An Evidence Map of the Women Veterans’ Health Research Literature (2008–2015)

Elisheva R. Danan, MD, MPH1,2, Erin E. Krebs, MD, MPH1,2, Kristine Ensrud, MD, MPH1,2, Eva Koeller, BA1, Roderick MacDonald, MS1, Tina Velasquez, MS1, Nancy Greer, PhD1, and Timothy J. Wilt, MD, MPH1,2

1VA HSR&D Center for Chronic Disease Outcomes Research, Minneapolis VA Healthcare System, Minneapolis, MN, USA; 2Department of Medicine, University of Minnesota Medical School, Minneapolis, MN, USA.

BACKGROUND: Women comprise a growing proportion of Veterans seeking care at Veterans Affairs (VA) healthcare facilities. VA initiatives have accelerated changes in services for female Veterans, yet the corresponding literature has not been systematically reviewed since 2008. In 2015, VA Women’s Health Services and the VA Women’s Health Research Network requested an updated literature review to facilitate policy and research planning.

METHODS: The Minneapolis VA Evidence-based Synthesis Program performed a systematic search of research related to female Veterans’ health published from 2008 through 2015. We extracted study characteristics including healthcare topic, design, sample size and proportion female, research setting, and funding source. We created an evidence map by organizing and presenting results within and across healthcare topics, and describing patterns, strengths, and gaps.

RESULTS: We identified 2276 abstracts and assessed each for relevance. We excluded 1092 abstracts and reviewed 1184 full-text articles; 750 were excluded. Of 440 included articles, 208 (47%) were related to mental health, particularly post-traumatic stress disorder (71 articles), military sexual trauma (37 articles), and substance abuse (20 articles). The number of articles addressing VA priority topic areas increased over time, including reproductive health, healthcare organization and delivery, access and utilization, and post-deployment health. Three or fewer articles addressed each of the common chronic diseases: diabetes, hypertension, depression, or anxiety. Nearly 400 articles (90%) used an observational design. Eight articles (2%) described randomized trials.

CONCLUSIONS: Our evidence map summarizes patterns, progress, and growth in the female Veterans’ health and healthcare literature. Observational studies in mental health make up the majority of research. A focus on primary care delivery over clinical topics in primary care and a lack of sex-specific results for studies that include men and women have contributed to research gaps in addressing common chronic diseases. Intentional research using randomized trials is needed.

INTRODUCTION

Despite serving in or alongside the US military since the Revolutionary War, women have experienced unequal access to Veterans Affairs (VA) benefits, and few women used the VA healthcare system prior to the early 1980s.1 In the subsequent 30 years, clinical, research, and policy initiatives have sought to improve the quality and accessibility of evidence-based healthcare for female Veterans.2 Today, women are the fastest-growing population of US Veterans receiving VA healthcare.3

When the literature related to female Veterans’ health and healthcare was last reviewed in 2008,4–6 the authors encountered a rapidly emerging field of research. They described growth in research related to access, utilization, and organizational quality, but identified gaps in research related to chronic physical and mental health conditions, complex combinations of disease, pregnancy and aging, traumatic brain injury, co-managed mental and physical preventive care, and post-deployment transitional health. Subsequently, the VA women’s health landscape has changed substantially. In 2008, the national Women’s Health Services (WHS) program was established to oversee clinical initiatives, such as the provision of comprehensive women’s healthcare (including general and gender-specific care) at a single site from a single provider.3

The VA Women’s Health Research Network (WHRN) was created in 2010 to fill knowledge gaps in the evidence base related to female Veterans’ health and healthcare.7 Based in part on the results of the previous review,5 the WHRN prioritized research on six key topic areas: (1) mental health, (2) primary care and prevention, (3) reproductive health, (4) complex chronic conditions/aging and long-term care, (5) access to care and rural health, and (6) post-deployment health.5

In this paper, we present an evidence map of the existing literature related to female Veterans’ health and healthcare published from 2008 through 2015, based on a VA Evidence-based Synthesis Program (ESP) report available at http://vaww.hsrq.research.va.gov/publications/esp/womens-health2.cfm. This review was requested jointly by VA WHS and the VA WHRN.

METHODS

Evidence maps identify and organize the existing literature within a broad subject area to facilitate future research and
policy planning. Given the interval growth and expansive scope of the literature related to female Veterans’ health and healthcare, we elected to create an evidence map rather than perform a traditional systematic review. A systematic review typically addresses a specific research question within a narrowly defined population. Our operational partners in the clinical and research offices of women’s health at the VA asked us to instead describe all facets of the female Veterans’ health literature. Key features of an evidence map include early involvement of stakeholders, a systematic search strategy, and a visual representation that presents the identified literature. Evidence maps do not involve assessing study quality or risk of bias, or extracting, evaluating, or synthesizing study findings. We describe multiple characteristics of the literature but provide a limited assessment of research quality.

Data Sources and Searches

We searched MEDLINE (Ovid), the Cumulative Index to Nursing and Allied Health Literature (CINAHL), and the VA Health Services Research and Development database for articles published between January 2008 and December 2015. The previous review period ended in September 2008, allowing a short overlap period to capture pending or unindexed publications. The search included the Medical Subject Headings (MeSH) terms Women; Women’s Health; Women’s Health Services; Veterans; Veterans Health; and Hospitals, Veterans.

Study Selection

We excluded studies that were not relevant to health/healthcare, did not include female US Veterans, or only included active duty military. Studies with fewer than 100 participants were excluded if less than 10% of participants were women, and studies with 100 to 1000 participants were excluded if less than 5% were women. Studies with more than 1000 participants were eligible if they included any women. For studies with a female or Veteran proportion < 75% of the total study population, we excluded studies that did not stratify results by sex or Veteran status, respectively. We also excluded case reports, letters, meeting abstracts, dissertations, editorials, reviews, conceptual frameworks, and protocols.

Abstracts were independently reviewed by a trained investigator (ED and NG) or research associate (EK, TV, and RM). A random selection of 18% (404 abstracts) were dual-reviewed; for these, agreement on inclusion was 87% (κ = 0.747), which is considered by convention to be substantial or moderate agreement. The full texts of eligible studies were then independently reviewed for inclusion by an investigator or research associate. A second reviewer independently reviewed a 10% random sample of full-text articles, as well as any additional articles that the original reviewer requested. If the two reviewers disagreed, a group arbitration system was used.

Data Abstraction

For each included study, 15 study characteristics were extracted onto evidence tables by one investigator or research associate. We selected and defined these study characteristics after discussion with key stakeholders in the clinical and research offices of women’s health at the VA and an expert panel composed of VA women’s healthcare providers and researchers, and then refined the categories within each study characteristic through multiple small subsample extractions. The characteristics extracted were healthcare topic, study design, sample size and proportion female, reporting of age and race, focus on special populations (e.g., lesbian, gay, bisexual, and transgender (LGBT), racial and ethnic minorities, or homeless Veterans), follow-up/duration, research setting, use of electronic health record, period of service, Veteran engagement (i.e., participation of patients in the design or conduct of the study), population studied, type of outcomes reported, publication year, and funding source. Each included study was designated one of 39 healthcare topics based on the primary focus of the article, and we grouped these under four subheadings (Table 1). Articles that reported on physical or mental health topics but primarily addressed issues of prevention and screening, healthcare organization and delivery, access and utilization, homelessness, or post-deployment health were placed in the latter groupings. We then performed an iterative, cross-tabular review of the abstracted data. A randomly selected 10% sample of studies were individually dual-reviewed across each column of study characteristics. Inter-rater discrepancies were noted within particular columns that relied on subjective interpretation. We addressed discrepancies by either reducing category granularity (e.g., we collapsed all observational studies except prospective cohort studies into a single grouping) or assigning two researchers to dual review all the studies grouped within a particular category, in order to ensure consistent assignment within each column. The principal investigator verified categorizations and addressed inconsistencies while summarizing the findings by study characteristics.

Data Synthesis and Analysis

We sorted and compared studies by healthcare topic, study design, sample size and proportion female, publication year, and funding source.

RESULTS OF LITERATURE SEARCH

We reviewed 2276 abstracts, excluded 1092, and reviewed the full text of 1184 references (Fig. 1). During full-text review we excluded 750 articles, leaving 434 eligible for inclusion. An additional six studies not found by our literature search were identified by searching references of 11 systematic reviews or during peer review of the draft report, bringing the total number of included references to 440 (Appendix A).
SUMMARY OF RESULTS

An overall visual representation of the included studies by healthcare topic subheading, sample size and proportion female, and study design is presented in Figure 2.

Healthcare topic: Most studies were related to mental health (208/440, 47%) or physical health conditions (133/440, 30%; Table 1).

Mental Health Conditions

Mental health articles were dominated by conditions often associated with military service, primarily post-traumatic stress disorder (PTSD) (71/208, 34%), military sexual trauma (MST) (37/208, 18%), and substance abuse (20/208, 10%). Four observational studies primarily addressed depression (3) and anxiety (1), and eight others addressed depression comorbid with other mental or physical health conditions. Four articles described reproductive mental health issues (e.g., postpartum depression). Twelve articles presented the primary findings (4 studies) or secondary analyses (8 studies) of randomized trials related to PTSD, MST, or multiple mental health diagnoses.

Physical Health Conditions

No specific clinical condition dominated the physical health articles, and few articles were found regarding common chronic conditions such as obesity (9), chronic pain (7), diabetes (3), and hypertension (0). The four most common topics were prevention and screening, reproductive health, long-term care and aging, and cardiovascular disease; together, they made up half (66/133, 50%) of the physical health articles. Though most studies were observational, there was one randomized controlled trial (RCT) on mammography screening promotion among women Veterans published in 2008,12 three subsequent secondary analyses of that study, and one small, single-site 6-month RCT of aerobic exercise for mild cognitive impairment.13

Healthcare Organization and Delivery

Thirty-one studies evaluated healthcare organization and delivery, 45% of which were published in 2015. These studies described the challenges, methods, and outcomes related to healthcare delivery for female Veterans. Half focused on comprehensive primary care for female Veterans, including a single VA-funded RCT of VA healthcare providers that tested the effects of a 30-min computerized educational program on gender awareness.14 We identified nine studies related to mental healthcare delivery for female Veterans, and three studies each related to emergency care delivery and virtual or telehealthcare delivery methods.

Access, Utilization, and Post-Deployment Health

We identified 57 articles related to access and utilization (24), rural healthcare (3), homelessness (12), or post-deployment health (18). The access and utilization studies assessed barriers to care related to homelessness, mental healthcare, financial concerns, and factors that explain delayed care and attrition, and described VA and non-VA healthcare utilization. Over a third of these specifically addressed Veterans of Iraq and Afghanistan conflicts (9/24, 38%). Nearly half of the 18 studies related to post-deployment health (44%) were published in 2015. One large VA-funded RCT studied the impact of online expressive writing on readjustment difficulties among Veterans of Iraq and Afghanistan conflicts.15

Participants. Most studies had over 1000 participants (249/440, 57%). Of the 249 large studies, 71% utilized the VA
electronic health record as a major data source. Thirteen studies enrolled clinicians or administrators as participants (e.g., a survey of VHA emergency department directors focused on capacity to meet the needs of female Veterans). Of the remaining 427 studies, 44% included only women, while 20% included less than 10% women.

![Fig. 1 Literature Flow Chart.](image)

![Fig. 2 Included Studies by Healthcare Topic, Sample Size and Proportion Female, and Study Design.](image)
**Study Design.** Most studies (398/440, 90%) utilized an observational research design such as a cohort, cross-sectional, or case-control design. Eight studies described the primary findings of RCTs, five of which were published since 2013. The two trials published in 2008\(^\text{12, 14}\) were also identified in the previous review.\(^5\) Five percent (22/440) of articles were qualitative studies involving in-depth interviews or focus groups, nearly half of which were published in 2015. None of the included articles described significant patient or Veteran engagement in the study design or implementation.

**Publication Year.** The number of articles published per year grew over the 8-year review period (Fig. 3). From 2008 to 2011, 135 articles were published, whereas from 2012 to 2015 more than double that number (305 articles) were published. More articles were published in 2015 (101), than in 2008, 2009, and 2010 combined. Several infrequently studied healthcare topics prioritized by the WHRN in 2011\(^8\) grew rapidly thereafter, including reproductive health, healthcare organization and delivery, access and utilization, and post-deployment health. Two healthcare topics did not follow the pattern of increasing publications after prioritization by the WHRN: long-term care and aging, and prevention and screening. Long-term care and aging showed no change over time. Prevention and screening was the only topic with a drop in research over time, from 11 articles published during the first half of the review period to seven during the second half.

**Funding Source.** Overall, 69% of articles (302/440) reported VA funding. Less than 7% had Department of Defense (DOD) funding (29/440). Fifteen percent (65/440) reported funding from other governmental sources, such as the National Institutes of Health (NIH). A small number of studies reported foundation (24/440, 5%) or university (18/440, 4%) funding. Less than 2% (7/440) of studies explicitly stated that they were unfunded (all observational), and only four studies (4/440, <1%) reported industry (all pharmaceutical) funding. Some studies reported more than one funding source, but 20% did not specify any funding.

Funding sources varied somewhat by healthcare topic. Whereas around 80% of reproductive health (20/24), healthcare organization and delivery (25/31), and access and utilization (19/24) articles were VA-funded, only about half of prevention and screening (10/18), post-deployment health (9/18), and homelessness articles (6/12) were VA-funded. Two-thirds of articles (19/29, 66%) with DOD funding addressed mental health issues, while just under half of articles (29/64, 45%) with other governmental funding addressed physical health issues. Articles about post-deployment health (7/18, 39%) and homelessness (5/12, 42%) were most likely to not specify a funding source.

![Fig. 3 Number of Articles Published by Year and Healthcare Topic. * The VA Women’s Health Research Network was established in 2010 and published a priority research agenda in 2011.](image-url)
DISCUSSION

Our evidence map describes the broad field of research related to female Veterans’ health and healthcare published between 2008 and 2015. The majority of identified studies were observational VA-funded studies, and nearly half were related to mental health conditions. We observed increased research in some priority topic areas, such as reproductive health, healthcare organization and delivery, access and utilization, and post-deployment health. However, we found few studies related to common chronic conditions seen in primary care and limited progress from observational to interventional research.

Advances in Research Priorities

In 2011, the VA WHRN set forth an ambitious research agenda with six key topic areas: (1) mental health, (2) primary care and prevention (including primary care delivery), (3) reproductive health, (4) complex chronic conditions/aging and long-term care, (5) access to care and rural health, and (6) post-deployment health. We found evidence that four of these areas advanced considerably in subsequent years, as did the subsection of primary care related to healthcare delivery. Complex chronic conditions/aging and long-term care, and the remainder of primary care and prevention, did not show substantial growth and are addressed separately below.

Mental health articles continue to dominate the VA women’s health literature (47% of studies), consistent with the previous review (85/195, 44%). PTSD studies remain prominent but now represent only one-third of mental health research, compared with nearly half in the previous review. In contrast, sexual trauma and substance abuse have grown considerably as a proportion of mental health research. Research related to the delivery of comprehensive primary care for female Veterans shows evidence of coordinated growth, involving varied viewpoints (providers, Veterans, vulnerable subpopulations) and multiple methodologies (observational studies, qualitative studies, and an RCT). Several other topic areas (reproductive health, access to care, rural health, and post-deployment health) with little research at the outset of our study period have grown dramatically in number of publications since being named research priorities, with publication counts rising as much as seven-fold.

The VA WHRN has also emphasized research related to particular subpopulations of female Veterans. Returning Veterans of Iraq and Afghanistan conflicts make up one-third of living female US Veterans. Over one-fifth of included articles targeted Veterans of those conflicts, and three-quarters of those have been published since 2012. The majority of studies addressing LGBT Veterans, racial and ethnic minorities, and homeless Veterans have also been published since 2012.

The overall increase in publications in recent years can be at least partially attributed to VA-funded journal supplements in 2011, 2013, and 2015. The proportion of female Veterans’ health research that is VA-funded has also grown from 45% (studies from 1978 to 2004) to 60% (2004–2008) to 69% of studies in this review (2008–2015).

Gaps in the Literature

We identified five primary gaps: research on common chronic disease topics, sex-specific results reporting, interventional study design, funding reporting, and Veteran engagement. First, several topics had surprisingly little research relative to their clinical prevalence—specifically, physical health topics in primary care and chronic disease, prevention and screening, and long-term care and aging. For example, we found no studies with a primary focus on hypertension though hypertension affects nearly 40% of middle-aged female Veterans in the VA and over 60% of those over 65. Controlling hypertension and other cardiovascular disease risk factors is critical for women, one in four of whom will die of heart disease. In addition, mental health topics most often encountered in primary care, including depression, anxiety, and postpartum depression, were largely absent from the literature. Depression is the most common mental health diagnosis among female Veterans at VA, including those returning from Iraq and Afghanistan. Evidence maps are primarily descriptive and our results do not directly address the causes or consequences of literature gaps. However, the stark disparity between the prevalence and significance of common chronic health conditions and the quantity of published research addressing those topics merits review.

We suggest that the apparent inattention to common chronic health conditions is primarily attributable to (1) the stage of existing evidence for most common conditions in primary care and (2) a lack of sex-specific results reporting for clinical research that includes female Veterans. For conditions such as hypertension and depression, decades of federally funded clinical research has defined best practices for healthcare. As a result, focusing ongoing research on health services delivery may be the most appropriate way to optimize the quality of care for female Veterans with these conditions. A 2008 VA Under Secretary for Health workgroup report on the provision of primary care to female Veterans highlighted the complexity of treating female Veterans with multiple comorbid chronic mental and physical health conditions, and identified fragmentation of care for general and gender-specific health concerns. Since 2008, most research related to common chronic conditions among female Veterans has addressed healthcare organization and delivery. For example, though very few articles in our sample primarily addressed depression, we found additional studies evaluating depression comorbid with physical health conditions and exploring integrated mental health and primary care delivery.

At least some research on common chronic conditions is being conducted with female Veterans, but the study results are not consistently reported by sex. We excluded over 350
articles that did not report sex-specific results. Though we did not extract study characteristics for excluded articles, a title search found 24 articles with the words “diabetes” or “depression” in the title (though only three had “hypertension” or “blood pressure,” and none had “anxiety”). The need for sex-specific reporting of scientific research has been recognized by both the NIH and the Institute of Medicine, though multiple challenges related to study design, statistical analysis, and results reporting exist. VA has long required the inclusion of women in research, and encouraging sex-specific results reporting could expand the field of female Veterans health research and allow for future meta-analyses by sex.

Conducting interventional research among female Veterans has been challenging due to the small number of women at any one clinical site. We identified only eight published RCTs over the past 8 years. A simple search of excluded studies with the words “randomized trial” in the title revealed at least seven additional RCTs that included female Veterans but did not provide sex-specific results, and four more that included too few women to meet our criteria. Increasing the recruitment of women into existing VA trials and encouraging sex-specific results reporting could augment the field of experimental research related to female Veterans’ health.

Reporting the source and role of funding is a quality standard for both experimental and observational research. Though 78% of studies identified at least one source of funding (a relatively high rate of funding compared to other medical fields), 20% of included articles did not report a funding source, which likely represents unfunded research. Explicitly describing research as unfunded will help stakeholders allocate resources.

Finally, although several studies incorporated Veterans’ perspectives, they all adhered to a traditional model of women as study subjects rather than as research stakeholders or partners. Researchers are increasingly seeking to engage patients and community members in the development of study questions, selection of outcome measures, and interpretation of findings. Incorporating female Veterans’ voices in the production of future research will strengthen the relevance and credibility of that work.

LIMITATIONS OF THIS EVIDENCE MAP

Due to resource limitations, we did not complete a dual review of all 2276 abstracts or 1184 full-text articles. As described in the methods section, we used a multifaceted approach to screen eligible articles and achieve consistent categorization. An inherent methodological limitation of evidence maps is that they present a broad but relatively superficial description of the literature within a field. Beyond documenting the topics or methodologies we did not encounter, we cannot conclude which research questions have been sufficiently addressed versus which deserve additional attention. Advancing specific fields of research will require in-depth reviews of study quality and bias, as well as a synthesis of outcomes, all of which were outside the scope of this review.

CONCLUSIONS

This large and varied body of research represents a growing evidence base that can be leveraged to improve the health of female Veterans. The VA is currently a leader in the field addressing military-related mental health conditions in women, such as PTSD. Recent research to improve the quality of primary care for female Veterans has been focused on the organization and delivery of care. As a nationally integrated healthcare system with a growing population of female Veterans and life span coverage, the VA is poised to be a leader in women’s health research. VA research and clinical stakeholders can use this evidence map to help direct the future of female Veterans’ health research.

Corresponding Author: Elisheva R. Danan, MD, MPH; VA HSR&D Center for Chronic Disease Outcomes Research Minneapolis VA Healthcare System, 1 Veterans Drive (152), Minneapolis, MN 55417, USA (e-mail: Elisabeth.Danan@va.gov).

Compliance with Ethical Standards:

Contributors: None.

Funders: VA ESP Project #009-009. This report is based on research conducted by the Evidence-based Synthesis Program (ESP) site located at the Minneapolis VA Healthcare System, Minneapolis, MN, funded by the Department of Veterans Affairs. Veterans Health Administration, Office of Research and Development, Quality Enhancement Research Initiative. The findings and conclusions in this document are those of the author(s), who are responsible for its content; the findings and conclusions do not necessarily represent the views of the Department of Veterans Affairs or the United States government. Therefore, no statement in this article should be construed as an official position of the Department of Veterans Affairs.

Prior Presentations: A synopsis of this research was presented as an oral presentation at the 2017 SGIM Annual Meeting on April 20, 2017.

Conflict of Interest: The authors declare that they do not have a conflict of interest.

Open Access This article is distributed under the terms of the Creative Commons Attribution 4.0 International License (http://creativecommons.org/licenses/by/4.0/), which permits unrestricted use, distribution, and reproduction in any medium, provided you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license, and indicate if changes were made.

REFERENCES

1. Willenz JA. Women Veterans: America’s Forgotten Heroines. New York: Continuum; 1983:163-196.
2. Hayes PM. Leading the nation in women’s health: the important role of research. Women's Health Issues. 2011;21 Suppl:S70-S72
3. Frayne SM, Phibbs CS, Suechao F, Maisel NC, Friedman SA, Finlay A, et al. Sourcebook: Women Veterans in the Veterans Health
Dutra L, Grubbs K, Greene C, et al. Women at war: Implications for mental health. J Trauma Dissoc 2011;12(1):25–37.

Fischer EP, Sherman MD, McSweeney JC, Pyne JM, Owen RR, Dixon LB. Perspectives of family and veterans on family programs to support reintegration of returning veterans with posttraumatic stress disorder. Psychol. Serv. 2015;12(3):187–198.

Freedly JR, Magruder KM, Mainsow AG, Frueh BC, Geesey ME, Carneull SM. Gender differences in traumatic event exposure and mental health among veteran primary care patients. Mil. Med. 2010;175(10):750–758.

Hawkins EJ, Malte CA, Grossbard JR, Saxon AJ. Prevalence and trends of concurrent opioid analgesic and benzodiazepine use among Veterans Affairs patients with post-traumatic stress disorder. 2003–2011. Pain Med. 2015;16(10):1943–1954.

Hawkins EJ, Malte CA, Imel ZE, Saxon AJ, Kivlahan DR. Prevalence and trends of benzodiazepine use among Veterans Affairs patients with post-traumatic stress disorder, 2003–2010. Drug Alcohol Depend. 2012;124(1–2):154–161.

Hebenstreit CL, Madden E, Koo KH, Maguen S. Minimally adequate mental healthcare and latent classes of PTSD symptoms in female Iraq and Afghanistan veterans. Psychiatry Res. 2015;230(1):90–95.

Holowka DW, Marx BP, Gates MA, et al. PTSD diagnostic validity in Veterans Affairs electronic records of Iraq and Afghanistan veterans. J. Consult. Clin. Psychol. 2014;82(5):569–579.

Hughes J, Joule J, Donelson S, Washington DL, Alesi CA, Martin JL. Insomnia and symptoms of post-traumatic stress disorder among women veterans. Behav. Sleep Med. 2013;11(4):258–274.

James LM, Belitskaya-Levy I, Lu Y, et al. Development and application of a diagnostic algorithm for posttraumatic stress disorder. Psychol. Serv. 2015;12(3):1–7.

Katz L, Douglas S, Zaleski K, Williams J, Huffman C, Cojocar G. Comparing holographic deprosessing and prolonged exposure for women veterans with sexual trauma: A pilot randomized trial. J. Contemp. Psychotherapy. 2014a;44(1):9–19.

Katz LS, Snetter MR, Robinson AH, Hewitt P, Cojocar G. Holographic reprocessing: Empirical evidence to reduce posttraumatic cognitions in women veterans with PTSD from sexual trauma and abuse. Psychotherapy 2008;45(2):186–198.

Koo KH, Hebenstreit CL, Madden E, Maguen S. PTSD detection and symptom presentation: Racial/ethnic differences by gender among veterans with PTSD returning from Iraq and Afghanistan. J. Affect. Disord. 2016;189:10–16.

Lee EA, Theus SA. Lower heart rate variability associated with military sexual trauma rape and posttraumatic stress disorder. Biol. Res. Nurs. 2012;14(4):412–418.

Lehavot K, Der-Martirosian C, Simpson TL, Shipherd JC, Washington DL. The role of military social support in understanding the relationship between PTSD, physical health, and healthcare utilization among women veterans with PTSD. J. Trauma. Stress. 2012a;25(2):272–275.

Lehavot K, O’Hara R, Washington DL, Yano EM, Simpson TL. Posttraumatic stress disorder symptom severity and socioeconomic factors associated with Veterans Health Administration use among women veterans. Womens Health Issues 2015;25(3):335–341.

Metzger LJ, Carson MA, Lasko NB, et al. Basal and suppressed salivary cortisol in female Vietnam nurse veterans with and without PTSD. Psychiatry Res. 2008;161(3):330–335.

Morland LA, Mackintosh MA, Rosen CS, et al. Telemedicine versus in-person delivery of cognitive processing therapy for women with post-traumatic stress disorder: A randomized noninferiority trial.Depress. Anxiety 2015;32(2):111–120.

Rehak KD, Campbell SB, Merca P, Mela L, Eshes C. Gender differences in the associations of PTSD symptom clusters with relationship distress in U.S. Vietnam veterans and their partners. J. Trauma. Stress. 2015;28(3):283–290.

Seal KH, Maguen S, Cohen B, et al. VA mental health services utilization in Iraq and Afghanistan veterans in the first year of receiving new mental health diagnoses. J. Trauma. Stress. 2010;23(1):5–16.

Shin IJ, Rosen CS, Greenbaum MA, Jain S. Longitudinal correlates of aggressive behavior in help-seeking, U.S. Veterans with PTSD. J. Trauma. Stress. 2012;25(6):649–656.

Tsai J, Rosenheck RA, Decker SE, Desai RA, Harpaz-Rotem I. Trauma experience among homeless female veterans: Correlates and impact on housing, clinical, and psychosocial outcomes. J. Trauma. Stress. 2012a;25(6):624–632.

Weitlauf JC, Finney JW, Ruzeck JI, et al. Distress and pain during pelvic examinations: Effect of sexual violence. Obstet. Gynecol. 2008;112(6):1343–1350.

Weitlauf JC, Frayne SL, Finney JW, et al. Sexual violence, posttraumatic stress disorder, and the pelvic examination: How do beliefs about the safety, necessity, and utility of the examination influence patient experience? J. Women’s Health 2010;19(7):1271–1280.

Wolf EJ, Lunney CA, Miller MW, Resick PA, Friedman MJ, Schnurr PP. The dissociative subtype of PTSD: A replication and extension. Depress. Anxiety 2012;29(8):679–688.

Wolf EJ, Miller MW, Groomen RJ, et al. The MMPI-2 reconstructed clinical scales in the assessment of posttraumatic stress disorder and comorbid disorders. Psychol. Assess. 2008;20(4):327–340.

Wolf EJ, Mitchell KS, Logue MW, et al. Corticotropin releasing hormone receptor 2 (CRHR-2) gene is associated with decreased risk and severity of posttraumatic stress disorder in women. Depress. Anxiety 2013;30(12):1161–1169.

Bernardy NC, Lund BC, Alexander B, Friedman MJ. Increased polysedative use in veterans with posttraumatic stress disorder. Pain Med. 2014;15(7):1083–1090.

Bernardy NC, Lund BC, Alexander B, Jenkyn AB, Schnurr PP, Friedman MJ. Gender differences in prescribing among veterans diagnosed with posttraumatic stress disorder. J. Gen. Intern. Med. 2013;28 Suppl 2:SS2–SS4.

Campbell R, Greenson MR, Bybee D, Raja S. The co-occurrence of childhood sexual abuse, adult sexual assault, intimate partner violence, and sexual harassment: A meditational model of posttraumatic stress disorder and physical health outcomes. J. Consult. Clin. Psychol. 2015;83(4):194–207.

Frayne SM, Chiu YY, Ipjal S, et al. Medical care needs of returning veterans with PTSD: Their other burden. J. Gen. Intern. Med. 2011;26(1):33–39.

Kimerling R, Serpi T, Weathers F, et al. Diagnostic accuracy of the composite international diagnostic interview (CIDI 3.0) PTSD module among female Vietnam-era veterans. J. Trauma. Stress. 2014;27(2):160–167.

King MW, Street AE, Gradus JL, Vogt DS, Resick PA. Gender differences in posttraumatic stress symptoms among OEF/OIF veterans: An item response theory analysis. J. Trauma. Stress. 2013;26(2):175–183.

Koola MM, Qualls C, Kelly DL, et al. Prevalence of childhood physical and sexual abuse in veterans with psychiatric diagnoses. J. Nerv. Ment. Dis. 2013;201(4):348–352.

Magruder K, Serpi T, Kimerling R, et al. Prevalence of posttraumatic stress disorder in Vietnam-era women veterans: The health of Vietnam-era women’s study (healthwv). JAMA Psychiatry 2015;72(11):1127–1134.

Maguen S, Cohen B, Cohen G, Madden E, Bertenthal D, Seal K. Gender differences in health service utilization among Iraq and Afghanistan veterans with posttraumatic stress disorder. J. Women’s Health Gend. Based Med. 2013;22(7):776–784.

Maguen S, Cohen B, Ren L, Bosch J, Kimerling R, Seal K. Gender differences in military sexual trauma and mental health diagnoses among Iraq and Afghanistan veterans with posttraumatic stress disorder. Womens Health Issues 2012;22(4):e61–e66.

Maguen S, Madden E, Neylan TC, Cohen BE, Bertenthal D, Seal KH. Timing of mental health treatment and PTSD symptom improvement among Iraq and Afghanistan veterans. Psychiatr. Serv. 2014a;65(12):1414–1419.

McCauley HL, Blochsch JR, Richter ME. Adverse childhood experiences and adult health outcomes among veteran and non-veteran women. J. Women’s Health 2015;24(9):723–729.

Myers CE, Vanmeemen KM, Servatius RJ. Impact of childhood abuse on physical and mental health status and healthcare utilization among female veterans. Mil. Med. 2015a;180(10):1065–1074.

Myers CE, Vanmeemen KM, Servatius RJ. Behavioral inhibition and PTSD symptoms in veterans. Psychiatr. Res. 2012;196(2–3):271–276.

Niihni YI, Gradus JL, Gutner CA, Luciano MT, Shipherd JC, Street AE. Deployment stressors and physical health among OEF/OIF veterans: The role of PTSD. Health Psychol. 2014;33(11):1281–1287.

Polusny MA, Dickinson K, Murdoch M, Thuras P. The role of cumulative sexual trauma and difficulties identifying feelings in understanding female veterans’ physical health outcomes. Gen. Hosp. Psychiatry 2008;30(2):162–170.

Sayer NA, Hagel EM, Noorbaloochi S, et al. Gender differences in VA disability ratings: Increased disparity. Psychiatr. Serv. 2014;65(10):663–669.

Schnurr PP, Lunney CA. Exploration of gender differences in how quality of life relates to posttraumatic stress disorder in male and female veterans. J. Rehabil. Res. Dev. 2008;45(3):383–393.
Overactive bladder and mental health symptoms in recently deployed women. J. Trauma. Stress. 2013;26(3):319-328.

Posttraumatic stress symptomatology as a mediator of the relationship between sexual assault and body mass index among women veterans. J. Trauma. Stress. 2013;26(3):319-328.

Prevalence of clinically significant alcohol misuse among patient subgroups. Med. Care 2015;53(4 Suppl 1):S120-S129.

Depression treatment patterns among women veterans with cardiovas- cular conditions or diabetes. World Psychiatry 2010a;9(3):177-182.

Irritable bowel syndrome and body mass index among research participants. Headache 2013;53(8):1312-1325.

Depressive disorders among women veterans diagnosed with PTSD. Behav. Sci. 2014;4(1):72-85.

Depression treatment patterns among women veterans with cardiovas- cular conditions or diabetes. World Psychiatry 2010a;9(3):177-182.

Gender differences in the correlates of hazardous drinking among American Indian male and female veterans. J. Women’s Health 2009;18(9):1347-1353.
188. Desai RA, Harpaz-Rotem I, Najavits LM, Rosenheck RA. Impact of the Seeking Safety program on clinical outcomes among homeless female veterans with psychiatric disorders. Psychi atr. Serv. 2008;59(9):996–1000.

189. Finlay AK, Binswanger IA, Smelson D, et al. Sex differences in mental health and substance use disorders and treatment entry among justice-involved veterans in the Veterans Health Administration. Med. Care 2015;53(4 Suppl 1):S105–111.

190. Koo KH, Hebenstreit CL, Madden E, Seal KH, Maguen S. Race/ethnicity and gender differences in mental health diagnoses among Iraq and Afghanistan veterans. Psychiatry Res. 2015;229(8):724–731.

191. Lehavot K, Simpson TL. Trauma, posttraumatic stress disorder, and depression among sexual minority and heterosexual women veterans. J. Couns. Psychol. 2014;61(3):392–403.

192. Maguen S, Cohen B, Cohen G, Madden E, Bertenthal D, Seal K. Eating disorders and psychiatric comorbidity among Iraq and Afghani stan veterans. Womens Health Issues 2012c;22(4):403–406.

193. Mattocks KM, Sadler A, Yano EM, et al. Sexual victimization, health status, and VA healthcare utilization among lesbian and bisexual OEF/ OIF veterans. J. Gen. Intern. Med. 2013;28 Suppl 2:S604–608.

194. Nunnink SE, Goldwasser G, Heppner PS, Pittman JO, Njeveogtef CM, Baker DG. Female veterans of the OEF/OIF conflict: Concordance of PTSD symptoms and substance misuse from 2010:565–569.

195. Reddy S, Dick AM, Gerber MR, Mitchell K. Timing of intimate partner violence in relationship to military service among women veterans. Mil. Med. 2015;180(11):1124–1127.

196. Iverson KM, Huang K, Wells SY, Wright JD, Gerber MR, Wiltsey-Stimma S. Women veterans’ preferences for intimate partner violence screening and response procedures within the Veterans Health Administration. Res. Nurs. Health 2014;37(4):302–311.

197. Iverson KM, Wing MW, Resick PA, Gerber MR, Kimerling R, Vogt D. Clinical utility of an intimate partner violence screening tool for female VHA patients: A replication and extension. J. Trauma. Stress. 2015;28(1):79–82.

198. Iverson KM, Wing MW, Resick PA, Gerber MR, Kimerling R, Vogt D. Clinical utility of an intimate partner violence screening tool for female VHA patients. J. Gen. Intern. Med. 2013a;28(10):1288–1293.

199. Iverson KM, Mercado R, Carpenter SL, Street AE. Intimate partner violence among women veterans: Previous interpersonal violence as a risk factor. J. Trauma. Stress. 2013c;26(6):767–771.

200. Ryan ET, McGrath JC, Creech SK, Borsari B. Estrogen disorders, posttraumatic stress, and sexual trauma in women veterans. Mil. Med. 2012;177(10):1161–1168.

201. Higgins DM, Dorrflinger L, MacGregor KL, Heapy AA, Goulet JL, Ruser C. Binge eating behavior as a shared component of overweight and obese veterans. Obesity 2013;21(5):900–903.

202. Litwack SD, Mitchell RS, Sloan DM, Reardon AF, Miller MW. Eating disorder symptoms and comorbid psychopathology among male and female veterans. Gen. Hosp. Psychiatry 2014;36(4):404–410.

203. Mitchell KS, Rasmussen A, Bartlett B, Gerber MR. Eating disorders and associated mental health comorbidities in female veterans. Psychiatr. Res. 2014a;219(3):589–591.

204. Mitchell KS, Wolf EJ, Reardon AF, Miller MW. Association of eating disorder symptoms with internalizing and externalizing dimensions of psychopathology among men and women. Int J Eat Disord. 2014b;47(8):860–869.

205. Burnett-Zeigler I, Zivin K, Ilen G, Smyzanski B, Blow FC, Kales HC. Depression treatment in older adult veterans. Am. J. Geriatr. Psychiatry 2012;20(3):238–238.

206. Davis TD, Darr TL, Fortney JC, Sullivan G, Hudson TJ. Utilization of VA mental health and primary care services among Iraq and Afghan is tan veterans with depression: The influence of gender and ethnicity status. Mil. Med. 2014;179(5):515–520.

207. Li Z, Pfeiffer PN, Hoggatt KJ, et al. Emergent anxiety after antide pressant initiation: A retrospective cohort study of Veterans Affairs Health System patients with depression. Clin. Ther.. 2011;33(12):1985–1992.e1981.

208. Mohayed S, Leslie DL, Rosenheck RA. Use of antipsychotics in the treatment of major depressive disorder in the U.S. Department of Veterans Affairs. J Clin Psychiatry 2006;67(6):906–912.

209. Cohen BE, Maguen S, Bertenthal D, Shi Y, Jacoby V, Seal KH. Reproductive and other health outcomes in Iraq and Afghanistan war veterans: Association with mental health diagnoses. Womens Health Issues 2012c;22(5):e461–471.

210. Mattocks KM, Skanderson M, Goulet JL, et al. Pregnancy and mental health among women veterans returning from Iraq and Afghanistan. J. Women’s Health 2010;19(12):2159–2166.

211. Shaw JG, Asch SM, Kimerling R, Fryane SM, Shaw KA, Philbs CS. Posttraumatic stress disorder and risk of spontaneous preterm birth. Obstet. Gynecol. 2011;118(6):1111–1119.

212. Miller LJ, Ghadiali NY. Gender-specific mental health care needs of women veterans treated for psychiatric disorders in a veterans administration women’s health clinic. Med. Care 2015;53(4 Suppl 1):S83–96.

213. Tch CF, Kilbourne AM, McCarthy JF, Welsh D, Blow FC. Gender differences in health-related quality of life for veterans with serious mental illness. Psychol. Serv. 2008;55(6):666.

214. Charlotte M, Schwartz E, Slade E, et al. Gender differences in mood stabilizer medications prescribed to veterans with serious mental illness. J. Affect. Disord. 2015;188:112–117.
281. Der-Martirosian C, Cordasco KM, Washington DL. Health-related quality of life and comorbidity among older women veterans in the United States. Qual. Life Res. 2013;22(10):2749–2756.

282. Friedlander AL, El-Saden SM, Aghazadehfar N, Chang TJ, Harada ND, Garrett NR. Comparison of calcified carotid atheromas visualized on panoramic images and aortic arch calcifications seen on chest radiographs of postmenopausal women. J Am Dent Assoc 2014;145(4):345–351.

283. Gerber MR, King MW, Pines JS, et al. Hormone therapy use in women veterans accessing Veterans Health Administration care: A national cross-sectional study. J Gen. Intern. Med. 2015;30(2):169–175.

284. Haskell SG, Bean-Mayberry B, Goulet JL, Skanderson M, Good CB, Rouen PA, Krein SL, Reame NE, Bush RL, Kallen MA, Liles DR, Bates JT, Petersen LA, Davis MB, Maddox TM, Langner P, Plomondon ME, Rumsfeld JS, Johnson RG, Wittgen CM, Hutter MM, Henderson WG, Mosca C, Rosenberger PH, Ning Y, Brandt C, Allore H, Haskell S, Littman AJ, Boyko EJ, McDonell MB, Fihn SD. Evaluation of a weight management program for veterans. Prev. Chronic Dis. 2012;9:E99.

285. Del Re AC, Frayne SM, Harris AH. Antibesity medication use across the Veterans Health Administration: Patient-level predictors of receipt. Obes Res Clin Pract 2014;7(2):191–197.

286. Littman AJ, Jacobson IG, Boyko EJ, Powell TM, Smith TC. Millennium Cohort Study Team. Weight change following US military service. Int. J. Obes. 2013;37(2):244–253.

287. Magee S, Madden E, Cohen B, et al. The relationship between body mass index and mental health among Iraq and Afghanistan veterans. J. Gen. Intern. Med. 2013;28 Suppl 2:S563–570.

288. Rosenberger PH, Ning Y, Brandt C, Allore H, Haskell S. Bmi trajectory groups in veterans of the Iraq and Afghanistan Wars. Prev. Med. 2011;53(3):149–154.

289. Maciejewski ML, Livingston EH, Kahwati LC, Henderson WG, Kavee AL, Arterburn DE. Discontinuation of diabetes and lipid-lowering medications after bariatric surgery at Veterans Affairs Medical Centers. JAMA 2013;310(6):607–609.

290. Maciejewski ML, Livingston EH, Smith VA, et al. Survival among high-risk patients after bariatric surgery. JAMA 2011;305(23):2419–2426.

291. Eads DJ, Matthias Nordin KA et al. Barriers and facilitators to chronic pain self-management: A qualitative study of primary care patients with comorbid musculoskeletal pain and depression. Pain Med. 2009;10(7):1280–1290.

292. Denke L, Barnes DM. An ethnography of chronic pain in veteran enlisted women. Pain Manag Nurs 2013;14(4):e189–195.

293. Weimer MB, Maccioa TA, Nicolaidisa C, Dobscha SK, Duckart JP, Groessl EJ, Weingart KR, Johnson N, Baxi SB. The benefits of yoga for women veterans with chronic low back pain. J. Altern. Complement. Med. 2012;18(9):832–838.

294. Haskell SG, Brandt CA, Krebs EE, Skanderson M, Kerns RD, Goulet JL, Oliva EM, Midboe AM, Lewis ET, et al. Determinants of hormone therapy discontinuation among women veterans with type 2 diabetes: Glucose control and symptom severity. J. Women’s Health Issues 2013;23(4):e225–e235.

295. Bush RL, Kallen MA, Liles DR, Bates JT, Petersen LA, Davis MB, Maddox TM, Langner P, Plomondon ME, Rumsfeld JS, Johnson RG, Wittgen CM, Hutter MM, Henderson WG, Mosca C, Rosenberger PH, Ning Y, Brandt C, Allore H, Haskell S, Littman AJ, Boyko EJ, McDonell MB, Fihn SD. Evaluation of a weight management program for veterans. Prev. Chronic Dis. 2012;9:E99.

296. Groessl EJ, Weingart KR, Johnson N, Baxi S. The benefits of yoga for women veterans with chronic low back pain. J. Altern. Complement. Med. 2012;18(9):832–838.

297. Haskel SG, Brandt CA, Krebs EE, Skanderson M, Kerns RD, Goulet JL, Oliva EM, Midboe AM, Lewis ET, et al. Sex differences in chronic pain management practices for patients receiving opioids from the Veterans Health Administration. Pain Med. 2015;16(1):112–118.

298. Weimer MB, Macciotta TA, Nicolaidis C, Dobscha SK, Duckart JP, Groessl EJ, Weingart KR, Johnson N, Baxi S. The benefits of yoga for women veterans with chronic low back pain. J. Altern. Complement. Med. 2012;18(9):832–838.

299. Lopez MR, Cheng JY, Kanner AM, Carvalho DZ, Diamond JA. Pain among veterans of Operations Enduring Freedom and Iraqi Freedom: Do women and men differ? Pain Med. 2009;10(7):1167–1173.

300. Oliva EM, Midboe AM, Lewis ET, et al. Sex differences in chronic pain management practices for patients receiving opioids from the Veterans Health Administration. Pain Med. 2015;16(1):112–118.

301. El-Serag HB. Prevalence and predictors of hepatitis B virus coinfection in a United States cohort of hepatitis C virus-infected patients. Hepatology 2013;58(2):538–545.

302. Wolfman JE, DeRycke EC, Driscoll MA, et al. Smoking status and pain intensity among OEF/OF/OND veterans. Pain Med. 2015;16(12):1839–1847.

303. Tyson GL, Kramer JR, Duan Z, Davila JA, Richardson PA, El-Serag HB. Prevalence and predictors of hepatitis B virus coinfection in a United States cohort of hepatitis C virus-infected patients. Hepatology 2013;58(2):538–545.

304. Arterburn DE, Olsen MK, Smith VA, et al. Association between bariatric surgery and long-term survival. JAMA 2015;313(1):62–70.

305. De Re AC, Frayne SM, Harris AH. Antibesity medication use across the Veterans Health Administration: Patient-level predictors of receipt. Obes Res Clin Pract 2014;7(2):191–197.

306. Littman AJ, Boyko EJ, McDonell MB, Fihn SD. Evaluation of a weight management program for veterans. Prev. Chronic Dis. 2012;9:E99.

307. Littman AJ, Jacobson IG, Boyko EJ, Powell TM, Smith TC. Millennium Cohort Study Team. Weight change following US military service. Int. J. Obes. 2013;37(2):244–253.

308. Magee S, Madden E, Cohen B, et al. The relationship between body mass index and mental health among Iraq and Afghanistan veterans. J. Gen. Intern. Med. 2013;28 Suppl 2:S563–570.

309. Rosenberger PH, Ning Y, Brandt C, Allore H, Haskell S. Bmi trajectory groups in veterans of the Iraq and Afghanistan Wars. Prev. Med. 2011;53(3):149–154.

310. Maciejewski ML, Livingston EH, Kahwati LC, Henderson WG, Kavee AL, Arterburn DE. Discontinuation of diabetes and lipid-lowering medications after bariatric surgery at Veterans Affairs Medical Centers. JAMA 2013;310(6):607–609.

311. Maciejewski ML, Livingston EH, Smith VA, et al. Survival among high-risk patients after bariatric surgery. JAMA 2011;305(23):2419–2426.
330. Luther SL, Neumayer L, Henderson WG, et al. The use of breast-conserving surgery for women treated for breast cancer in the Department of Veterans Affairs. Am. J. Surg. 2013;206(1):72–79.

331. McQueen A, Swank PR, Bastian LA, Vernon SW. Predictors of perceived susceptibility of breast cancer and changes over time: A mixed modeling approach. Health Psychol. 2008;27(1):68–77.

332. Iverson KM, Hendricks AM, Kimerling R, et al. Psychiatric diagnoses and neurobehavioral symptom severity among OEF/OIF VA patients with deployment-related traumatic brain injury: A gender comparison. Womens Health Issues 2011;21(4 Suppl):S210–217.

333. Iverson KM, Fogda TK, Gradus JL, Street AE. Deployment-related traumatic brain injury among women veterans: An invisible wound of intimate partner violence. Med. Care. 2015;53(4 Suppl 1):S112–119.

334. Iverson KM, Fogda TK, Gradus JL, Street AE. Deployment-related traumatic brain injury among women veterans: A gender comparison. Womens Health Issues 2011;21(4 Suppl):S210–217.

335. Anger JT, Saigel CS, Wang M, Yano EM. Urologic diseases in America P. Urologic disease burden in the United States: Veteran users of the Department of Veterans Affairs healthcare. Urology. 2008;72(1):37–41.

336. Anger JT, Saigel CS, Wang M, Yano EM. Urologic diseases in America P. Urologic disease burden in the United States: Veteran users of the Department of Veterans Affairs healthcare. Urology. 2008;72(1):37–41.

337. Betts L, Caramori M, Halloran C, Politi E, et al. Expanded HIV testing in the US Department of Veterans Affairs, 2009–2011. Am. J. Public Health 2015;103(12):e40–e45.

338. Nayak SU, Welch ML, Kan VL. Greater HIV testing after Veterans Health Administration policy change: The experience from a VA Medical Center in a high HIV prevalence area. J. Acquir. Immune Defic. Syndr. 2009;52(2):203–208.

339. Blackstock OJ, Tate JP, Akgun KM, et al. Sex disparities in overall burden of disease among HIV-infected individuals in the Veterans Affairs Healthcare System. J. Gen. Intern. Med. 2013;28 Suppl 2:S57–S59.

340. Czarnogorski M, Halloran C, Politi E, et al. Expanded HIV testing in the US Department of Veterans Affairs, 2009–2011. Am. J. Public Health 2015;103(12):e40–e45.

341. Bedimo RJ, McGinnis KA, Dunlap M, Rodriguez-Barradas MC, Justice AC. Incidence of non-aids-defining malignancies in HIV-infected versus noninfected patients in the HAARP era: Impact of immuno suppression. J. Acquir. Immune Defic. Syndr. 2009;52(2):203–208.

342. Brown DW. Smoking prevalence among US veterans. J. Gen. Intern. Med. 2010;25(2):147–149.

343. Katzung JR, Farmer MM, Poza IV, Sherman SE. Listen to the consumer: Designing a tailored smoking-cessation program for women. Subst. Use Misuse 2008;43(8–9):1240–1259.

344. Katzung JR, Yano EM, Washington DT, et al. Combining women’s preferences and expert advice to design a tailored smoking cessation program. Subst. Use Misuse 2009;44(4):2114–2137.

345. Barnett PG, Hamlett-Berry K, Sung HY, Max W. Healthcare expenditures attributable to smoking in military veterans. Nicotine Tob. Res. 2015;17(5):586–591.

346. Farmer MM, Rose DE, Rioselle D, Lanto AB, Yano EM. Gender differences in smoking and smoking cessation treatment: An examination of the organizational features related to care. Womens Health Issues 2011;21(4 Suppl):S185–S189.

347. Bastian L, Fish LJ, Gierisch JM, Stechuchak KM, Grambow SC, Keefe FJ. Impact of smoking cessation on subsequent pain intensity among chronically ill veterans enrolled in a smoking cessation trial. J. Pain Symptom Mnage 2015b;50(6):822–834.

348. Wheeler S, Moore K, Forsberg CW, et al. Mortality among veterans with type 2 diabetes initiating metformin, sulfonylureas or sulfonylglucose monotherapy. Diabetologia 2013;56(9):1834–1843.

349. Vimalananda VG, Miller DR, Hofer TP, Hollemans RG, Klamerus ML, Kerr EA. Accounting for clinical action reduces estimates of gender disparities in lipid management for diabetic veterans. J. Gen. Intern. Med. 2013;28 Suppl 2:S529–S535.

350. Curtin CM, Suarez PA, Di Ponio LA, Frayne SM. Who are the women and men in Veterans Health Administration’s current spinal cord injury population? J. Rehabil. Res. Dev. 2012;49(3):351–360.

351. Rivere JK, Krueger CA, Johnson AE. Female combat amputees have higher rates of posttraumatic stress disorder disability. US Army Med Dep J. 2015a;74–79.

352. Al Mohajer M, Musher DM, Minard CG, Darouiche RO. Clinical significance of Staphylococcus aureus bacteriuria at a tertiary care hospital. scand. J. Infect. Dis. 2013;45(9):688–695.

353. Alazeez A, Cooper MM, Bailey B, Youssef DA, Manning T, Peiris AN. Vitamin D status and monitoring in female veterans. Womens Health 2015;55(4):367–377.

354. Anger JT, Saigel CS, Wang M, Yano EM. Urologic Diseases in America P. Urologic disease burden in the United States: Veteran users of the Department of Veterans Affairs healthcare. Urology. 2008;72(1):37–41.

355. Anger JT, Saigel CS, Wang M, Yano EM. Urologic Diseases in America P. Urologic disease burden in the United States: Veteran users of the Department of Veterans Affairs healthcare. Urology. 2008;72(1):37–41.

356. Betts L, Caramori M, Halloran C, Politi E, et al. Expanded HIV testing in the US Department of Veterans Affairs, 2009–2011. Am. J. Public Health 2015;103(12):e40–e45.

357. Betts L, Caramori M, Halloran C, Politi E, et al. Expanded HIV testing in the US Department of Veterans Affairs, 2009–2011. Am. J. Public Health 2015;103(12):e40–e45.

358. Betts L, Caramori M, Halloran C, Politi E, et al. Expanded HIV testing in the US Department of Veterans Affairs, 2009–2011. Am. J. Public Health 2015;103(12):e40–e45.

359. Betts L, Caramori M, Halloran C, Politi E, et al. Expanded HIV testing in the US Department of Veterans Affairs, 2009–2011. Am. J. Public Health 2015;103(12):e40–e45.

360. Betts L, Caramori M, Halloran C, Politi E, et al. Expanded HIV testing in the US Department of Veterans Affairs, 2009–2011. Am. J. Public Health 2015;103(12):e40–e45.

361. Betts L, Caramori M, Halloran C, Politi E, et al. Expanded HIV testing in the US Department of Veterans Affairs, 2009–2011. Am. J. Public Health 2015;103(12):e40–e45.

362. Betts L, Caramori M, Halloran C, Politi E, et al. Expanded HIV testing in the US Department of Veterans Affairs, 2009–2011. Am. J. Public Health 2015;103(12):e40–e45.

363. Betts L, Caramori M, Halloran C, Politi E, et al. Expanded HIV testing in the US Department of Veterans Affairs, 2009–2011. Am. J. Public Health 2015;103(12):e40–e45.

364. Betts L, Caramori M, Halloran C, Politi E, et al. Expanded HIV testing in the US Department of Veterans Affairs, 2009–2011. Am. J. Public Health 2015;103(12):e40–e45.

365. Betts L, Caramori M, Halloran C, Politi E, et al. Expanded HIV testing in the US Department of Veterans Affairs, 2009–2011. Am. J. Public Health 2015;103(12):e40–e45.

366. Betts L, Caramori M, Halloran C, Politi E, et al. Expanded HIV testing in the US Department of Veterans Affairs, 2009–2011. Am. J. Public Health 2015;103(12):e40–e45.

367. Betts L, Caramori M, Halloran C, Politi E, et al. Expanded HIV testing in the US Department of Veterans Affairs, 2009–2011. Am. J. Public Health 2015;103(12):e40–e45.
### APPENDIX A

| Healthcare Topics | Number of Studies | Reference |
|-------------------|-------------------|-----------|
| **Mental Health**<br>Total: 208 articles | | |
| PTSD and trauma | 71 | 32–102 |
| Military sexual trauma | 37 | 103–139 |
| Mental health comorbid with non-mental health | 23 | 140–162 |
| Substance abuse | 20 | 163–182 |
| Multiple mental health diagnoses | 16 | 20, 183–197 |
| Suicide | 13 | 198–210 |
| Intimate partner violence | 9 | 211–219 |
| Disordered eating | 5 | 220–224 |
| Depression and anxiety | 4 | 225–228 |
| Reproductive mental health | 4 | 229–232 |
| Serious mental illness | 3 | 233–235 |
| Personality disorders | 0 | |
| Other mental health topics | 3 | 236–238 |
| **Physical Health**<br>Total: 133 articles | | |
| Reproductive health | 24 | 239–262 |
| Prevention/Screening | 18 | 12, 263–279 |
| Long-term care/aging | 13 | 13, 280–291 |
| Cardiovascular disease | 11 | 292–302 |
| Obesity | 9 | 303–311 |
| Chronic pain | 7 | 312–318 |
| Comorbid medical conditions | 7 | 319–325 |
| Cancer | 6 | 326–331 |
| Tobacco | 6 | 332–336 |
| Traumatic brain injury | 5 | 337–341 |
| HIV/AIDS | 5 | 342–347 |
| Multiple sclerosis | 4 | 348–351 |
| Diabetes | 3 | 352–354 |
| Spinal cord injury | 1 | 355 |
| Traumatic amputations | 1 | 356 |
| Hypertension | 0 | |
| Other medical conditions | 13 | 357–369 |
| **Healthcare Organization and Delivery**<br>Total: 31 articles | | |
| Comprehensive and primary care delivery | 16 | 14, 370–384 |
| Mental healthcare delivery | 9 | 385–393 |
| Emergency care delivery | 3 | 394–396 |
| Virtual or telehealthcare delivery | 3 | 397–399 |
| **Access, Utilization & Post-Deployment Health**<br>Total: 57 articles | | |
| Post-deployment health | 18 | 400–417 |
| Barriers and facilitators of care | 13 | 418–430 |
| Homelessness | 12 | 431–442 |
| Healthcare utilization | 11 | 443–453 |
| Rural healthcare | 3 | 454–456 |
| **Other** | | |
| | | |
| **TOTAL NUMBER OF INCLUDED STUDIES** | 440 | |