Women have served in every United States military conflict since the American Revolution (1). Roles for women in the military have diversified over time, and many current female service members are achieving top ranks in all branches of the military. Many have undergone prolonged military deployment with war zone exposure, and increasing numbers of women are serving in combat. At the conclusion of their military service, they transition back into their communities as Veterans (see Box 1). With their service and sacrifice come unique health care needs (2, 3). Health care providers have an opportunity and responsibility to appropriately address the needs of women in the military and women Veterans. The goal of this document is to increase awareness about women in the military and women Veterans and describe special considerations regarding their reproductive health care needs.

Demographics

In 2011, 8% (1.8 million) of all U.S. Veterans were women, a proportion that is expected to increase to 11% (more than 2 million) of the total Veteran population by 2020 (4). Women comprise approximately 14.5% of the active duty military force and 18% of the National Guard and Reserves (1). Women Veterans (median age, 48 years) are younger than their male counterparts (median age, 63 years) (5).

Women Veterans may seek health care at military treatment facilities (through the Department of Defense’ TRICARE program), at civilian sector facilities (through Medicaid, Medicare, or private insurance), through the U.S. Department of Veterans Affairs (VA), or some combination thereof (1, 6–8). The number of women Veterans who use services provided by the Veterans Health Administration has doubled in the past 10 years from 160,000 in 2000 to more than 337,000 in 2011 (6). Also, the age distribution of women Veterans who use Veterans Health Administration services has shifted; in 2009, the age distribution of women showed three main peaks in the mid twenties, mid forties, and mid fifties (6). This trimodal distribution of women Veterans who use Veterans Health Administration services indicates the importance of reproductive health care for women Veterans and the need for a lifespan approach to providing this care.

Military Deployment Exposure and Postdeployment Health

Because obstetrician–gynecologists may be the primary medical providers for women in the military and women Veterans, they are in a position to interact with these women and intervene early and appropriately to address their unique reproductive health care needs. Understanding the potential health effects of military service will help health care providers best serve women in the military and women Veterans across the lifespan.

Research on this cohort has increased significantly over the past two decades (9–11). Although somewhat limited in scope (studies are observational or descriptive,
use cross-sectional designs, and report on subsets of women Veterans who use Veterans Health Administration facilities for their health care), several studies characterize their greater physical and psychiatric morbidity (often linked to an exposure to sexual trauma) and diminished social support compared with their civilian counterparts (2, 3, 9, 12) and, in some cases, with male Veterans (13).

The evolving roles of women in the military have introduced new risks to their health and safety. For the first time in our history, women serve in combat as gunners, police officers, pilots, truck drivers, and fuel suppliers. They are exposed to unpredictable warfare, improvised explosive devices, rocket-propelled grenades, and mortars. For these women, as with all combatants, combat experience is a potential source of physical injury, emotional trauma, and disability (14). Some military service-specific issues include traumatic brain injury, amputations, military sexual trauma (see later discussion), and posttraumatic stress disorder (PTSD) (see later discussion). The most common causes of traumatic brain injury are falls, motor vehicle accidents, and military explosive blasts. Health care providers who treat women who are serving or have served in the military must appreciate the unique risks to health and safety that accompany military service, particularly deployment to war zones and service on the “front lines.”

It is important to screen women for current or past military service and Veteran status at initial health care visits. Most women may not identify themselves as being Veterans. Therefore, it is more appropriate to ask, “Have you ever served in the military (eg, on active duty in the U.S. Armed Forces, Reserves, or National Guard)?” rather than “Are you a Veteran?” This question may be used to initiate a discussion to acknowledge military service as part of the patient’s life, to relay the message that her service and sacrifice are greatly appreciated, and to address how the patient’s military service might affect her current or future health. Additional information regarding obtaining a military history can be found at http://www.va.gov/OAA/pocketcard/FactSheet.asp.

**Exposure to Interpersonal Violence**

Increased rates of lifetime exposure to interpersonal violence (eg, sexual assault and intimate partner violence) contribute to the diminished physical health status of women Veterans compared with their civilian counterparts. The exact prevalence of lifetime exposure to sexual violence among female Veterans, even those who use Veterans Health Administration facilities, is unknown. However, several studies document higher than expected rates of exposure to sexual violence, including childhood sexual abuse (15), military sexual trauma (or sexual harassment or assault incurred during military service) (16, 17), and sexual assault during one’s adult civilian life (18). The physical and psychosocial health sequelae of sexual victimization are well documented (12, 16, 17, 19, 20–23). Several studies reveal an association between exposure to interpersonal violence and decreased rates of preventive reproductive health care (24–27). Health care providers who treat women Veterans should be aware of the high prevalence of sexual violence exposure in this population as well as its contribution to chronic illness and diminished physical health.

For service members returning to civilian life, intimate partner violence also is an area of concern (10, 28, 29). The factors associated with prolonged military deployment, alcohol and substance use or concomitant mental health conditions in one or both partners, postdeployment adjustment to work and family life, re-employment (or unemployment), or the physical and mental health consequences of military service (eg, PTSD) may increase family stress and, thus, the risk of intimate partner violence. Health care providers must be attentive and sensitive to the increased risk of intimate partner violence. The American College of Obstetricians and Gynecologists (the College) recommends screening and counseling for intimate partner violence as a core part of women’s preventive health care visits and provides guidance on screening questions (30). Understanding potential variations in risks of intimate partner violence across various subgroups of women, including Veterans, is important.

Military sexual trauma is the experience of sexual harassment or attempted or completed sexual assault during military service (16, 31). Military sexual trauma is a unique risk of military service. Perpetrators and survivors of military sexual trauma can be of either sex. Perpetrators may include military personnel, civilians, commanding officers, subordinates, strangers, friends, or intimate partners (31). According to the national VA military sexual trauma surveillance data, approximately one in five women Veterans undergoing universal screening at a Veterans Health Administration facility report that they experienced military sexual trauma (16, 32). The prevalence rates of military sexual trauma differ in studies, depending on populations surveyed and types of questions asked, but can range up to 70% (17). Despite the differing prevalence, these studies all document the substantial prevalence of military sexual trauma in women Veterans (17). Military sexual trauma can have long-term health implications, including increased risk of suicide, PTSD, major depression, alcohol or drug abuse, relationship difficulties, disrupted social networks, and employment difficulties (17). Additional health sequelae of military sexual trauma may include diffuse reproductive health effects, such as long-term sexual dysfunction, menstruation-related and other pelvic pain, unintended pregnancy, and self-reported difficulties with conception (32–35). Military sexual trauma also has been associated with risky behavior (eg, exchanging sex for commodities, such as food, shelter, or money) that may further compound reproductive health risks (36). Any type of trauma can affect a person’s mental and physical health, even years later. Therefore, it is critical that health care providers screen for military
sexual trauma, so that they may effectively identify and address the associated health concerns of military sexual trauma (16, 23).

In the VA, under a federal mandate, such screening for military sexual trauma involves asking the following two questions that use descriptive, nonjudgmental language (16) and can be used in any office setting: “When you were in the military,

1. did you receive uninvited and unwanted sexual attention, such as touching, cornering, pressure for sexual favors, or verbal remarks?
2. did someone ever use force or the threat of force to have sexual contact with you against your will?”

Veterans who respond positively to either question are considered to have a positive screening result for military sexual trauma. Screening and all treatments for mental and physical conditions related to military sexual trauma are free of charge and unlimited in length at any Veterans Health Administration facility. The College applauds this mandate by the VA and the efforts of the U.S. Department of Defense and encourages the continued prioritization of efforts for primary prevention of military sexual trauma. Health care providers also are encouraged to be involved in advocacy in professional, community, military, and educational venues for primary prevention of sexual trauma.

**Posttraumatic Stress Disorder**

The prevalence of PTSD is increased more than twofold in women Veterans compared with their civilian counterparts (37, 38). This is commonly attributed to greater exposure of women Veterans to interpersonal violence; in particular, to military sexual trauma (23). Posttraumatic stress disorder can be defined as a psychiatric illness that can result from exposure to a traumatic event (eg, combat, rape or other personal assault, natural disaster, or accident), which patients perceive to threaten their lives or physical integrity, and to which they respond with horror, terror, or fright. As classified in the *Diagnostic and Statistical Manual of Mental Disorders*, fourth revision, text edition, hallmark symptoms of PTSD center around three clusters: 1) persistent reexperiencing of the traumatic event, which may include recurrent recollections, images, thoughts, dreams, illusions, flashbacks, a sense of reliving the event, or distress on exposure to reminders of the event; 2) avoidance of the reminders of the trauma, such as places, people, and activities; and 3) hyperarousal in response to stimuli reminiscent of the trauma (such as difficulty sleeping, irritability, poor concentration, hypervigilance, and exaggerated startle response) and motor restlessness (39). Posttraumatic stress disorder is among the most common psychiatric disorders diagnosed in Veterans, including women Veterans. The lifetime prevalence of PTSD in this population is estimated to be 27% compared with 10% among civilian women (37, 38). Posttraumatic stress disorder is linked with a heavy burden of physical illness (40), particularly in women (41). Studies also show that Veterans who have PTSD seek more VA health care services when compared with Veterans who do not have PTSD (42). Therefore, women Veterans should be screened for PTSD and offered referral to mental health care providers or Veterans Health Administration facilities if the screening results warrant intensive treatment. Given the prevalence of PTSD and its association with interpersonal violence (particularly sexual trauma) in women, the benefits of universal screening for PTSD in reproductive care settings should be considered. Meltzer-Brody and colleagues have developed a PTSD screening instrument specifically designed for use in obstetrics and gynecology (43). The Veterans Health Administration uses a four-item validated screening questionnaire to identify patients who may have PTSD (44). Instructions, questions, and scoring rules for use of this screening tool are presented at [http://www.ptsd.va.gov/professional/pages/assessments/pc-ptsd.asp](http://www.ptsd.va.gov/professional/pages/assessments/pc-ptsd.asp). The Veterans Health Administration has more than 200 specialized programs for the treatment of PTSD. Some of these resources for Veterans with traumatic experiences are listed in Box 2.

**Special Considerations in Reproductive Health Care**

**Trauma and Gynecologic Examination**

Patients with prior sexual trauma, particularly those with PTSD, are prone to traumatic reactions during preventive gynecologic procedures, such as the pelvic examination...
Strong negative reactions to the pelvic examination may be associated with increased rates of avoiding preventive reproductive health care among women who are survivors of sexual violence or abuse. Research suggests an association between exposure to sexual violence and decreased rates of cervical cancer screening (27). Additional information about approaching the patient who has a history of sexual assault can be found in the College’s Committee Opinion No. 498, “Adult Manifestations of Childhood Sexual Abuse” (48). As with all women with a history of sexual assault, awareness of potential exposure of a woman to military sexual trauma is critical for all health care providers. The College recommends routine screening for a history of sexual assault in all patients, paying particular attention to those who report pelvic pain, dysmenorrhea, or sexual dysfunction (49). For women Veterans, this screening should include questions about military sexual trauma as discussed earlier.

### Unique Needs of Women in the Military and Women Veterans

As the number of women Veterans increases, reproductive health across the lifespan is an emerging area of interest. Women who have served in the military may have unique obstetric and gynecologic needs. Many women Veterans have had lifelong careers in the military, some with prolonged military deployment that at times included combat exposure during their childbearing years. However, research that describes the effect of military service on reproductive health is limited (50). Research agendas that focus on long-term reproductive health issues in this population are needed.

Prolonged military deployment, particularly to locations with severe climate and environment, presents unique challenges to women serving in the military and often results in limited access to acceptable medical services and sanitary equipment (51). These types of environments may also predispose women to gynecology-related conditions, such as urinary tract infections or bacterial vaginosis (51). Military deployment can interrupt ongoing treatment or evaluation for various conditions, such as menorrhagia, endometriosis, or uterine leiomyomas.

Additionally, menstruation can be inconvenient and logistically challenging in combat settings (52). Menstrual suppression with continuous oral contraceptive pills is one option of potential benefit in deployed women, although the use of these contraceptives in severe environments may be challenging and is low in this population (53). Most women who used hormonal cycle control to induce amenorrhea during military deployment were satisfied despite side effects and logistical and environmental concerns (53).

### Family Planning and Use of Contraceptives

Service women on active duty have unique challenges regarding contraceptive use when deployed. Women who are deployed work long shifts and may travel across multiple time zones. This unpredictability can result in difficulty adhering to a regular contraceptive schedule (54). Harsh environments also make use of certain contraceptives difficult. For example, some deployed women who used the patch in harsh climates reported challenges with patch adhesion (55). Furthermore, depending on the location of the military deployment, contraceptive methods may need to be altered because some combat areas are not conducive to stocking certain contraceptives, such as depot medroxyprogesterone acetate and the vaginal ring.

Additional contraceptive options that may be of benefit include long-acting reversible contraception, namely intrauterine devices and the contraceptive implant. The College encourages educating health care providers, women Veterans, and women in the military regarding potential benefits of long-acting reversible contraception especially for women on active duty given the challenges to adhering to methods like the pill or patch while on such duty. The U.S. Department of Defense has recently begun encouraging widespread provision of the levonorgestrel intrauterine system for deployed women.

Family planning and contraceptive counseling is available to all eligible women who request these services within the U.S. Department of Defense (56). The Veterans Health Administration facilities also offer a wide range of contraceptive methods, including combination oral contraceptives, injections, implants, intrauterine devices, emergency contraception, and vaginal rings, that can be made available at no cost or low cost to eligible women Veterans. Despite this access, only 22% of women Veterans who sought care at the Veterans Health Administration facilities had a documented method of contraception in the medical record (57). However, this percentage was increased more than twofold in women who received care at VA women’s health clinics when compared with women who received care in VA primary care clinics (57). Increased efforts to train VA primary care providers regarding a wide range of basic reproductive health and women’s health issues, including contraception and preconception care, are critical and ongoing in the VA health care system. All health care providers should discuss contraceptive options with women Veterans as with all women.

Empiric data regarding rates or consequences of unintended pregnancy in women in the military and women Veterans are quite limited. Some estimates reveal that 50% of pregnancies in this population are unintended, which is consistent with the national average. However, other results indicate that as many as 65% of pregnancies in this population are unintended (58–62). These studies had small sample sizes. In a study of 3,745 women in active duty military service aged 18–44 years, the authors reported that nearly one in five women in this population was pregnant during 2005 and of these pregnancies 54% were unintended (63). Additional research is needed to understand unintended pregnancy patterns in this population.
It should be noted that under statute, women in the military and those women Veterans who receive insurance benefits through the Civilian Health and Medical Program of the VA have more limited insurance coverage of abortion than other women who receive health insurance through the federal government (federal employees and Medicaid or Medicare beneficiaries) because they receive benefits only in the setting of life endangerment (64, 65). The College opposes all regulations that limit or delay access to abortion (66). The disparity in insurance coverage of abortion must be eliminated to provide women in the military and women Veterans with the same coverage for abortion as other women who are insured through the federal government.

**Cervical Cancer Screening**

Some literature suggests that rates of abnormal Pap test results are increased among women in active-duty military service deployed to war zones (67). It also has been reported that women in the military are at high risk of lifetime sexual assault and abnormal cervical cytology results (68). Further research must explore these potential risk factors in military women. Timely access to appropriate cervical cancer screening is critical for all populations.

**Fertility and Obstetric Care**

The effect of military deployment and war zone exposure on women’s fertility is unexplored, but it is an area of concern for many female Veterans. Many experts have raised concerns about the potential consequences of delayed childbearing in women with prolonged military deployment. These potential consequences are understudied. Others have raised concerns about how military deployment or war zone exposure (including potential exposure to environmental toxins or elements of biologic warfare) may affect fertility or the health of women and their fetuses (69–75). The literature that addresses concerns about teratogenic effects of military deployment remains incomplete and should be an area for future research. A 2011 evidence-based systematic review of the literature revealed contradictory evidence of the effect of military service on rates of spontaneous abortion, stillbirth, and ectopic pregnancy (50). A 2010 Institute of Medicine report concluded that evidence is inadequate to determine whether an association exists between military deployment to the Gulf War and specific birth defects; adverse pregnancy outcomes, such as miscarriage and stillbirth; and infertility (76). It also concluded that limited evidence exists regarding an increased prevalence of these conditions in this population (76). Given that birth defect studies require large sample sizes, conclusions regarding outcomes in this area are limited because of the lack of statistically significant results (50).

Little is known regarding pregnancy outcomes among women Veterans. The effect of depression and medical comorbidities, such as hypertension and diabetes, on pregnancy is well researched in non-Veteran women. Thus, some associations may likely be derived regarding the effect of certain health conditions on pregnancy. However, research targeting all women Veterans is necessary. With data suggesting a strong association between military deployment status and an increased risk of depression during pregnancy and the postpartum period, more intense care coordination, screening, monitoring, and treatment plans are warranted for those women whose partners are currently deployed, for women in active duty military service, or for women Veterans who have recently returned from military deployment in a combat zone (77). Therefore, given the increase in the rates of mental health conditions, such as depression and PTSD in women Veterans, further study is needed to determine the effects of co-occurring mental health and medical conditions on reproductive health in women Veterans (78). Research that will guide preconception care and the safe pharmacologic management of women Veterans with psychiatric illness (eg, depression or PTSD) who are or wish to become pregnant also is urgently needed.

Another critical area of concern is the safe and effective obstetric management of women Veterans with disabilities, which, to date, has received little empiric attention. Data from the VA reveal that in 2009, more than one half of women Veteran patients of Veteran Health Administration facilities had some level of disability that was caused or exacerbated by their military service (5). Research is needed to guide proper obstetric and postpartum care for female veterans with cognitive or physical impairment that stems from traumatic brain injury, polytrauma, or other injury. Additional areas of consideration are needs for assisted reproductive technologies, such as in vitro fertilization, in this cohort of women Veterans who may have severe disability secondary to military service.

**Veterans Affairs Health Care Services**

Efforts have been underway to ensure seamless transition of women in active-duty military service from the care of the U.S. Department of Defense to that of the VA. Women who are honorably discharged from the military may qualify for a variety of VA benefits, including health care benefits. This eligibility is based on multiple criteria (see Box 3). Veterans who served in Operation Enduring Freedom, Operation Iraqi Freedom, and Operation New Dawn receive free health care for the first 5 years after discharge or release (79). Women Veterans can receive a wide range of health care services from the VA, including basic and specialty care (56). Under the VA mandate, each Veterans Health Administration facility must ensure that eligible women Veterans have access to all necessary medical care.

Many mechanisms are in place to support the health needs of women Veterans. Each Veterans Health Administration facility nationwide has a designated
Women Veterans Program Manager who advocates for women and provides leadership in establishing, coordinating, and integrating quality health care services for women. Many VA sites have specialized women’s health clinics and services available to care for women Veterans either on site or through referrals to non-VA health care providers. For example, the VA covers pregnancy-related care through arrangements with community health care providers. Connecting women Veterans to VA services may facilitate receipt of the comprehensive health care they need. Additionally, for women who are eligible for VA benefits, the Veterans Health Administration may provide more affordable contraceptive services than those available within other health care systems.

Given the increasing numbers of women serving in the U.S. military and women Veterans, it is essential that strong clinical partnerships be forged between public and private health care settings, academic departments of obstetrics and gynecology, and the VA. This will allow all health care providers who treat Veterans to ensure that Veteran patients in their care are aware of health care resources offered through the VA and provide referrals when needed. Moreover, given that additional research is needed to better serve the health care needs of this population, academic departments of obstetrics and gynecology should develop collaborative partnerships with the VA to ensure that a robust research agenda regarding the reproductive health care needs of women Veterans is developed and implemented. Also, these entities should ensure that front-line practitioners are well equipped to effectively manage this patient population with sensitivity and respect and ensure delivery of high-quality health care through effective coordination of care and sharing of best practices.

### Reproductive Health Care Coverage of Military Personnel

Military personnel covered by the TRICARE program also see a community-based obstetrician–gynecologist. The TRICARE Program allows covered beneficiaries access to military treatment facilities and civilian providers. A report from the U.S. Government Accountability Office confirmed that low reimbursement rates and a shortage of health care providers result in a lack of participation in TRICARE by civilian health care providers (56). This limited participation affects access to care. Civilian obstetric–gynecologic providers can benefit from increased education and understanding of available coverage through TRICARE for women in the military.

### Conclusions and Recommendations for the Future

Increasing numbers of women are taking on diverse roles in the military. Their military exposure results in special postdeployment health care needs. Although more studies are needed on how such exposure directly effects reproductive health, health care providers should increasingly become familiar with the health issues of this population. All health care providers should be aware of the possible unique treatment needs and resources for women who serve or have served in the military and address these issues at their health care visits. Women Veterans are a key population for all obstetrician–gynecologists who care for women across the lifespan. These patients have served our country and require in return the best care from health care providers. Efforts to undertake the following are essential:

1. Assess women for history of military service and inquire about Veteran status
2. Understand reproductive health risks of military service
3. Be knowledgeable about preconception care, family planning, and contraceptive considerations for deployed women and women Veterans
4. Screen for interpersonal violence, including military sexual trauma
5. Promote a research agenda that studies the effect of military status on reproductive health
6. Engage with the local Veterans Health Administration facility and other entities that serve Veterans

### Resources

The following list is for information purposes only. Referral to these sources and web sites does not imply the endorsement of the American College of Obstetricians and Gynecologists. This list is not meant to be comprehensive. The exclusion of a source or web site does not reflect the quality of that source or web site. Please note that web sites are subject to change without notice.

#### Resources for Patients

U.S. Department of Veterans Affairs
http://www.womenshealth.va.gov

To locate a VA facility, go to www.va.gov/directory or call 1-800-827-1000.

For crisis intervention and suicide prevention, contact U.S. Department of Veterans Affairs Veteran’s Crisis Line at 1-800-273-8255 or go to http://www.veteranscrisisline.net.
Resources for Health Care Providers
To access the Women Veterans Program Manager, locate the nearest facility via [www.va.gov/directory] and ask to speak to the Women Veterans Program Manager or go to National Association of State Women Veteran Coordinators. State coordinators directory. Available at: [http://www.naswvc.com/attachments/article/24/2012%20SWVC%20and%20NASDVA%20Contacts%2005012012.pdf]. Retrieved August 16, 2012.


References


78. Mattocks KM, Skanderson M, Goulet JL, Brandt C, Womack