepare for the full life cycle of healthcare needs of the new cohorts of young women Veterans currently entering VA for the first time.

A large, population-based health study examines healthcare needs of older women Veterans (female Vietnam era Veterans, who are now in their 60s and 70s). This study, called the **Health of Vietnam Era Veteran Women's Study (or HealthViEWS)**, followed over 12,000 Vietnam era women Veterans, including those who served in the US military in Vietnam, in countries near Vietnam, and those who were not deployed.^{2,3} Results from this study are still being analyzed.

In the interim, the VA HSR&D Women's Health Research Network (WHRN) developed a Strategic Priority Area focused on women Veterans' complex chronic conditions, long term care needs and aging, led by Lori Bastian, MD, MPH (lori.bastian@va.gov), a VA women's health clinician and leading researcher. To foster research in this area, Dr. Bastian is developing collaborative research work groups focused in key areas (e.g., chronic pain). She also helped develop a collaboration between VA HSR&D Service and the VA Office of Women's Health Services (WHS) to support secondary analyses of the over 3,700 women Veterans who participated in the national Women's Health Initiative (WHI). Overseen by VA researcher Gayle Reiber, PhD and WHI Co-Principal Investigator Andrea LaCroix, PhD, these analyses generated a series of papers and editorials published in part in a **journal supplement on findings relevant to women Veterans in the Gerontologist**.⁴

Another useful source of information about women Veterans' health conditions may be found in each of several national VA Sourcebooks on Women Veterans. These Sourcebooks have been generated by the Women's Health Evaluation Initiative (WHEI), led by Susan Frayne, MD, MPH at VA Palo Alto, and funded by VA Women's Health Services to generate systematic summaries of data describing women Veterans' sociodemographics, health status, health care utilization and health conditions. These and other useful reports are available at: <http://www.womenshealth.va.gov/latestinformation/publications.asp>.

¹ Frayne S, Pibbs C, Friedman S, et al. Sourcebook: Women Veterans in the Veterans Health Administration. Volume 2. Sociodemographics and Use of VHA and Non-VA Care (Fee). 2012. Washington DC: Women's Health Evaluation Initiative (WHEI), Women's Health Services, Veterans Health Administration, Department of Veterans Affairs. Available at: http://www.womenshealth.va.gov/WOMENSHEALTH/docs/SourcebookVol2_508c_FINAL.pdf Washington.

² Magruder K, Serpi T, Kimerling R, et al. When she came marching home: Prevalence of posttraumatic stress disorder in Vietnam-era women Veterans: the Health of Vietnam Women's Study (HealthViEWS). JAMA Psychiatry. 2015;72(11):1127-34.

³ Kang HK, Cypel Y, Kilbourne AM, et al. HealthViEWS: Mortality study of female US Vietnam era Veterans, 1965-2010. Am J Epidemiol. 2014 March 15;179(6):721-730.

⁴ Reiber GE, LaCroix AZ. Older women Veterans in the Women's Health Initiative. Gerontologist. 2016 Feb; 56 Suppl 1:S1-S5.

RESEARCH HIGHLIGHTS:

- Weitlauf and colleagues found that older women Veterans enrolled in the Women's Health Initiative had a 13% higher all-cause mortality relative to non-Veteran women.⁵
- Washington and colleagues compared longitudinal trajectories of physical activity and sedentary behavior between Veteran and non-Veteran women. Although Veterans had higher baseline physical activity than non-Veterans, they had greater declines in physical activity over time.⁶
- LaFleur and colleagues found that the age-adjusted rate of hip fracture was significantly higher for Veteran women compared with non-Veteran women. After adjustment for fracture risk factors, the hazard ratio of hip fracture was about 20% higher for Veterans relative to non-Veterans.⁷
- Callegari and colleagues compared the prevalence of hysterectomy with or without bilateral-salpingo oophorectomy (BSO or removal of both ovaries and Fallopian tubes) between Veterans and non-Veterans.⁸ In an analysis of more than 140,000 post-menopausal women, they found that Veterans <65 years at WHI enrollment were more likely to have experienced prior hysterectomy with or without BSO, and early hysterectomy before age 40 compared with non-Veterans.
- Gray and colleagues examined the impact of chronic conditions on physical function among Veterans and non-Veteran women with diabetes.⁹ Among women with diabetes, having any additional chronic condition accelerated the decline in physical function – an effect that was even more pronounced among Veterans.
- Padula and colleagues found Veteran status was associated with higher prevalence of protective factors that may have helped preserve cognitive functioning initially. However, findings ultimately revealed more pronounced cognitive decline among women Veterans.¹⁰

The full contents of the Gerontologist supplement are available without subscription at http://gerontologist.oxfordjournals.org/content/56/Suppl_1.toc.

⁵ Weitlauf JC, LaCroix AZ, Bird CE, et al. Prospective analysis of health and mortality risk in Veteran and non-Veteran participants in the Women's Health Initiative. *Women's Health Issues*. 2015 Nov-Dec;25(6):649-657.

⁶ Washington DL, Gray K, Hoerster KD, et al. Trajectories in physical activity and sedentary time among women Veterans in the Women's Health Initiative. *Gerontologist*. 2016 Feb;56 Suppl 1:S6-S9.

⁷ LaFleur J, Rillamas-Sun E, Colon-Emeric CS, et al. Fracture rates and bone density among postmenopausal Veteran and non-Veteran women from the Women's Health Initiative. *Gerontologist*. 2016 Feb;56 Suppl 1:S78-S90.

⁸ Callegari LS, Gray KE, Zephyrin LC, et al. Hysterectomy and bilateral salpingo-oophorectomy: Variations by history of military service and birth cohort. *Gerontologist*. 2016 Feb;56 Suppl 1:S67-S77.

⁹ Gray KE, Katon JG, Rillamas-Sun E, et al. Association between chronic conditions and physical function among Veteran and non-Veteran women with diabetes. *Gerontologist*. 2016 Feb;56 Suppl 1:S112-S125.

¹⁰ Padula CB, Weitlauf JC, Rosen AC, et al. Longitudinal cognitive trajectories of women Veterans from the Women's Health Initiative Memory Study. *Gerontologist*. 2016 Feb;56(1):115-125.