

VA WOMEN'S HEALTH RESEARCH NETWORK (WHRN)

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

Executive Summary (March 2022)

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 initially 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 (1) build capacity in VA women's health research by developing and supporting a **national Consortium of VA researchers** in development of new research, and (2) 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 focused on methodological and women Veteran-focused 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 junior investigators) in key areas (e.g., intimate partner violence, substance use disorder treatment). 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

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.

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 conditions/aging, and reproductive health.⁴

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 interventional and implementation research initiatives 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 care for women Veterans.⁹ CREATE used the WH-PBRN to facilitate recruitment of 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 were interviewed 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

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.

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.

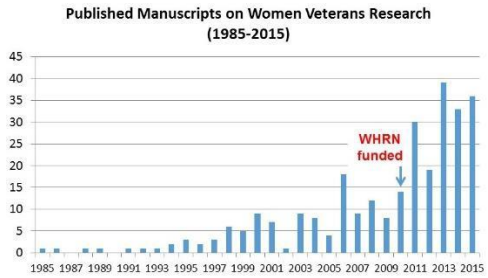
⁶ Kimerling R, Bastian LA, Bean-Mayberry BA, Bucossi MM, Carney DV, Goldstein KM, Phibbs CS, Pomernacki A, Sadler AG, Yano EM, Frayne SM. Patient centered mental health care for women Veterans. *Psychiatr Serv*. 2015 Feb 1;66(2):155-162.

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 Jun;6(2):128-134.

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.

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 done, in Medical Care and 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 continued to grow substantially.



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 have used the WH-PBRN.**



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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 to increase funding, 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). The largest supplement on women Veterans' health research is forthcoming in the Journal of General Internal Medicine (2022).

WHRN is **focused on making VA research more accessible to non-research audiences** by helping researchers develop **easy-to-understand research "snapshots"** and develop new ways to help stakeholders find needed information. These include opportunities to present research during VA Research Day on the Hill and Congressional briefings. We have also supported the Center for Women Veterans and Office of Women's Health in the design and conduct of Congressionally mandated research in intimate partner violence, unemployment, and childcare. We also bring research to policymakers and the clinical community through virtual conferences (e.g., reproductive health in 2021).

¹⁰ Bastian LA, Mattocks KM, Rosen AK, Hamilton AB, Bean-Mayberry B, Sadler AG, Klap RS, Yano EM. 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.

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, Koeller E, MacDonald R, Velasquez T, Greer N, Wilt TJ. 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 Examining sex/gender differences in VA clinical and health services research. [https://www.whijournal.com/issue/S1049-3867\(19\)X0004-3](https://www.whijournal.com/issue/S1049-3867(19)X0004-3).

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. The WH-PBRN is 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.^{17,18} For example, *participating VAs increased access to women's primary care providers, enhanced PACT team function, and improved trauma-sensitive care*, among a host of other improvements. WH-PBRN leaders then extended this research-tested 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.

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.

Who leads WHRN?

VA HSR&D Service (in the VA Office of Research & Development) funds WHRN, which is collaboratively led by three researchers who, respectively, oversee the Consortium, WH-PBRN, and Multilevel Stakeholder Engagement Team. **Elizabeth Yano, PhD, MSPH** (elizabeth.yano@va.gov) leads the Consortium. At VA Greater Los Angeles, Dr. Yano is also Director of the VA HSR&D Center for the Study of Healthcare Innovation, Implementation & Policy, and Professor of Public Health and Medicine at UCLA. **Susan Frayne, MD, MPH** (susan.frayne@va.gov) leads the WH-PBRN. At VA Palo Alto, Dr. Frayne directs the VA Women's Health Evaluation Initiative, which has generated four national Women Veterans' Sourcebooks, and is an Investigator at the VA HSR&D Center for Innovation to Implementation and Professor of Medicine, Stanford University Division of Primary Care and Population Health. **Alison Hamilton, PhD, MPH** (alison.hamilton@va.gov) leads the Multilevel Stakeholder Engagement Team. Also at VA Greater Los Angeles, Dr. Hamilton is Director of the VA EMPOWER QUERI 2.0, and Professor, Department of Psychiatry & Biobehavioral Sciences, UCLA Geffen School of Medicine. WHRN work is supported by two Program Managers, **Adriana Rodriguez, PhD** (adriana.rodriguez3@va.gov), whose training as a clinical psychologist and research expertise in implementation science, psychosocial evidence-based practices, and trauma- and resilience-informed systems of care advances Consortium capabilities, and **Diane Carney, MA** (diane.carney@va.gov), whose longstanding multisite research and project management experience ensures effective management of the 76-site WH-PBRN.

¹⁷ 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.

¹⁸ 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.