

VA WOMEN'S HEALTH RESEARCH NETWORK (WHRN)

VA HSR&D Service Directed Research (Project #SDR 10-012)

Executive Summary (August 2023)

Background and Rationale

Women Veterans' rapid growth among VA users has escalated demand for a stronger evidence base to better understand and systematically improve access to, quality of, and outcomes of their care. VA Health Services Research & Development (HSR&D) Service has become a leader in women Veterans' research to address critical knowledge gaps. Funded since 2010, the VA Women's Health Research Network (WHRN) is among HSR&D's special initiatives to systematically transform VA's capacity to examine and reduce gender disparities in health and health care, and to use research to increase delivery of evidence-based care tailored to women Veterans' needs.

Objectives of the VA Women's Health Research Network (WHRN)

WHRN was funded in 2010, following several years of systematic development of the VA Women's Health Research Agenda for the VA Office of Research & Development.¹ WHRN's initial objectives (2010-13) were to build women's health research capacity by developing and supporting a **national Consortium of VA researchers** in development of new research, and develop and test a **VA Women's Health Practice-Based Research Network (WH-PBRN)** to facilitate recruitment of women Veterans, their providers, and their care settings in VA research. Together, the Consortium and WH-PBRN enabled conduct of high-priority research on gender differences and women Veteran-specific issues.



In three short years, WHRN met or exceeded all of its deliverables...

WHRN's **Consortium** work led women Veteran-focused methodological education and training through national cyber-seminars and small group sessions; building capabilities and collaboration through technical support, mentorship, and research development around high-priority research topics; increasing dissemination of women's health research; and accelerating implementation of research into practice by enhancing research-clinical partnerships. Over 250 VA investigators and clinicians joined the Consortium, with broad participation in over 30 national cyber-seminars. With a target of 10+ research proposal *submissions*, **WHRN helped 29 women's health-related grants get funded**. Similarly, while HSR&D hoped to see at least 20 peer-reviewed scientific manuscripts published on women Veterans' research, **WHRN oversaw 2 VA-funded journal supplements²⁻³ devoted to women Veterans' health and health care that delivered 40 papers**, not counting many other WHRN-supported publications published elsewhere, markedly expanding the scientific literature. National mentors were identified to meet the needs of the growing group of young investigators interested in VA women's health research, including post-doctoral fellows and VA HSR&D Career Development Awards (akin to NIH's K Awards for promising early career investigators) in key areas (e.g., intimate partner violence, substance use). WHRN organized a **National VA HSR&D Women's Health Services Research Conference (2010)**, which convened national VA policy leaders and VA women's health researchers, as well as leaders from the Institute of Medicine, US Departments of Defense, Health & Human Services (including NIH), Justice, and Labor, among others, to learn about women Veterans' research. Participants also came to consensus on an HSR&D-focused research agenda, which expanded strategic planning in new priority areas, including access/rural health, primary care/prevention, mental health, post-deployment health, complex chronic care/aging, and reproductive health.⁴

¹ Yano EM, Bastian L, Frayne S, et al. Toward a VA women's health research agenda: Setting evidence-based priorities to improve the health and health care of women veterans. *J Gen Intern Med.* 2006;21(Suppl 3):S93-101.

² Yano EM, Frayne, SM. Health and health care research among women veterans and women in the military: Research informing evidence-based practice and policy (*Commentary*). *Women's Health Issues.* 2011;21(4 Suppl):S64-S66.

³ Bastian LA, Bosworth HB, Washington DL, Yano EM. Setting the stage: Research to inform practice, policy and interventions to improve women veterans' health and health care. Editorial. *J Gen Intern Med.* 2013;28(Suppl 2):S491-S494.

⁴ Yano EM, Bastian L, Bean-Mayberry B, Eisen S, Frayne SM, et al. Using research to transform care for women veterans: Advancing the research agenda and enhancing research-clinical partnerships. *Women's Health Issues.* 2011;21(4 Suppl):S73-S83.

Concurrently, WHRN's **WH-PBRN** developed the procedures and multilevel partnerships necessary to prepare member sites to participate in VA women's health research, including establishment of local VA Site Leads and procedures for engaging frontline providers, clinic staff, managers, and leaders in research planning and conduct.⁵ The first four "founder" VA sites (Palo Alto, Los Angeles, Durham, Iowa City) tested PBRN capabilities in patient-, provider-, and practice-level data collection through *Implementation Evaluation Projects*. Within the 1st year of operation, the WH-PBRN launched a **primary care practice-based study of women Veterans' preferences for gender-sensitive mental health care**.⁶ By the 2nd year, WHRN collaboratively developed and launched a **4-site cluster randomized trial of an evidence-based quality improvement approach to implementing gender awareness training among VA providers and staff**.⁷⁻⁸ While expansion was planned for at least two sites by the 3rd year, demand for participation far exceeded expectations, yielding a **nearly 10-fold growth to 37 VA facilities**.

Together, the Consortium and WH-PBRN accelerated research, including interventions and implementation research focused on women Veterans' health, which were rare prior to WHRN funding. First among these was the HSR&D-funded **Women Veterans' Healthcare CREATE Initiative**, a partnered research program of five studies developed collaboratively to use research to accelerate implementation of comprehensive women's health care.⁹ CREATE used the WH-PBRN to help recruit sites, providers, and women Veterans. WHRN's successes led to its recognition in the VA's Blueprint for Excellence as key to *advancing innovations in women Veterans' health care*.

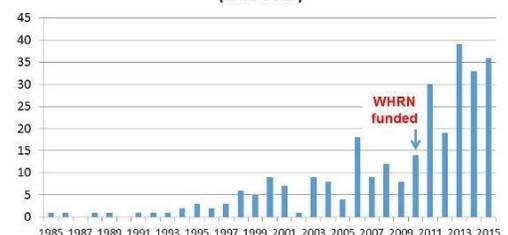
Building on the Successes of the VA Women's Health Research Network: "WHRN 2.0"

VA HSR&D Service renewed WHRN in 2014, leveraging knowledge gained from the first phase of WHRN's efforts to further develop the national Consortium of VA researchers alongside the capabilities of the WH-PBRN. WHRN increased emphasis on **accelerating interventions, implementation, and high-impact (I³) research**.

Learning from early use of the WH-PBRN, WHRN leaders added a **third aim** to incorporate a focus on **multilevel stakeholder engagement in VA women's health research**. Guided by a community-engaged research conceptual model, 81 VA leaders, providers, researchers, and women Veterans engaged in interviews about their experiences with, perspectives on, and suggestions for stakeholder engagement. **WHRN 2.0 (2014-2016)** continued research development in priority areas, supporting proposal development and increasing interventions and implementation science. For example, a randomized trial evaluated impacts of tailoring VA's patient-centered medical home model (PACT) to women Veterans' needs, while another trial studied impacts of virtual education and electronic consults with expert women's health providers on provider proficiency in VA community-based outpatient clinics.⁹

Over a dozen new VA HSR&D Career Development Awardees were also funded, including researchers focused on women Veterans' cardiovascular risk reduction, preconception care, and maternity care quality, among others. **Two more VA journal supplements were published** ([Medical Care](#), [The Gerontologist](#)), the latter transforming knowledge of older women Veterans' health needs from the 3,700+ women Veterans enrolled in the *Women's Health Initiative*.¹⁰⁻¹¹ The scientific literature focused on women Veterans' health continued to grow substantially.

Published Manuscripts on Women Veterans Research (1985-2015)



⁵ Frayne SM, Carney DV, Bastian L, et al. The VA women's health practice-based research network: Amplifying women veterans' voices in VA research. *J Gen Intern Med*. 2013;28(Suppl 2):S504-S509.

⁶ Kimberling R, Bastian LA, Bean-Mayberry BA, Bucossi MM, Carney DV, Goldstein KM, Phibbs CS, Pomernacki A, Sadler AG, Yano EM, Frayne SM. Patient centered mental health care for women Veterans. *Psychiatr Serv*. 2015 Feb 1;66(2):155-162.

⁷ Fox AB, Hamilton AB, Bean-Mayberry B, et al. Evaluation of an evidence-based quality improvement approach to enhance impact of employee training in the VA health care setting. *J Contin Educ Health Prof*. 2016 Spring;36(2):96-103.

⁸ Goldstein KM, Vogt D, Hamilton AB, et al. Practice-based research networks add value to evidence-based quality improvement. *Healthc (Amst)*. 2018;6(2):128-34.

⁹ Yano EM. A partnered research initiative to accelerate implementation of comprehensive care for women Veterans: The VA Women's Health CREATE. *Med Care*. 2015 Apr;53(4 Suppl 1):S10-14.

¹⁰ Bastian LA, Mattocks KM, Rosen AK, et al. Informing policy to deliver comprehensive care for women Veterans. *Med Care*. 2015 Apr;53(4 Suppl 1):S1-S4.

¹¹ Bastian LA, Hayes PM, Haskell SG, Atkins D, Reiber GE, LaCroix AZ, Yano EM. Improving our understanding of health issues in older women Veterans: What can we learn from secondary analyses? *The Gerontologist*. 2016;56(S1):S10-S13.

In parallel, the **WH-PBRN nearly doubled in size to 61 VA medical centers**, increasing the representativeness of facility types and regions. **Expertise in recruiting women Veterans into VA research** led to funding to evaluate how to optimize women's enrollment in a comparative effectiveness trial of PTSD treatment (CSP #591). **Nearly 80 studies had used the WH-PBRN by this time.**

In 2015, WHRN also helped develop the first VA Quality Enhancement Research Initiative (QUERI) Program focused on women Veterans, **Enhancing Mental & Physical health of Women through Engagement & Retention (EMPOWER)**.¹² EMPOWER tested multilevel engagement strategies for gender-tailoring care models for depression and anxiety, cardiovascular risk reduction, and diabetes prevention.

Extension of WHRN to Accelerate Interventions, Implementation & High-Impact Research

Given WHRN's contributions, VA HSR&D extended funding through 2026 for key functions, while WHRN also began testing strategies for **supporting VA as a learning healthcare system**, increasing employee engagement in research-clinical partnerships capable of generating and acting on research evidence to respond to priority needs. For example, WHRN launched a **women Veterans' suicide prevention research group** to accelerate research through collaboration and technical support, and oversaw a **VA journal supplement** on suicide research among women Veterans, active-duty servicewomen, and civilian women (*Medical Care*, 2021). WHRN leveraged results of a **VA evidence map**¹³ to conduct systematic reviews on women Veterans' reproductive health, substance use, and clinical complexity.¹⁴⁻¹⁵ In partnership with the VA Cooperative Studies Program, which funds large VA clinical trials, WHRN fostered reporting of gender differences in VA research in a supplement to *Women's Health Issues* (2019).¹⁶ The largest supplement on women Veterans' research yet was published in 2022 (*Journal of General Internal Medicine*).¹⁷

WHRN is **making VA research more accessible to non-research audiences** by developing **easy-to-understand research "snapshots"** and helping stakeholders find needed information, including opportunities to present research during VA Research Day on the Hill and Congressional briefings. We have supported the Center for Women Veterans in identifying VA research teams in design and conduct of legislatively mandated research, for example, in Veteran-related intimate partner violence,¹⁸ drivers of women Veterans' unemployment, and childcare needs. We also bring research to policymakers and the clinical community through virtual conferences (e.g., a reproductive health conference in 2021¹⁹).

WH-PBRN membership has **further grown to 76 sites**, covering the majority of women Veterans seen in VA. Member sites are increasingly in diverse clinical settings and geographic regions, further expanding the WH-PBRN's reach for multisite research (including implementation research), evaluation, and quality improvement. The WH-PBRN has also expanded its tools for working with member sites in a learning healthcare system. For example, **rapid "scans" of how care is delivered** (e.g., where mammograms are offered, what activities are underway to reduce harassment of women Veterans on VA grounds) have provided insights on local innovations for possible spread. Similarly, the WH-PBRN **rapidly gauges women Veterans' care preferences and experiences**, via short anonymous in-clinic surveys ("card studies"). Over 50 VAs and thousands of women Veterans have participated in at least one such Veteran Feedback Project. The WH-PBRN recently expanded the card study method via a VA clinician-facing climate scan.



¹² Hamilton AB, Farmer MM, Moin T, et al. Enhancing Mental and Physical health Of Women through Engagement and Retention (EMPOWER): A protocol for a program of research. *Implement. Sci.* 2017 Nov 7;12(1):127.

¹³ Danan ER, Krebs EE, Ensrud K, et al. An evidence map of the women Veterans' health research literature (2008-15). *J Gen Intern Med.* 2017;31(12):1359-76.

¹⁴ Katon JG, Zephyrin L, Meoli A, et al. Reproductive health of women Veterans: A systematic review of the literature from 2008 to 2017. *Seminars in Reprod Health.* 2018;36(6):315-322.

¹⁵ Creech SK, Pulverman CS, Crawford JN, et al. Clinical complexity in women Veterans: A systematic review of the recent evidence on mental health and physical health comorbidities. *Behav Med.* 2019; 1-19.

¹⁶ Goldstein KM, Yano EM, Klap R, et al. Accelerating the growth of evidence-based care for women and men Veterans. *Women's Health Issues.* 2019;29(S1):S2-S5.

¹⁷ Hamilton AB, Schwarz EB, Thomas HN, Goldstein KM. Moving women Veterans' research forward. *J Gen Intern Med.* 2022;37(Suppl 3):665-667.

¹⁸ Parr NJ, Young S, Ward R, Mackey K. Evidence brief: Prevalence of intimate partner violence/sexual assault among Veterans. Washington DC: VA, Dec 2021.

¹⁹ Katon JG, Rodriguez A, Yano EM, et al. Research priorities to support women Veterans' reproductive health and health care within a learning health care system. *Women's Health Issues.* 2023;33(3):215-221.

The WH-PBRN is also a **testing ground for implementing and spreading evidence-based practices**. For example, the VA HSR&D-funded trial that tested an *evidence-based quality improvement (EBQI) approach* to tailoring PACT to meet women Veterans' needs demonstrated substantial gains in a wide-range of quality gaps (e.g., improved access to WH providers), plus increased provider gender sensitivity, enhanced PACT team function, and lower provider burnout.^{20,21} WH-PBRN leaders extended this evidence-based strategy through two **Quality Improvement Collaboratives**, one focused on culture change and another on abnormal mammogram follow-up, as we study how to take this strategy to scale in cost-effective ways.

The WH-PBRN's expertise in women Veteran recruitment also led to VA Cooperative Studies Program (CSP) funding to optimize women Veteran enrollment in VA clinical trials through the **Women's Enhanced Recruitment Process (WERP, CSP #N0011)**, while providing widespread investigator support in the design and conduct of multisite research focused on or including women Veterans.

WHRN is also working to get **rapid feedback on the feasibility and usefulness of interventions before significant resources are spent testing them in larger trials**. For example, before testing promising innovations for improving VA trauma-sensitive primary care (e.g., training, communication guides, environmental scans) in a large trial, VA researchers received modest funding to obtain women Veteran and subject matter expert input. Innovation options were then presented to the national WH-PBRN Site Lead community for interactive, real-time polling feedback, making it possible to **canvas frontline providers' perspectives nationally** in a matter of weeks to months instead of years.

Building on lessons learned from over 80 interviews with VA researchers, providers, leaders, and women Veterans, WHRN has also **tailored and disseminated new strategies and tools for vetting research plans and products with the many stakeholders in VA care delivery**. WHRN has developed the **Women's Improvement Network (WIN)** to directly engage women Veterans VA users in the design, planning, execution, review, and dissemination of VA research.

The **VA women's health research portfolio has continued to grow in size and diversity**, including work in access, chronic pain, menopause, eating disorders, pregnancy/maternity care, perinatal mental health, stranger harassment, depression, anxiety, military sexual trauma, PTSD, intimate partner violence, and more, as well as gender-tailored interventions to improve diabetes prevention, cardiovascular risk reduction, insomnia treatment, and primary care.

WHRN is convening a **national VA Women's Health Services Research Conference** in early September 2023 to highlight women Veterans' research in partnership with representatives from the Office of the Secretary and Under Secretary for Health, VA clinical program offices, other federal agencies, and Veteran Service Organizations on the path to an updated research agenda and new roadmap for accelerating impacts through partnered research.

Who leads WHRN?

WHRN is collaboratively led by VA researchers who, respectively, oversee the Consortium, WH-PBRN, and Multilevel Stakeholder Engagement Team. **Elizabeth Yano, PhD, MSPH** leads the Consortium. At VA Greater Los Angeles, she also directs the VA HSR&D Center for the Study of Healthcare Innovation, Implementation & Policy, and is Professor of Public Health and Medicine at UCLA. **Susan Frayne, MD, MPH** leads the WH-PBRN. At VA Palo Alto, she also directs the VA Office of Women's Health funded Women's Health Evaluation Initiative, is Interim Director of the VA HSR&D Center for Innovation to Implementation, and Professor of Medicine, Stanford University. **Alison Hamilton, PhD, MPH** leads the Engagement Team. Also at VA Greater Los Angeles, Dr. Hamilton is Director of the VA EMPOWER QUERI 2.0, and Professor of Psychiatry & Biobehavioral Sciences at UCLA. WHRN work is supported by two National Program Managers. **Adriana Rodriguez, PhD**, a clinical psychologist with expertise in implementation science, psychosocial evidence-based practices, and trauma- and resilience-informed systems of care, advances Consortium capabilities. **Diane Carney, MA**, has longstanding multisite research and project management experience which ensures effective management of the 76-site WH-PBRN. For more information, email us at WHRN@va.gov.

²⁰ Yano EM, Darling J, Hamilton AB, Canelo I, Chuang E, Meredith LS, Rubenstein LV. Cluster randomized trial of a multilevel evidence-based quality improvement approach to tailoring VA Patient Aligned Care Teams to the needs of women Veterans. *Implement Sci.* 2016;11(1):101.

²¹ Hamilton AB, Brunner J, Chuang E, Canelo I, Yano EM. Engaging multilevel stakeholders in an implementation trial of evidence-based quality improvement in women's primary care. *Transl Behav Med.* 2017 Sep;7(3):478-485.