



Conference proceedings

Using Research to Transform Care for Women Veterans: Advancing the Research Agenda and Enhancing Research–Clinical Partnerships

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Article history: Received 2 December 2010; Received in revised form 5 April 2011; Accepted 8 April 2011

ABSTRACT

The purpose of this paper is to report on the outcomes of the 2010 VA Women's Health Services Research Conference, which brought together investigators interested in pursuing research on women veterans and women in the military with leaders in women's health care delivery and policy within and outside the VA, to significantly advance the state and future direction of VA women's health research and its potential impacts on practice and policy. Building on priorities assembled in the previous VA research agenda (2004) and the research conducted in the intervening six years, we used an array of approaches to foster research–clinical partnerships that integrated the state-of-the-science with the informational and strategic needs of senior policy and practice leaders. With demonstrated leadership commitment and support, broad field-based participation, strong interagency collaboration and a push to accelerate the move from observational to interventional and implementation research, the Conference provided a vital venue for establishing the foundation for a new research agenda. In this paper, we provide the historical evolution of the emergence of women veterans' health services research and an overview of the research in the intervening years since the first VA women's health research agenda. We

Funding Source: This paper is based on work supported by the U.S. Department of Veterans Affairs, Veterans Health Administration, Office of Research and Development, Health Services Research & Development (HSR&D) Service and the Women Veterans Health Strategic Health Care Group under the Office of Public Health & Environmental Hazards (now under the VA Office of Patient Care Services) (Project No. CSF 10-179). The project was also supported by VA Women's Health Research Consortium also funded by VA HSR&D Service

(Project No. SDR 10-120). Dr. Yano's time was covered by a VA HSR&D Research Career Scientist award (Project No. RCS 05-195).

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then present the resulting VA Women's Health Research Agenda priorities and supporting activities designed to transform care for women veterans in six broad areas of study, including access to care and rural health; primary care and prevention; mental health; post deployment health; complex chronic conditions, aging and long-term care; and reproductive health.

Published by Elsevier Inc.

Introduction and Background

One of the hallmarks of the transformation of the Veterans Affairs (VA) health care system over the past 20 years has been the active integration of lessons from research into evidence-based practice and policy (Jha, Perlin, Kizer, & Dudley, 2003; Yano, Hayes, Wright, Schnurr, Lipson, et al., 2010; Yano, Simon, Lanto, & Rubenstein, 2007). Such translation has spanned new technologies (e.g., the VA's electronic medical record—the Computerized Patient Record System; Evans, Nichol, & Perlin, 2006), new resource allocation models (Wasserman et al., 2001), and new approaches to delivering care (Stetler, McQueen, Demakis, & Mittman, et al., 2008). Similarly, the VA has supported rigorous comparative effectiveness research, which has included continually evaluating its own practices and policies in comparison with other health care organizations (Asch et al., 2004; Atkins, Kupersmith, & Eisen, et al., 2010; Kerr et al., 2004). The VA is also subject to substantial scrutiny imposed by external agencies as the nation's largest health care system and the principal model for publicly funded health care reform (Asch et al., 2006; Yano et al., 2007).

Consistent with this tradition of research focused on the determinants of health and health care for veterans in service of quality improvement, the VA has actively engaged researchers in learning about the needs of special and emerging groups of patients (e.g., spinal cord injury, traumatic brain injury, and Veterans returning from Iraq and Afghanistan). Research results, in turn, may inform the design of new initiatives and services, which researchers may then help to evaluate. A particularly strong model of this type of research-clinical-policy partnership is in evidence with respect to women veterans as a special population (Yano, Rose, Bean-Mayberry, Canelo, Washington, et al., 2010). Figure 1 represents highlights of the history of VA research in the context of policy and practice, and reflects the potential value of such partnerships over time. The VA also benefits from the high volume of clinical scientists engaged in both research and direct patient care, by their involvement in designing and testing new interventions and care models. Intermittently, legislation has also had its own role on influencing the care of women veterans, and in turn, the kinds of research studies that investigators have pursued.

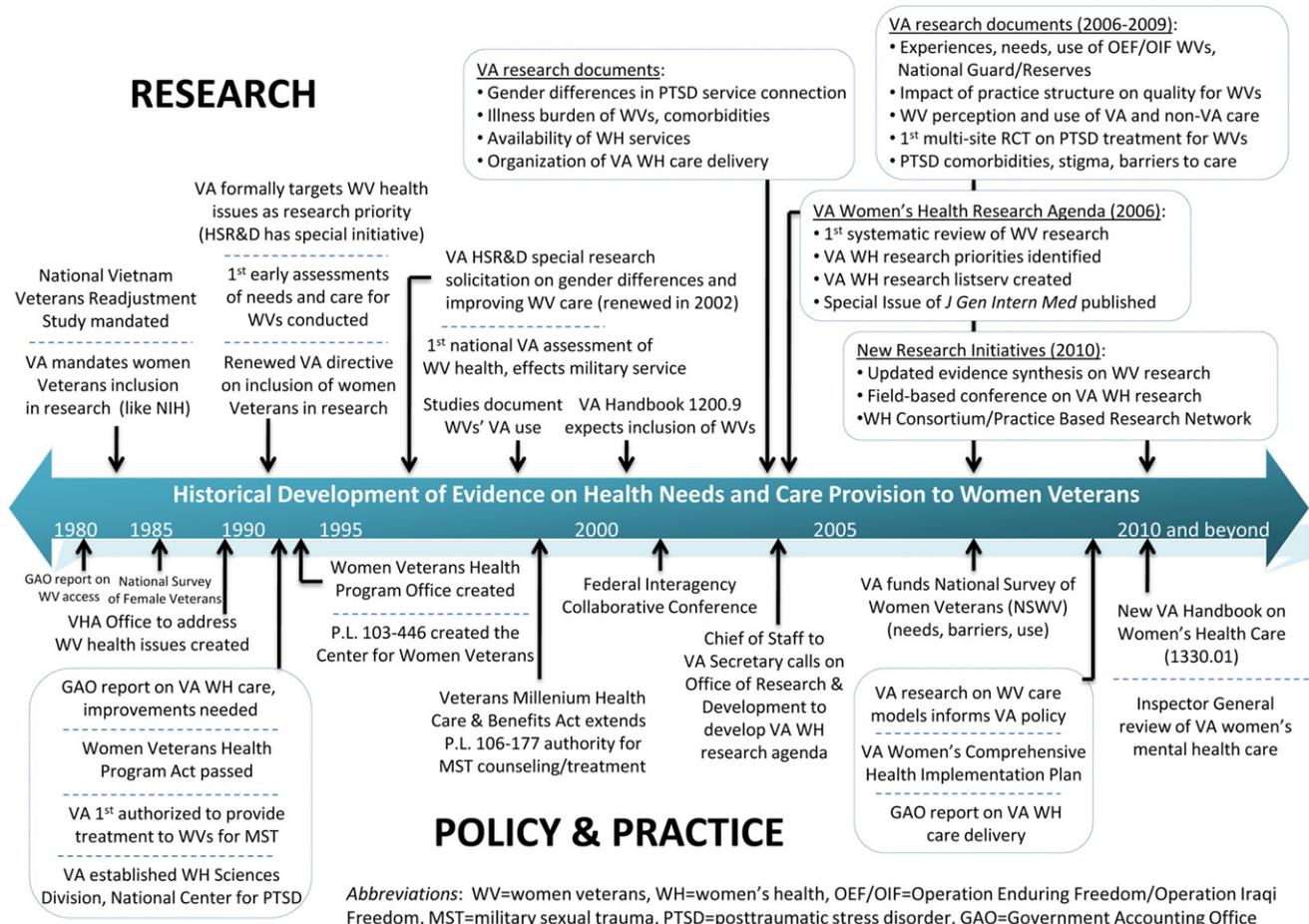


Figure 1. History of VA research and policy/practice partnerships around women's health.

Although historically an extreme numerical minority when legislation had imposed a 2% cap on women's participation in the military, women veterans are now entering the military at unprecedented levels (20% of new recruits), substantially changing the demographics of the veterans served by the VA health care system and the range of services that VA providers must be prepared to deliver (Yano, Hayes, et al., 2010). Gender differences in utilization (Frayne et al., 2007, 2008) and quality (Bean-Mayberry et al., 2009; Wright, Craig, Campbell, Schaefer, & Humble, 2006; Yano, Hayes, et al., 2010) have also been noted, raising concerns about how to ensure equitable access to high-quality health care services. Because women veterans have historically underused VA health care, with most of today's women Veterans obtaining all or most of their medical care outside the VA (Murdoch et al., 2006), the VA has placed elimination of barriers to VA use for women as a top priority (Carden, 2010; U.S. Department of Veterans Affairs, 2010). VA research has thus far demonstrated that women veterans have substantial misconceptions about VA care, including gaps in knowledge/awareness of their eligibility for VA care and inaccurate assumptions that the VA provides care only for men and/or does not deliver women's health care services (Washington, Kleimann, Michelini, Kleimann, & Canning, 2007; Washington, Yano, Simon, & Sun, 2006). These and other findings suggest the importance of outreach/education as well as marketing campaigns. Recent efforts to ensure access to VA care among all veterans discharged from military service in Iraq and Afghanistan have resulted in nearly 50% enrollment rate among younger women veterans, far exceeding the levels of women from other periods of service and rapidly transforming the mix of patients seen in day-to-day practice at facilities across the VA health care system nationwide. Not surprisingly, the VA has elevated the status and increased oversight and strategic planning for delivery of comprehensive women's health care services (VHA Handbook 1330.01; Veterans Health Administration, 2010).

On average younger than male Veterans, women Veterans now entering the VA health care system are also increasingly of childbearing age, resulting in needs to alter local service provision and streamline care coordination with community providers. Reproductive health services, including prenatal care and infertility services, are in increased demand, influencing clinical staffing needs, referral mechanisms, and the importance of outcomes monitoring, in addition to generating legislative responses to benefits expansion (e.g., newborn care coverage).

In response to the need for more information about women veterans, the VA Office of Research and Development (ORD)—and especially the ORD's VA Health Services Research and Development (HSR&D) Service—accelerated their efforts to foster the conduct of high-priority research on women Veterans' health and health care issues. In particular, the ORD sponsored the first-ever national VA women's health research agenda-setting conference in 2004 (Yano et al., 2006). In preparation for the conference, the ORD funded a systematic review of women Veterans' health research, which demonstrated that most of the literature was descriptive and observational (i.e., almost no clinical trials or interventions); noted gaps in knowledge of disease prevalence, transitions between military and VA care, and quality; and demonstrated a need for a better understanding of women veterans' health care needs and preferences (Goldzweig, Balekian, Rolon, Yano, & Shekelle, 2006). Based on secondary analyses of the national VA databases, conference attendees also learned about women Veterans' health conditions and differences in utilization (Frayne et al., 2007, 2008). The

resulting agenda was informed by experiences and efforts at the National Institutes of Health (NIH) Office of Research on Women's Health and the Agency for Healthcare Research and Quality, and was anchored in the expertise of seasoned investigators and senior research managers using consensus development techniques (Yano et al., 2006).

Resulting health services research priorities focused on the need for research on models for delivering care to women Veterans (in different settings, for different conditions) and assessments of health care need and quality among women Veterans with high-impact conditions (e.g., psychiatric conditions). Research on access, continuity, and costs, as well as better epidemiologic data on women veterans' disease burdens and utilization patterns, was also called for. Consequently, new VA research solicitations were disseminated, and more women's health expertise was integrated into VA scientific review panels, resulting in new research on women Veterans' health care needs, access, and barriers (Table 1). This research included studies of chronic physical and mental health comorbidities, determinants of ambulatory care use and unmet health care needs, and the organization of women's health care delivery, among others. More studies were also funded to examine women's mental health care needs (e.g., posttraumatic stress disorder [PTSD] treatment, barriers and facilitators to seeking PTSD care, evaluation of VA military sexual trauma screening and treatment, detection/treatment of intimate partner violence, sexual violence, and gynecologic health). Because of the rapid influx of Veterans from Operations Enduring Freedom and Iraqi Freedom, many studies of post-deployment health were also funded, including assessments of women's mental health and substance abuse service needs, physical and/or sexual assault of deployed women, gender differences in stigma and barriers to care, and community and family reintegration (including service needs for women Veteran mothers).

Further, experts in research development recommended building capacity, fostering collaborations and mentorship; providing the infrastructure and technical consultation to help surmount methodological barriers and limitations, e.g., recruiting sufficient numbers of women Veterans; and increasing the visibility and impact of VA women's health research, e.g., journal supplements (Yano et al., 2006). Attendees also recommended greater oversampling of women Veterans in ongoing data collection efforts, including VA performance measures.

In response to the call for capacity building, VA HSR&D Service funded a VA Women's Health Research Network. The Network is comprised of two components: 1) A VA Women's Health Research Consortium (designed to provide education/training, technical consultation, mentorship and support dissemination), and 2) a Women Veterans' Practice-Based Research Network (composed of VA facilities with large women Veteran caseloads to support multisite interventions and other studies). The VA HSR&D Service also funded a special issue of the *Journal of General Internal Medicine* focusing on the health and health care of women Veterans (Washington, Yano, & Horner, 2006), while also establishing a VA women's health research website, Listserv, and interest group (U.S. Department of Veterans Affairs, 2011). VA leaders have since started reporting VA performance measures by gender, requiring VA network leaders to select an area of gender disparity for quality improvement.

The rapid acceleration of research on the health and health care of women Veterans (and women in the military) has produced a wealth of new information for use in improving care within and outside the VA. Since the first systematic review was conducted, more papers have been published in the last 5 years

Table 1
VA Women's Health Services Research Studies (2006–2010)*

Topic	Funded Research Studies
Needs assessments (health care needs, barriers to access, continuity, chronic care needs)	Updated systematic review of research on military women and women veterans Chronic physical and mental illness care in women veterans Assessment of the health care needs and barriers to VA use by women veterans Determinants of women veterans' ambulatory care use and unmet need The quality of locoregional breast cancer treatment for breast cancer in VA
Evaluations of Models of care	Impact of practice structure on the quality of care for women veterans Changes in women's health care delivery Re-engineering systems for the primary care treatment of PTSD Implementation and sustainability of VA women's mental health clinics
Mental health care needs	Gender differences in mental health treatment needs and service use Barriers and facilitators to PTSD treatment seeking Examining the diagnostic and clinical utility of the PTSD checklist Relationship and PTSD study: Detection of intimate partner violence PTSD focused cognitive behavioral therapy for partner violence: A pilot study Evaluation of military sexual trauma screening and treatment Military sexual trauma effect on PTSD and health behavior: A longitudinal study of Marines Evaluating the VA's assessment of military sexual trauma in veterans Sexual violence and women veterans' gynecological health Alcohol misuse and risk of postsurgical complications and mortality
Returning veterans' and deployed women's needs	Stigma, gender and other barriers to VA use among OEF/OIF veterans Soldier to civilian: Randomized trial of an intervention to promote post-deployment reintegration Community reintegration problems and treatment preference among OEF/OIF veterans Online interventions for female OEF/OIF Reserve/National Guard women veterans Women Veterans Cohort Study (OEF/OIF) Predicting post-deployment mental health substance abuse and service needs Gender and medical needs of OEF/OIF veterans with PTSD and comorbid substance abuse Understanding pain of gastrointestinal origin in women that serve in OEF/OIF Physical and sexual assault in deployed women: risks, outcomes and services Urogenital symptoms, depression and PTSD in OEF/OIF women veterans Combat, sexual assault, and posttraumatic stress in OEF/OIF military women Further development and validation of the DRR1 Validation of modified DRR1 scales in a national sample of OEF/OIF veterans
Reproductive health	Paternal environmental exposures and reproductive outcomes: A comparison Pilot study of the reintegration and service needs of women veteran mothers
Infrastructure development	VA Women's Health Research Consortium VA Women Veterans' Practice Based Research Network

Abbreviations: DRR1, deployment risk and resiliency inventory; OEF, Operation Enduring Freedom; OIF, Operation Iraqi Freedom; PTSD, posttraumatic stress disorder.
* Studies listed were funded by VA HSR&D Service or the VA HSR&D Quality Enhancement Research Initiative (QUERI).

than the previous 25 years combined (Bean-Mayberry et al., 2010). The first multisite trial of PTSD treatment for women veterans demonstrated the benefits of prolonged exposure therapy (Schnurr et al., 2007), and was the focus of a series of briefings to VA leaders, who worked with researchers to design and roll out a national prolonged exposure therapy training program. Studies have also demonstrated that women's clinics are associated with higher breast and cervical cancer screening rates and patient ratings of access, continuity, and coordination, and helped inform revision of the VHA Handbook for women's health care delivery (Goldzweig, Parkerton, Washington, Lanto, & Yano, 2004; Washington, Yano, Simon, et al., 2006; Yano, Rose, et al., 2010; Yano, Washington, & Bean-Mayberry, 2008). And qualitative research among women Veterans was used to generate and then test a gender-sensitivity curriculum for VA providers and staff in a randomized trial (Vogt, Barry, & King, 2008), which is now being tested in the VA women's health research network before national implementation. The promise of VA research for improving care for women Veterans has never been greater.

Although VA women's health research has made many advances, the need for evidence-based practice and policy has continued to accelerate. As a result, the VA HSR&D Service and the VA Women Veterans Health Strategic Health Care Group co-sponsored a field-based research meeting—the 2010 VA Women's Health Services Research Conference. The conference

was designed to update the original VA women's health research agenda by integrating research conducted in the intervening 6 years and to foster research–clinical partnerships that would integrate the state-of-the-science with the informational and strategic needs of senior policy and practice leaders. Agenda development was further enhanced by significant participation of leaders in women's health care delivery and policy within and outside the VA, to yet again significantly advance the state of VA women's health research and its potential impact on practice and policy. The purpose of this paper is to report on the resulting research agenda and roadmap for moving forward on behalf of the women who have served in the military.

Methods

Conference Design

The conference was designed to accelerate the creation of research–clinical partnerships that would advance a research agenda focused on studies capable of heightened impact on practice and policy. Conference segments were organized to optimize information flow and anchored in learning theory, theories of research utilization, and consensus development techniques (Lewis, 2007; Wilson, Petticrew, Calnan, & Nazareth, 2010; Table 2). Conference notification to the research

Table 2
Theory-Based Domains and Conference Design Elements

Theory-Based Domain	Conference Design Element
Leadership commitment/support	Introductory remarks by senior officials in patient care, women's health and research Virtually every VA Office represented ^a
Broad field-based participation	Nearly 100 MD and PhD researchers, representing 45 VA facilities and spanning 27 states Represented approximately two thirds of the >150 investigators expressing interest in conducting VA women's health research
Knowledge production	Invited plenary presentations on state of the state: Women's Health Evaluation Initiative Systematic Literature Review Update National Survey of Women Veterans State of VA Women's Mental Health Research Thematically organized scientific presentations based on competitive abstracts Research spanned high-priority topics in mental health, post-deployment/reintegration, access, prevention, screening, treatment, gender differences, methods
Integration of VA strategic planning and operational needs	Introductory remarks on VA transformational initiatives Leadership panel response to current state of knowledge Workshop on patient-centered medical homes for women veterans [†] VA leaders/managers participation in agenda-setting breakout sessions alongside researchers
Focus attention on interagency collaboration	Invited representatives from policy, practice, and research within and outside VA Workshop on opportunities for VA-DoD research collaboration Attendance from high-level policy/research organizations (e.g., Institute of Medicine; U.S. Departments of Veterans Affairs, Defense, Health & Human Services [NIH, NIMH, AHRQ], and Labor; National Committee for Quality Assurance; Society for Women's Health Research; Congressional staff) [‡]
Accelerate move from observational to interventional and implementation research	Workshop on intervention design, multisite studies, implementation research and PBRNs Invited talks and agenda recommendations from experts in conducting multisite interventional research through PBRNs and implementation research leaders from within and outside the VA [§]

Abbreviations: AHRQ, Agency for Healthcare Research and Quality; NIH, National Institutes of Health; NIMH, National Institutes of Mental Health; PBRN, practice-based research network.

^a VA Office of the Under Secretary for Health, Office of Patient Care Services, Office of Quality & Performance, Office of Mental Health Services, Office of Academic Affiliations, Office of Public Health & Environmental Hazards, Office of Rural Health, Office of Research & Development, in addition to key program offices and centers such as the Center for Women Veterans, the Homeless Program, the National Center for PTSD, among others.

[†] The VA has initiated implementation of patient-centered medical homes nationwide as one of many transformation initiatives outlined by the Secretary of the U.S. Department of Veterans Affairs. The VA also recently completed a new VHA Handbook on Health Care Services for Women Veterans (VHA Handbook 1330.01, May 21, 2010), which encompasses comparable restructuring and redesign efforts.

[‡] Attendees included high-level representatives from the Institute of Medicine Board on Select Populations (which encompasses military and veterans), the U.S. Department of Health & Human Services (e.g., NIH Office of Research on Women's Health, NIMH Board on Women's Health Research, AHRQ), the U.S. Department of Defense (e.g., Congressionally Directed Medical Research Program, Tripler Army Medical Center), the U.S. Department of Labor (DOL), the National Committee for Quality Assurance, the Society for Women's Health Research (SWHR), the RAND Center for Military Research, Veteran Service Organization (VSO) representatives, and Congressional staffers.

[§] Included leader of primary care practice-based research networks (PBRNs) at the Agency for Healthcare Research and Quality (AHRQ) and national director of VA Quality Enhancement Research Initiative (QUERI) Program, VA HSR&D Service (implementation research).

community occurred through a call for abstracts disseminated to members of the VA women's health research interest group and/or listserv, VA-funded principal investigators, and research center leaders for broad distribution within and outside the VA.

Conference participation was determined through both competitive scientific abstract submissions and directed invitations to representatives from senior VA policy and practice offices and senior women's health research leaders in other public and private sectors (e.g., NIH Office of Research on Women's Health, National Institute of Mental Health Women's Bureau, Department of Labor Women's Bureau, Society for Women's Health Research), as well as key stakeholders (e.g., Center for Women Veterans, Congressional staffers).

The conference was launched with talks demonstrating leadership commitment from senior officials in clinical care, women's health, and research, followed by overviews of the state of knowledge on women Veterans' health and health care (Table 3). New scientific findings were also presented (>70 oral and poster presentations). Breakout sessions were organized by six key research/quality improvement priorities: 1) access/rural health; 2) primary care and prevention; 3) mental health; 4) post-deployment health; 5) complex chronic conditions, including aging/long-term care; and 6) reproductive health. Breakout session facilitators guided development of agenda recommendations.

Priority research agenda recommendations generated in the sessions were presented to the full audience of conference attendees, and two research "thought leaders," who followed with additional recommendations for advancing the resulting research agenda toward interventional and implementation research.

Results

State of Women Veterans Health and Health Care Research

Table 3 presents an overview of selected findings presented at the conference to help set the stage for agenda-setting breakout sessions. These presentations reflected, in large part, the research funded under the prior VA research agenda. They spanned studies of the intersection of combat, sexual, and nonmilitary trauma; health and reintegration among deployed military and veterans; unmet needs, perceptions, and barriers; prevention, screening, and treatment; and measurement/methodological issues.

VA Women's Health Research Agenda

The resulting 2010 VA Women's Health Services Research Agenda is described in Table 4. Key research gaps and, where

Table 3
Overview of State of Women Veterans Health and Health Care Research

Scientific Data Sources*	Selected Findings
<p>Overview of the Women's Health Evaluation Initiative Secondary analyses of national VA databases Funded by Women Veterans Health Strategic Health Care Group Support for strategic planning</p>	<p>Women represent 3%–8% of veteran outpatients at most VA facilities (fiscal year 2008). Number of women veterans using VA has doubled over past decade. Age distribution no longer bimodal (reflects infusion of OEF/OIF, anticipate large cohort of elderly women). Women have more diagnosed mental health conditions than men. High prevalence of cardiovascular risk factors (e.g., hypertension, hyperlipidemia, obesity), depression, and musculoskeletal disorders.</p>
<p>Updated Systematic Literature Review Update of 2004 systematic review (reflects 191 articles between 2004–2008) Funded by VA Evidence Synthesis Program under the direction of the HSR&D Service</p>	<p>More observational and less descriptive. Reflects increase in VA funding. Majority of literature on mental health, followed by quality/satisfaction, access/use, deployment/post-deployment, and organizational studies. Strengths in PTSD treatment outcomes, access to care (barriers, perceptions, use) and organizational determinants of quality. Gaps in clinical and intervention studies for chronic mental/physical conditions, transitions from military to civilian life, impact of military duty, and effects on families.</p>
<p>Overview of Findings from National Survey of Women Veterans last national survey of female veterans conducted in 1985 (25 years ago) Funded by Women Veterans Health Strategic Health Care Group</p>	<p>Younger women veteran cohorts more likely to be racial–ethnic minorities, with greater VA use in past 12 months. VA users have more chronic medical conditions, higher prevalence of mental health diagnoses (e.g., PTSD, anxiety) compared with nonusers. Gaps in knowledge of eligibility and VA services remain.</p>
<p>State of VA Women's Mental Health Research Synthesis of funded research (including selected VA, DoD and other studies)</p>	<p>Majority of VA HSR&D–funded projects in women's health focus on mental health. Substantial mental health burdens among women Veterans. Military sexual trauma prevalent, increases risk of comorbid problems. Move to interventions accelerating (e.g., long-term health outcomes of women's service during Vietnam War, Women Veterans Cohort Study, online interventions for female OEF/OIF Reserve and National Guard veterans). Prominence of mental health conditions reflects need as well as cross-cutting effects on physical health and health behaviors.</p>
<p>Scientific sessions addressing women veterans' needs, perceptions and barriers</p>	<p>Lack of close proximity to VA women's health services deters use of VA. Unmet need higher among young, low-income, and poor health status; younger have problems with affordability/time off work, older with transportation. Lack awareness of VA reproductive services. OEF/OIF veterans with PTSD and/or substance use disorders have high rates of musculoskeletal, digestive, nervous system, and other problems. Challenges to family reintegration substantial.</p>
<p>Scientific sessions on clinical issues in caring for women veterans: Prevention, screening, and treatment</p>	<p>Women's health mini-residencies improved provider comfort in delivering care. Mental health conditions associated with less cancer screening. Traumas convey excess risk of irritable bowel syndrome, which is itself underdiagnosed in VA. Significant alcohol use while on antidepressants.</p>
<p>Scientific sessions on combat, sexual, and nonmilitary trauma</p>	<p>High rates of PTSD and depression. Significant combat and trauma exposure. High rates of harassment, sexual assault. High rates of intimate partner violence. Combat exposure and military sexual harassment associated with greater suicidal ideation, attempts. Women with military sexual trauma have poorer ratings of coordination of care; prefer separate waiting rooms, choice of male/female provider.</p>
<p>Scientific sessions on gender differences in health and health care for deployed military personnel and veterans</p>	<p>Women veterans smoke more, although more likely to be offered treatment. Less likely to be screened for depression (use of designated providers in mental health clinics helps). Higher prevalence of musculoskeletal conditions. Less combat exposure, but more likely to result in PTSD and more likely to seek health care. Lower BMI among OEF/OIF women veterans. Women with traumatic brain injury experience more severe neurobehavioral symptoms.</p>

Abbreviations: BMI, body mass index; HSR&D, VA Health Services Research & Development; OEF/OIF, Operation Enduring Freedom/Operation Iraqi Freedom; PTSD, posttraumatic stress disorder; WHEI, Women's Health Evaluation Initiative.

* Overviews of the state of VA women's health research were presented by leading VA investigators: Women's Health Evaluation Initiative (Susan Frayne, MD, MPH, Principal Investigator [PI], VA Palo Alto); Evidence Synthesis (Bevanne Bean-Mayberry, MD, MHS, PI, VA Greater Los Angeles); National Survey of Women Veterans (Donna Washington, MD, MPH, PI, VA Greater Los Angeles); and the state of VA women's mental health research (Paula Schnurr, PhD, National Center for PTSD, White River Junction VA).

Table 4
VA Women's Health Research Agenda for the Future

Main Topic	Research Priorities	Supporting Activities
Access to care and rural health	<p>Address gaps in women Veterans' knowledge and use of VA services (e.g., outreach/education, social marketing, telemedicine interventions).</p> <p>Evaluate and improve quality of transitions from military to VA care.</p> <p>Evaluate care provided at VA community-based outpatient clinics (e.g., availability, provision of women's health services).</p> <p>Evaluate care delivered to women Veterans through fee-basis or contract arrangements; compare quality with VA providers.</p> <p>Assess impact of transportation issues and need for child care arrangements and flexible clinic hours on access and use.</p> <p>Assess factors related to women veterans' trust of VA and other providers and clinic environments (e.g., safety, privacy, secure messaging).</p> <p>Need data on urban/rural differences in women Veteran population distribution, demographics, medical conditions, access and quality.</p>	<p>Consider development of a rural health registry.</p> <p>Increase conduct of implementation research (i.e., studies of strategies for implementing research into routine practice).</p>
Primary care and prevention	<p>Evaluate VA comprehensive women's primary care models (e.g., patient satisfaction, patient ratings of care, chronic disease quality, prevention performance, provider proficiency).</p> <p>Evaluate and improve primary care-specialist, primary care-hospital and primary care-emergency department communication and coordination of care.</p> <p>Conduct research on breast and cervical cancer screening and care (e.g., mammography compliance, follow-up of abnormal screens).</p> <p>Conduct studies of women Veterans' sexual health, sleep issues, menopausal management, obesity/weight management (quality of care, determine need for gender-sensitive programs).</p> <p>Develop and test informatics tools to support primary care providers' achievement of comprehensive, guideline-concordant care.</p> <p>Assess gender differences in symptom reporting.</p> <p>Assess VA care for women veterans using <i>Healthy People 2020</i> priorities as benchmark.</p>	<p>Determine strategies for increasing protected time of clinician researchers.</p> <p>Develop repository/report of funding opportunities.</p> <p>Develop pilot funding mechanisms for quality improvement studies.</p> <p>Increase quality of data capture.</p> <p>Foster collaboration with CDC, DoD, and VA National Center for Health Promotion & Disease Prevention.</p>
Mental health	<p>Need for research on how to integrate treatment of women with complex presentations (e.g., combinations of depression, PTSD, pain, substance use disorders and personality disorder).</p> <p>Examine structure and care models that support the patient-centered medical home.</p> <p>Understand similarities/differences between male and female Veterans with military sexual trauma, including barriers, needs and outcomes.</p> <p>Understand impact of mental health on sexual health and reproductive health over the lifetime.</p> <p>Determine barriers to caring for women who attempt/complete suicide.</p> <p>Identify risk factors for suicide among women Veterans.</p> <p>Evaluate variations in mental health care needs, use and outcomes of subgroups of women Veterans (e.g., racial-ethnic minorities).</p> <p>Improve PTSD screening instruments for use with women Veterans.</p> <p>Study effectiveness of integration of alternate mental health coping mechanisms (e.g., community support groups, spiritual/religious support).</p> <p>Conduct research on intimate partner violence, disordered eating, binge drinking, and other topics understudied among women Veterans.</p> <p>Test interventions to engage and retain women Veterans in mental health care.</p> <p>Evaluate effectiveness of group therapy by gender, by military cohort, by type of trauma (as well as with same-gender providers).</p> <p>Evaluate effectiveness of gender-specific approaches to interventions (e.g., smoking cessation).</p> <p>Evaluate effectiveness of peer support interventions to improve use.</p>	<p>Build capacity for more protected research time for clinician investigators.</p> <p>Increase data sharing opportunities (within VA, between VA and DoD, etc.).</p> <p>Increase partnerships with National Center for PTSD and VA Women's Mental Health Support Team.</p> <p>Enhance collaboration with university partners where expertise complements VA capabilities.</p> <p>Increase research dissemination through use of a clearinghouse.</p> <p>Develop sourcebook of mental health measures.</p> <p>Increase emphasis on implementation research.</p> <p>Promote VA and DoD collaborations.</p> <p>Use VA women Veterans practice-based research network to gain access to larger numbers of women veterans.</p>
Post deployment health	<p>Conduct research on post-deployment reintegration and readjustment among women Veterans.</p> <p>Evaluate determinants of use of VA health care by era, branch of service and participation in Reserves and National Guard.</p> <p>Evaluate functional status, quality of life, and resilience post-deployment, in addition to physical and mental health.</p> <p>Improve care coordination after post-deployment screenings.</p> <p>Evaluate polytrauma care needs and service delivery among women Veterans.</p> <p>Evaluate impacts of multiple deployments on women Veterans and their families.</p> <p>Develop combat exposure measure(s) that reflect women Veterans' experiences.</p> <p>Evaluate interventions designed to smooth transitions between the military and VA health care systems (e.g., transfer of medical record information, communication of community resources before discharge).</p> <p>Test interventions supporting appropriate care-seeking.</p>	<p>Increase collaboration among researchers interested in post-deployment health at VA, DoD, NIH, and other agencies.</p> <p>Improve access to large population cohorts of OEF/OIF Veterans.</p> <p>Promote integration of veteran status in databases outside VA.</p> <p>Increase effective communication about VA research to Veterans Service Organizations as well as the general public.</p>

(continued on next page)

Table 4 (continued)

Main Topic	Research Priorities	Supporting Activities
Complex chronic conditions/aging and long-term care	<p>Understand the aging issues of women Veterans (e.g., menopause, osteoporosis, arthritis, diabetes, heart failure, chronic pain, substance use, incontinence, dementia), including needs, use, and preferences.</p> <p>Assess gender differences in presentation and outcomes of chronic disease among Veterans; reduce gender disparities in care delivery.</p> <p>Assess and improve osteoporosis screening/management.</p> <p>Investigate the unique long-term care needs of women Veterans (i.e., to what extent should long-term care services be tailored to women's needs?).</p> <p>Assess and reduce risks of homelessness among women Veterans.</p> <p>Understand the natural progression of mental health issues as women Veterans age (e.g., long-term follow-up of women with PTSD).</p> <p>Evaluate access to and use and quality of home-based primary care and nursing home care (community living center options) for women.</p> <p>Evaluate needs and care for disabled women Veterans.</p> <p>Evaluate provider proficiency in gender-based differences in aging.</p> <p>Assess impacts of caregiver burdens on women Veterans' health.</p> <p>Evaluate and improve VA emergency care for women Veterans.</p> <p>Evaluate and improve palliative care interventions adapted to women Veterans' needs and preferences.</p>	<p>Engage women Veterans on research advisory boards.</p> <p>Increase collaboration to enhance growth in this research area (increase number of investigators and studies).</p> <p>Foster multisite research to ensure adequate numbers of women for geriatric research.</p>
Reproductive health	<p>Determine reproductive health needs of women Veterans (e.g., reproductive technologies, infertility needs, hysterectomy rates, contraceptive needs, preconception care).</p> <p>Understand impacts of military exposure on pregnancy outcomes.</p> <p>Track reproductive health care needs of military women and women Veterans across the lifespan (see Complex chronic conditions/aging and long-term care).</p> <p>Investigate best models of specialty reproductive care (e.g., supporting transitions between VA and community providers).</p> <p>Assess costs of reproductive health services among women Veterans.</p> <p>Evaluate VA implementation of the new pregnancy and newborn care legislation.</p> <p>Evaluate workforce development and integration (e.g., obstetrics-gynecology, family practice, nurse practitioners, nurse midwives).</p> <p>Examine impacts of first experiences with reproductive health services (e.g., on perceptions of care, on later use).</p> <p>Examine relationships between reproductive health and mental health (e.g., care coordination, impact of medications on pregnancy).</p> <p>Evaluate variations in screening for sexually transmitted diseases.</p> <p>Evaluate impacts of potential reversal of "Don't Ask Don't Tell" policies on VA care.</p> <p>Study needs and level of demand for care among transgendered Veterans.</p>	<p>Create a reproductive health research work group to enhance collaboration, foster interdisciplinary teamwork, and increase portfolio area.</p> <p>Explore value of creation of a birth outcomes registry.</p> <p>Engage other national organizations (e.g., American College of Obstetrics & Gynecology, Association of Women's Health, Obstetric & Neonatal Nurses, National Institute for Child Health & Human Development).</p> <p>Improve collaboration with affiliated centers (e.g., NIH Cancer Centers).</p>

Abbreviations: CDC, Centers for Disease Control and Prevention; NIH, National Institutes of Health; PTSD, posttraumatic stress disorder.

appropriate, resources for advancing research are noted for each of the main priority areas (e.g., access).

Improving access to care remains a high priority in general. More research is needed to address gaps in women veterans' knowledge of VA services and to facilitate transitions between military and VA care, including exploration of social marketing and other outreach/education interventions. Improving access for women Veterans at a distance from the larger, better resourced VA medical centers is also a priority, requiring research on the care provided at VA community-based outpatient clinics, issues of transportation, access to child care, and flexible clinic hours. Many of these issues are also relevant to rural health; however, basic descriptive and observational research are needed to better understand differences in the population of women Veterans in rural areas, including their demographics, needs, access, and quality of available care.

Enhancing primary and preventive care among women Veterans has continued to be a fundamental clinical goal, which will benefit from research to monitor and improve quality. Research recommendations spanned health care systems, as well as provider- and patient-level issues. Ongoing study of VA's comprehensive women's primary care models, as well as interventions to improve coordination between primary care and women's clinics and other specialty care (including emergency departments), are needed. Evaluating and enhancing provider

proficiency in women's health care is also key, including addressing providers' comfort in handling sexual health, contraception, and other topics routinely handled in primary care settings outside the VA. Using the *Healthy People 2020* priorities (e.g., smoking cessation, weight gain) to benchmark VA care was also recommended.

Much of the VA women's health research portfolio has been focused on mental health issues. Building on the knowledge gained from this investment, the new agenda proposes evaluating effectiveness of combined treatments for multiple mental health comorbidities (e.g., depression, PTSD, and substance use), as well as developing and testing gender-specific approaches to behavioral health interventions (e.g., smoking cessation). A better understanding of gender and racial-ethnic differences in mental health care needs, use, and outcomes is also a priority, in addition to understudied topics such as intimate partner violence, eating disorders, and binge drinking. Research evaluating predictors of treatment dropout and designing interventions to enhance retention in mental health care is also needed.

The combined VA women's health and post-deployment health research solicitations resulted in increased knowledge, but also elucidated additional research needs. More research is needed to assess and improve community reintegration and readjustment, and to examine the impacts of multiple deployments on women and their families. Most research has examined

the mental health sequelae of deployment, leaving gaps in our knowledge of their quality of life, function, resilience, and chronic care needs, especially among those with polytrauma, where most evidence is from studies of male veterans.

More research is also needed on the complex chronic conditions and aging issues among women veterans. Little is known about their needs, use, and preferences for care for osteoporosis, arthritis, heart failure, and incontinence, among other conditions. Women Veterans' long-term care needs have also been understudied: What is their access to home-based primary care or community living center options? What is the natural progression of PTSD and other mental health issues as women Veterans age? The degree to which chronic, emergency, long-term, and palliative care services need to be tailored to gender-specific needs is unclear.

Research related to women veterans' reproductive health has also been more limited. Currently, research assessing the range of their reproductive health needs and experiences is lacking, requiring studies of the diverse needs of young women veterans of childbearing age through menopausal management and long-term needs among elderly women veterans. Recent legislation expanding the VA's coverage of pregnancy and newborn care should also be evaluated. Improved integration of reproductive health care will also require study of new models of care and integration of different types of providers into VA care (e.g., nurse-midwives).

Conference attendees also noted key activities that would foster achievement of the new VA women's health services research agenda (Table 4). Recommendations included establishment of collaborative work groups focused on key research topics, including partnerships outside the VA where appropriate (especially between VA and Department of Defense [DoD] researchers). Exploration of the potential value of registry development (e.g., rural health, birth outcomes) was also suggested.

Discussion

Since recommendations from the 2004 VA women's health research agenda were made, the volume of research studies and published literature on the health and health care of military women and women veterans has grown substantially. Perhaps not surprisingly, the bolus of new scientific knowledge has created a new set of research questions that need to be answered. The new research agenda described here builds on that foundation by focusing on the potential for health services research to substantively contribute to evidence-based practice and policy.

VA policymakers have added to this research investment by sponsoring their own efforts to better understand women veterans' needs. Two key examples are the National Survey of Women Veterans, a national probability sample of women veteran VA users and non-users, and the VA Women's Health Evaluation Initiative Sourcebook, which describes the prevalence and costs of women veterans' health conditions for use in health planning. Further, Congress has funded a large longitudinal study of Vietnam women veterans. Made possible by the presence of a strong VA research community, these efforts provide foundational scientific knowledge to advances in practice.

Although improving women veterans' access to care remains a priority, interventions aimed at addressing demonstrated barriers to care are yet to be tested (e.g., outreach/education, telemedicine for women), reflecting opportunities for highly policy-relevant research. The VA's major initiatives in improving access among veterans residing in rural areas could also parallel efforts to improve access for women, providing opportunities for partnership with the VA Office of Rural Health and their field-based Rural

Health Resource Centers. Substantial VA use of community providers for women's specialty care needs also requires research on improved coordination and communication between VA and non-VA providers. Health care reform also presents implications for future VA research, because more options for women veterans' care may evolve but without (as yet) clear pathways for information sharing between VA and community providers.

Primary care and prevention research is currently only a small portion of the VA's research portfolio, despite major initiatives to implement patient-centered medical homes. Adapting medical home constructs to women's health care warrants further study, especially in view of research demonstrating lower patient ratings of care in traditional VA primary care clinics compared with comprehensive women's clinics (Bean-Mayberry et al., 2003; Yano et al., 2008). In addition, more research is needed on the adaptations required to deliver primary care and preventive services to the population of women veterans with high mental health comorbidities.

Much of the VA's women's mental health research points to the importance of gender differences in care seeking, perceptions of quality, and the effects of mental health on physical health and health care. Acting on these gender differences through adapted interventions at the patient, provider, or organizational levels (or better yet, through multilevel interventions) would be the logical next step for some of the extant research, whereas other conditions (e.g., bipolar disorder) require more descriptive and observational research before moving to interventions. The VA has released a Uniform Mental Health Services Benefits Package that now integrates "gender aware care" as a fundamental policy focus, although recent research suggests that translation of this concept into local care delivery is not a straightforward endeavor. More research is needed to examine the comparative effectiveness of different mental health care arrangements that incorporate lessons learned from VA's substantial investment in mental health research among women veterans. Opportunities to leverage this investment into a growing fund of knowledge with non-VA partners, including the National Institutes of Mental Health Women's Bureau, should help to translate VA lessons learned to all women. VA research to better understand and treat PTSD and other traumas among women veterans also has application to other contexts outside military or veteran exposures.

The growth in post-deployment health research in general and among women veterans specifically has stemmed from specific research solicitations in response to major VA-wide policy priorities for caring for this population of veterans. Of particular importance is the ongoing need for effective partnerships with DoD researchers, clinicians, and policymakers; data sharing and collaborative VA-DoD research continue to be quite limited, likely requiring purposeful planning and policy direction at the highest levels.

Although VA women's health research has grown, there is a need for greater attention to women veterans' complex chronic conditions across the lifespan. This is especially salient for the large cohort of aging women veterans from the Korean and Vietnam Wars who will be requiring long-term care at levels not previously seen in VA settings. Fortunately, the VA is a leader in geriatrics as well as palliative care; however, very few researchers in these fields are currently focused on gender differences or women's needs. An important first step in this direction is the VA-funded National Longitudinal Vietnam Women Veterans study, designed to examine long-term effects of military service. Further, the VA (clinicians and researchers alike) would benefit from preparing for the full life cycle of health care needs of the new cohorts of young women (including mothers) currently entering VA for the first time.

Following the legislative changes in VA services affording women veterans' broad coverage of reproductive health services (2000), research in this area is still in its relative infancy. Basic descriptive and observational studies are needed. Given that VA facilities are not set up for obstetric deliveries, studies of the care delivered through fee-basis providers and contract care are needed. Factors limiting women veterans' return to VA care post partum also merit further study.

We face many challenges and opportunities ahead in our efforts to implement the recommendations that comprise this research agenda, not the least of which are the very real constraints and limits in federal funding that will make expansion and action on the agenda difficult. The VA's investment in technical support, mentorship, and an infrastructure to help remedy historical challenges in recruiting enough women into VA studies will hopefully help to improve the feasibility and efficiency of research in this field. Central to the conference was also a focus on public sector partnerships (e.g., NIH–VA, Agency for Healthcare Research and Quality–VA, DoD–VA), with an emphasis on quality improvement and implementation research (e.g., National VA Quality Enhancement Research Initiative, National Committee for Quality Assurance). In addition to the VA agenda-setting efforts, we note parallel reports of updated women's health research agendas by the NIH Office of Research on Women's Health and the Institute of Medicine (Institute of Medicine, 2010; Pinn, Clayton, Begg, & Sass, 2010; Wood, Blehar, & Mauery, 2011). We anticipate that future partnerships across agencies, collaboration and cooperation among investigators and enhanced research-clinical partnerships will help leverage resources, both financial and intellectual, in the service of improving care for all women (Adler, 2010; Geller, Koch, Pellettieri, & Carnes, 2011; Bierman, 2003; Stone, Pinn, Rudick, Lawrence, & Carlyn, 2006; Pinn, 2005).

Acknowledgments

The authors acknowledge the support of the VA HSR&D Service, for the opportunity to convene the VA Women's Health Services Research Conference as one of seven field-based research meetings held in 2010. Conference development was led by a planning group comprised of field-based VA MD and PhD researchers from throughout the United States, in addition to representatives from VA HSR&D Service (Eisen, Lipson), the Women Veterans Health Strategic Health Care Group (Hayes), and the VA HSR&D Center for Information Dissemination & Education Resources (CIDER; McGlynn). Field-based researchers included several of the original investigators involved in the first agenda-setting planning group (2004) (Yano, Bastian, Frayne), principal investigators of several major VA studies of women veterans (Bean-Mayberry, Schnurr, Washington), an investigator with qualitative VA and DoD research experience (Sadler) and a young investigator building a career in women veterans' research (Mattocks).

Special thanks go to our invited speakers, who helped us to set the stage for implementing research into evidence-based practice and policy: the Honorable Robert L. Jesse, MD, PhD, Principal Deputy Under Secretary for Health, Veterans Health Administration; Patricia Hayes, PhD, Chief Consultant, Women Veterans Health Strategic Health Care Group; Madhulika Agarwal, MPH, MD, Deputy Under Secretary for Health for Policy and Services; Susan McCutcheon, RN, EdD, Director, Family Services, Women's Mental Health and Military Sexual Trauma, Office of Mental Health Services; Joel Kupersmith, MD, Chief Research and Development Officer; Ciaran Phibbs, PhD, VA Health Economics

Resource Center, VA Palo Alto Healthcare System; Captain E. Melissa Kaime, MD, Director, Congressionally Directed Medical Research Programs; Robert B. Wallace, MD, Chair, Board on Select Populations, Institute of Medicine and Professor, University of Iowa Hospitals & Clinics; Lt. Col. Lori L. Trego, PhD, CNM, Nursing Research Service, Tripler Army Medical Center; David Atkins, MD, MPH, Director, VA Quality Enhancement Research Initiative (QUERI), VA HSR&D Service; and David Lanier, MD, Associate Director, Center for Primary Care, Prevention and Clinical Partnership, Agency for Healthcare Research & Quality (AHRQ). We would also like to acknowledge the contributions of all of the meeting attendees whose participation throughout the conference led to the formulation of research priorities that are the substance of the resulting agenda.

The conference was launched at a reception at the Women in Military Service for America Memorial in Arlington Cemetery, surrounding attendees in a powerful physical place that served as a reminder of the history of women's contributions to the military over the generations. We thank Brig. Gen. Wilma L. Vaught, USAF (Ret.), President of the Memorial Foundation, and Memorial staff for their support and assistance.

The conference could not have taken place without the enormous commitment of exceptional staff responsible for the design and logistics of the conference on-the-ground: Ismelda Canelo, MPA, Britney Chow, MPH, Jennifer Peralta, Acacia Hori, Amy Lau, MPH, and Susan Stockdale, PhD. We also thank Mark Canning, Sam Garcia, MFA, and Vera Snyder-Schwartz, MA, for their coordination of contracts and supplies. Several key Conference presentations are available to the public on http://www.research.va.gov/programs/womens_health/conference2010/default.cfm. The views expressed in this article are those of the authors and do not necessarily reflect the position or policy of the Department of Veterans Affairs or the United States government.

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