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# State of Reproductive Health Report

VOLUME II



# State of Reproductive Health Report Volume II: VA Reproductive Health Diagnoses and Organization of Care

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# Executive Summary

Reproductive and sexual health (RSH) is a core component of comprehensive health care and plays a critical role in enabling people to enjoy life, remain healthy, and actively contribute to their communities. Reproductive and sexual health is defined by the World Health Organization (WHO) to include all matters relating to the reproductive system and its functions and processes. This is a report produced by Veterans Health Administration (VHA) Office of Women's Health that focuses on RSH of women/gender-diverse Veterans.<sup>1</sup> The objectives of this second *State of Reproductive Health Report* are to:

1. Summarize the RSH needs of women/gender-diverse Veterans and describe how these needs have changed over time, including variation by age, race/ethnicity, and rurality
2. Summarize the change in availability and organization of RSH care services in VHA over time

This information, combined with the growing canon of peer-reviewed literature, is essential for informing continued quality improvement, program expansion, and policy efforts related to VHA RSH care.

## Use of the Term “Women/Gender-diverse Veterans”:

An important limitation of VHA data is that historically only sex data have been collected. A gender identity field has recently been added to the electronic health record, but is still being implemented, and it is not yet well-populated.

Furthermore, while the sex field in VHA data is intended to represent sex listed at birth, it currently includes only options for male or female and does not include intersex.

In some cases, the sex field may reflect gender identity rather than birth sex. Before an option existed to specify gender identity in a separate field, some Veterans requested that the birth sex field be adjusted to reflect their gender identity. There is no way to tell whether the VHA sex variable represents birth sex or gender identity for a given individual. For example, some transgender men are coded as female in the sex field, and other transgender men have had their coding changed to male in the sex field. Similarly, some transgender women are coded as male in the sex field, and other transgender women have had their coding changed to female in the sex field. Among transgender men and transgender women, some have had reproductive organ gender-affirming surgery and others have not. For example, some transgender women have a vulva and vagina, and some do not.

Therefore, while this report seeks to be inclusive of individuals of all genders who have vaginas, vulvas, cervixes, uteri and/or ovaries regardless of gender identity, the report uses “female” to identify the population because the sex field is the only comprehensively populated field in the medical records.

To reflect this, we use the term “women/gender-diverse Veterans” to describe the population of individuals examined in the report. While the term used includes the phrase “gender-diverse Veterans,” not all gender-diverse Veteran VHA patients are included in the cohort examined in this report. Specifically, individuals identifying as women but who do not have vaginas, vulvas, cervixes, uteri and/or ovaries are unintentionally included in the cohort of individuals referred to as women/gender-diverse Veterans in this report. Additionally, some individuals who do have vaginas, vulvas, cervixes, uteri and/or ovaries are unintentionally omitted. While the term used includes the phrase “gender-diverse Veterans,” not all gender-diverse Veteran VHA patients are included in the cohort examined in this report.

Readers should interpret the term “women/gender-diverse Veterans” used in this report with the above caveats in mind. Future reports should be able to accurately represent the sex listed at birth and gender identities of Veterans included in sample populations.

<sup>1</sup> In this report, the term “women and gender diverse Veterans” refers to Veterans for whom the sex field in VHA administrative data is populated as “female,” regardless of the individual's gender identity. Not all gender diverse Veteran VHA patients are included in this report; only gender diverse Veterans for whom the sex field is coded as “female” are part of the cohort examined in this report. Please see page 7 for an explanation of the use of this term, and caveats around use of the sex field from VHA administrative data.

## Demographics of Women/Gender-diverse Veterans Using VHA in Fiscal Year 2018 (FY18)

- Nearly half of the women/gender-diverse Veterans who used VHA in FY18 were 45–64 years old (N=234,270, 45.9%), and a slightly lower percentage were 18–44 years old (N=208,187, 40.8%).
- Women/gender-diverse Veterans using VHA health care are diverse in terms of race/ethnicity, with 29.4% identifying as Black (N=150,244), 7.2% identifying as Hispanic (N=36,760), and 3.8% identifying as American Indian/Alaska Native, Asian, or Native Hawaiian/Other Pacific Islander (N=19,347).
- The majority of women/gender-diverse Veterans using VHA in FY18 lived in urban areas (73.3%, N=373,853).
- A little more than half of women/gender-diverse Veterans using VHA health care in FY18 had at least one mental health diagnosis (52.0%, N=265,401) and nearly all had at least one diagnosed medical condition apart from any reproductive or sexual health diagnoses (91.7%, N=467,622).

**IMPLICATIONS:** Given the broad age distribution, including those in their reproductive years as well as those who are peri- or post-menopausal, VHA must continue to emphasize meeting reproductive and sexual health care needs across the life span. With growing national recognition of racial and ethnic disparities in reproductive and sexual health care provision and outcomes, it is critically important that VHA assess its reproductive and sexual health policies and programs in terms of racial equity, including building capacity for regular reporting of access to care, health care utilization, and outcomes by race/ethnicity. Given the concentration of women/gender-diverse Veterans in urban areas, VA medical centers in these locations may be well-positioned to expand on-site reproductive and sexual health services. In addition, both mental health and chronic disease can impact reproductive and sexual health in a variety of ways. VHA must ensure that all health care providers who care for women/gender-diverse Veterans are knowledgeable about potential interactions between mental health, chronic disease, and reproductive and sexual health care.

## Reproductive and Sexual Health Diagnoses of Women/Gender-diverse Veterans Using VHA Health Care in FY18

- The top seven most frequent reproductive and sexual health diagnoses were urinary disorders (including incontinence) (12.4%, N=63,230); reproductive organ disorders—other<sup>2</sup> (11.5%, N=58,702); menstrual disorders (7.0%, N=35,699); contraceptive care management (6.9%, N=34,952); vaginitis, sexually transmitted infection (STI), and other pelvic inflammatory conditions (6.0%, N=30,362); benign breast conditions (6.0%, N=30,537); and menopausal disorders (5.9%, N=30,158).
- For those 18–44 years old, the two most frequent reproductive and sexual health diagnoses were reproductive organ disorders—other and contraceptive care and management (15.3% and 15.0%, respectively). These were followed by menstrual disorders (12.7%), and urinary disorders (including incontinence) (10.1%), and STI, vaginitis, and other pelvic inflammatory conditions (9.2%). For those 45–64 years old, the most frequent reproductive and sexual health diagnosis was urinary disorders (including incontinence) (12.9%), followed by reproductive organ disorders—other (12.9%), menopausal disorders (9.8%), benign breast conditions (7.0%), and abnormal breast conditions (5.4%). Among those 65+ years old, the most frequent reproductive and sexual health diagnosis was urinary disorders (including incontinence) (17.8%), followed by osteoporosis (11.2%), menopausal disorders (5.3%), reproductive organ disorders—other (5.2%), and abnormal breast conditions (5.0%).

<sup>2</sup> Reproductive organ disorders—other includes fibroids, ovarian cysts, polycystic ovaries, benign gynecologic neoplasms—other, prolapse of female genital organs, and carcinoma in situ—female reproductive—other.

- Across racial/ethnic groups, reproductive organ disorders—other (White 10.5%, Black 13.5%, Hispanic 13.8%) and urinary conditions (including incontinence) (White 13.6%, Black 11.5%, Hispanic 13.8%) were the most frequent reproductive and sexual health diagnoses in FY18.
- More urban-dwelling Veterans (7.3%) than rural/highly rural-dwelling Veterans (5.8%) received a diagnosis indicating receipt of contraceptive care management, likely reflecting the former group’s skew toward younger ages.

**IMPLICATIONS:** The reproductive and sexual health needs of women/gender-diverse Veterans change over the life span and the demand for services will reflect the shifting age distribution of those using VHA. Findings also indicate a high demand for care for urinary conditions (including incontinence) across all age groups. Given this observation, continued investment in a variety of services for treating urinary conditions is necessary. Similarly, given the continued high frequency across all age groups of a variety of reproductive health organ conditions, VHA needs to continue to build capacity to provide gynecological care both on-site at VHA medical centers and through community care.

Clear differences exist in reproductive and sexual health needs of women/gender-diverse Veterans across racial and ethnic groups and by rurality. Younger Veterans are more racially/ethnically diverse and more likely to live in urban areas. VHA needs to ensure that reproductive and sexual health care for Veterans is culturally competent given their racial/ethnic diversity. Ensuring access to needed reproductive and sexual health care may be more challenging for rural/highly rural-dwelling Veterans as a documented shortage of these services already exists in rural settings.<sup>1,2</sup> Exploring whether telehealth can address some of these issues, entering into innovative partnerships with local organizations, and using mobile service models may help facilitate access to care in rural and highly rural areas.

## Changes in Reproductive and Sexual Health Diagnoses Among Women/Gender-diverse Veterans Using VHA Health Care from FY10-FY18

There was little change in the most frequent reproductive and sexual health diagnoses over time. However, given the increase in the number of women/gender-diverse Veterans using VHA health care, these small shifts translated into large changes in demand for care in terms of absolute numbers. For example, female infertility was one of the least common diagnoses in both FY10 and FY18 with only a 0.4% increase between the two time points, but a more than two-fold increase in the absolute number of Veterans with this diagnosis (FY10 N=1,980; FY18 N=5,244).

- The five reproductive and sexual health diagnoses with the largest increases in absolute frequency were urinary disorders (including incontinence) (N=25,562), reproductive organ conditions-other (N=20,340), contraceptive care and management (N=15,436), menstrual disorders (N=12,720), and abnormal breast conditions (N=11,065).
- The largest absolute increases in frequency of diagnoses were observed among those 18–44 years old. In all age groups, the largest absolute increases were not necessarily for diagnoses that were in the top five in terms of relative frequency. For example, among those 18–44 years old, pregnancy-related diagnoses were not in the top five in terms of relative frequency but had the 5th largest absolute increase between FY10 and FY18 (N=8,314).
- Changes in diagnosis frequency by race/ethnicity and rurality largely reflected shifts in the age distribution among these subgroups of Veterans.

**IMPLICATIONS:** While the number of Veterans aged 44–65 years old using VHA health care continues to increase, the largest absolute increases in frequency of reproductive and sexual health diagnoses were observed among those 18–44 years old. This likely reflects a combination of a substantial increase in the number of women/gender-diverse Veterans in this age group, greater age-related reproductive and sexual health needs (e.g., contraception, pregnancy, infertility), and increased reliance on VHA.

Findings also indicate increasing demand for care for urinary conditions (including incontinence) across all age groups. Continued investment in services for treating urinary conditions is necessary. Similarly, given both the continued high relative frequency and large absolute increases across all age groups of a variety of reproductive health organ conditions, VHA needs to build capacity to provide gynecological care both on-site at VHA medical centers and through community care.

## Organization and Availability of Reproductive and Sexual Health Services in VHA for Women/Gender-diverse Veterans

Drawing upon data from the annual Women’s Assessment Tool for Comprehensive Health (WATCH) survey of VHA health care systems, this report also examined availability of specific services at VHA health care systems. A VHA health care system is typically composed of a flagship VHA medical center plus its associated community-based outpatient clinics (CBOCs). In this report, “availability of care” refers to availability on-site at a VHA health care system.

- Between 2014 and 2019, availability of long-acting reversible contraception (LARC) within VHA health care systems increased: it was available at 71% of health care systems in 2014, and at 81% of health care systems in 2019. During the same time-period, colposcopy and endometrial biopsy remained available at approximately 80% of VHA health care systems.
- In terms of specialized reproductive health services, the availability of transvaginal ultrasound increased from 76% to 83% of health care systems; availability of pelvic floor physical therapy (PT) remained stable at about 30%; and gynecologic-oncology services were available at fewer than 15% of VHA health systems throughout the time-period.
- Due to rewording of questions in the WATCH survey over time, assessing changes in availability of infertility care was difficult, though there appeared to be a slight increase in availability of infertility evaluation.
- Overall availability of breast care, including mammography, breast biopsy, and surgery, remained unchanged or decreased during this time-period, with none of these services available at more than 40% of VHA health care systems by 2019.

**IMPLICATIONS:** The majority of VHA health care systems offer reproductive and sexual health outpatient procedures, such as LARC, colposcopy, and endometrial biopsies on-site. Availability of LARC is essential to ensure that women/gender-diverse Veterans have access to the full range of contraceptive options and can access care that aligns with their reproductive needs. While provision of on-site diagnostic procedures for gynecologic cancers, such as colposcopy and endometrial biopsy, is important, it is also critical to ensure mechanisms for care coordination are in place for a gynecologic cancer diagnosis.

The majority of VHA health care systems offer on-site transvaginal ultrasound, but it may not be available 24/7. This is of particular concern in emergency departments, where patients may present with gynecologic emergencies requiring urgent work-up.<sup>3</sup>

Given that urinary conditions (including incontinence) and reproductive organ disorders are among the five most frequent reproductive and sexual health diagnoses across all age and racial/ethnic groups, VHA needs adequate capacity to provide pelvic floor PT. However, availability on-site has remained unchanged over time. Increased pelvic floor PT capacity within VHA is necessary to meet current needs and anticipated demand in this area.

While availability of on-site gynecological care and surgery has increased in VHA over time, few VHA health care systems offer gynecologic-oncology care. This likely reflects concerns regarding the need to have sufficient volume to ensure high quality of care for gynecological cancers. Continued reliance on non-VHA care for gynecologic-oncology surgery highlights the need for ongoing support and care coordination for Veterans with gynecological cancers. Mammography is an essential preventive health screening tool that is recommended annually beginning at age 40–50 (varies based on patient-provider shared decision making, individual risk factors, and professional society recommendations).<sup>4</sup> Veterans in the age group for recommended routine breast cancer screening represent nearly half of the women/gender-diverse Veterans using VHA health care; thus, these services are in high demand, supporting the decision by many VHA health care systems in recent years to offer mammography on-site. Additionally, ongoing efforts are needed to ensure coordination of this preventive service, including timely follow-up for abnormal results.

## Conclusions

The number of women/gender-diverse Veterans using VHA reproductive and sexual health care is increasing rapidly. While the rate of reproductive and sexual health diagnoses has remained relatively constant over time, there are large increases in the absolute *number* of women/gender-diverse Veterans with many of these diagnoses. Given the growing number of young women/gender-diverse Veterans using VHA health care, large absolute increases were observed for reproductive and sexual health diagnoses linked to the reproductive years (18–44 years old). Women/gender-diverse Veterans in this age group are more racially/ethnically diverse, highlighting the need to consider equity of services and outcomes as key quality metrics.

Finally, a small but significant minority of women/gender-diverse Veterans using VHA live in rural areas. Identifying ways of increasing access to reproductive and sexual health care and reducing barriers to care for these Veterans will require employing community partnerships, using telehealth, and, when necessary, providing appropriate transportation options and support for overnight stays.

# 1. Introduction

Reproductive and sexual health (RSH) is a core component of comprehensive health care and plays a critical role in enabling people to enjoy life, remain healthy, and actively contribute to their communities. Reproductive and sexual health is defined by the World Health Organization (WHO) to include all matters relating to the reproductive system and to its functions and processes.<sup>5</sup> While some RSH needs are age-specific (e.g., contraception), others are pertinent across the entirety of the life span (e.g., gynecological care). RSH and other health care needs can interact in complex ways, such as with chronic health conditions like diabetes, hypertension, depression, or posttraumatic stress disorder. Experiences that occur across the life span, such as stress, trauma, and exposures to environmental contaminants, also impact RSH and overall health outcomes. Thus, it is important to consider the complexity of interactions between RSH, life experiences, stage of life, and other health concerns. RSH services are available to all eligible and enrolled Veterans who use the Veterans Health Administration (VHA) for care.

There are important technical caveats relevant to this report. This report, produced by the reproductive health program within the VHA Office of Women's Health, focuses on the RSH of women Veterans and all Veterans with vaginas, vulvas, cervixes, uteri, ovaries, and/or breast/chest tissue. Until recently, VHA did not systematically collect information about Veterans' sexual orientation and gender identity. Information about the state of RSH of LGBTQ+ Veterans is considerably limited due to the absence of relevant data fields and the overall poor quality of data available at the time of this report. To address these gaps, VA has been successful in rolling out data collection of sexual orientation and gender identity in electronic health records. These data are collected by self-report during a clinic visit or by Veterans' updating their profile on VA.GOV. This process may require years before all 6 million Veterans using VHA have this information recorded. We anticipate future reports will be able to look more comprehensively at these data for our women and gender diverse Veterans. These limitations also present challenges in accurate reporting of RSH information more broadly. For example, demographic information reported in Table 1 excludes women/gender-diverse Veterans whose birth sex is listed as "male" in the medical records system while including men and gender diverse individuals whose birth sex is listed as "female" in the medical records system. Accuracy in reporting utilization of organ-specific services, such as cancer screenings, is degraded by assuming the presence or absence of organs based on information available in the birth sex field. For example, data on the completion of cervical cancer screenings erroneously include Veterans who do not need screening as they were born without a cervix (such as transgender women) or had their cervixes removed (due to hysterectomy or vaginectomy for benign conditions), while simultaneously excluding Veterans who need these services (such as transgender men and other gender-diverse Veterans whose birth sex is listed as "male" but have not had their cervixes removed). VHA first implemented a field to capture gender identity in 2017; however, the gender field, which is currently termed self-identified gender identity (SIGI), remains unfilled for approximately 89% of Veterans.<sup>6</sup> To ameliorate these limitations and the resulting impact on data reporting and Veteran care, VHA plans to implement an organ inventory in the electronic health record to reflect the clinical needs of the individual Veteran. For the current report, when referring to women/gender-diverse Veterans, we include all Veterans whose birth sex was listed as "female" in the VHA medical record and who used VHA services at any time in fiscal years (FY) 2010–18 (FY10–18). Wherever possible, we use inclusive language and focus on the specific organs, diagnoses, and procedures involved while acknowledging limitations to the overall completeness of this report.

Women/gender-diverse Veterans continue to be one of the fastest growing groups of new health care users at VHA. Among those of reproductive age (18–44 years old) using VHA health care in FY15, RSH ranked among the top five health care diagnoses.<sup>7</sup> For those older than 44, RSH care remains important, although it is not within the top five health care diagnoses.

The first *State of Reproductive Health in Women Veterans* report, published in 2014, highlighted the diversity of RSH needs across the full age range of women/gender-diverse Veterans and some of the ongoing challenges faced by VHA in providing these services.<sup>8</sup> The report provided critical information for identifying where additional RSH programming and research were needed. It also helped bring greater visibility to the needs of women/gender-diverse Veterans.

Since the first report, VHA has made strides to improve RSH services. Nevertheless, emergent literature suggests that VHA RSH care may mirror some of the same inequities observed outside VHA.<sup>9–12</sup> Therefore, it is important to consider both the overall shifts in Veterans' RSH care needs and to examine differences among subgroups of Veterans and how they may have shifted over time. The goal of this report is to identify strengths and weaknesses in VHA provision of RSH care and to facilitate improvements that address inequities in RSH care delivery and outcomes.

This second *State of Reproductive Health Report* will:

1. Summarize the utilization of RSH care by women/gender-diverse Veterans and describe how these needs have changed over time, including variation by age, race/ethnicity, and rurality
2. Summarize the change in availability and organization of RSH care services in VHA over time. This information, combined with the growing canon of peer-reviewed literature, is essential to inform continued quality improvement, program expansion, and policy efforts related to VHA RSH care.

## 2. Demographic Characteristics and Reproductive and Sexual Health Diagnoses

This section of the *State of Reproductive Health Report, Volume II*, characterizes the RSH diagnoses of women/gender-diverse Veterans using VHA health care, including variation by age, race/ethnicity, and rurality and changes over time. VHA's Women's Health Evaluation Initiative (WHEI) compiled and analyzed data from FY10 to FY18 for this report. Details of cohort construction, variable definition, interpretation, and limitations of the WHEI data are included in an online technical appendix. These data are descriptive; thus, no measures of inference or precision are included. *To better reflect the diversity of gender among those identified as "women Veterans" within the Corporate Data Warehouse, we describe our denominator for the first section of this report as "women/gender diverse Veterans" from here forward. However, when describing implications of the findings we use language that emphasizes populations' specific clinical needs.*

### 2.1 Demographics Among Women/Gender-diverse Veterans Using VHA in FY18

**TABLE 1** shows the demographic characteristics, health profile, and health care utilization of women/gender-diverse Veterans using VHA in FY18 (October 1, 2017–September 30, 2018).

**AGE:** Nearly half of the women/gender-diverse Veterans who used VHA in FY18 were 45–64 years old (N=234,270, 45.9%) and a slightly lower percentage were 18–44 years old (N=208,187, 40.8%). Only 13.2% were 65 years or older.

**IMPLICATIONS:** Although a large proportion of women/gender-diverse Veterans using VHA are in their reproductive years (18–44 years old), the majority are likely peri- or post-menopausal. Given this distribution, continued emphasis on meeting RSH needs across the life span is necessary.

**RACE/ETHNICITY:** Women/gender-diverse Veterans using VHA are more diverse than their civilian counterparts in terms of race/ethnicity, with 29.4% identifying as non-Hispanic Black/African American (hereafter referred to as Black) (N=150,244), 7.2% identifying as Hispanic (N=36,760), and 53.7% identifying as White Non-Hispanic (hereafter referred to as White, N=273,954). Those identifying as American Indian/Alaska Native, Asian or Native Hawaiian/Other Pacific Islander each made up less than 2% each of the total population of women/gender-diverse Veterans using VHA.

**IMPLICATIONS:** Given the growing national recognition of racial and ethnic disparities in reproductive and sexual health care and outcomes, it is critically important that VHA assess its RSH policies and programs in terms of racial equity. Regular reporting of access to care, health care utilization, and outcomes by race/ethnicity represents a first step in this process.

**RURALITY:** The majority of women/gender-diverse Veterans using VHA in FY18 lived in urban areas (73.3%, N=373,853). Approximately one quarter lived in rural areas (25.6%, N=130,538), while less than 2% lived in highly rural (0.8%, N=4,093) or island (0.1%, N=485) areas.

**IMPLICATIONS:** Given the concentration of women/gender-diverse Veterans in urban areas, VHA medical centers in these locations may be well-positioned to expand their on-site RSH services. Nevertheless, there remains a need to ensure that women/gender-diverse Veterans living in rural areas can access the RSH services they need, which may involve expansions of telehealth, partnerships with rural health centers and hospitals, and additional hiring and training of clinicians.

**SERVICE-CONNECTED CONDITION:** In FY18, approximately one-third of women/gender-diverse Veterans using VHA had no service-connected condition (31.4%, N=160,089). One third had a service-connected rating of 50–99 percent (35.0%, N=178,550). The remaining third had a service-connected rating of either 0–49 percent (21.9%, N=111,760) or 100 percent conditions (11.4%, N=58,251).

**IMPLICATIONS:** More than two-thirds of women/gender-diverse Veterans using VHA in FY18 had a service-connected condition. These Veterans may be eligible for VHA services with no co-pay, more dependent on VHA services, and more likely to continue using VHA throughout their lives. VHA needs to continue working to meet the RSH needs of today’s population of women/gender diverse Veterans, while preparing to meet their future needs.

**Table 1. Demographic characteristics, health profile, and health care utilization of women/gender-diverse Veterans using VHA in FY18 (N=510,179)**

Demographic characteristics	N	%
<b>Age</b>		
18–44	208,187	40.8
45–64	234,270	45.9
≥ 65	67,556	13.2
<b>Race/ethnicity<sup>a</sup></b>		
White, non-Hispanic	273,954	53.7
Black, non-Hispanic	150,244	29.4
Hispanic	36,760	7.2
American Indian/Alaska Native	6,352	1.3
Asian	7,605	1.5
Native Hawaiian/Other Pacific Islander	5,390	1.1
Unknown	29,874	5.9
<b>Rurality</b>		
Urban	373,853	73.3
Rural	130,538	25.6
Highly rural	4,093	0.8
Insular Island	485	0.1
<b>Service-connected condition</b>		
None	160,089	31.4
0–49 percent rating	111,760	21.9
50–99 percent rating	178,550	35.0
100 percent rating	58,251	11.4
<b>Health profile</b>		
≥ 1 Mental health condition	265,401	52.0
≥ 1 Medical health condition (excluding RH conditions)	467,622	91.7
≥ 1 RH condition	215,341	42.2
<b>Community care utilization</b>		
≥1 Non-VHA medical care encounters <sup>b</sup>	207,290	40.6

<sup>a</sup>Due to updates in WHEI’s race/ethnicity algorithm, there is no “multi-race” category in FY18. <sup>b</sup>The FY18 counts for ≥1 non-VHA medical care encounters (i.e., care outsourced by VHA) include any community care encounter recorded in the FY18 fee inpatient/outpatient files or the Program Integrity Tools (PIT) Professional or PIT Institutional claims datasets with service dates in FY18 (per PIT data accessed 5-11-2021).

**HEALTH PROFILE:** Just over half of women/gender-diverse Veterans using VHA in FY18 had at least one mental health diagnosis (52.0%, N=265,401) and nearly all had at least one diagnosed medical condition apart from any reproductive or sexual health diagnoses (91.7%, N=467,622). Additionally, approximately 40% had at least one RSH diagnosis (42.2%, N=215,34).

**IMPLICATIONS:** A significant percentage of women/gender-diverse Veterans using VHA have diagnoses for mental health and other medical conditions. Both mental health conditions and chronic disease can interact with and impact RSH in a variety of ways. VHA must ensure that all health care providers who care for women/gender-diverse Veterans are aware of potential interactions of mental health and chronic disease with RSH. To help address these concerns, VHA Office of Mental Health and Suicide Prevention has implemented a national reproductive mental health consult service, and the Office of Women's Health continues to support trainings that include implications of chronic medical conditions for RSH needs and outcomes.

**COMMUNITY CARE UTILIZATION:** Forty percent of women/gender-diverse Veterans using VHA in FY18 had at least one community care visit (N=207,290).

**IMPLICATIONS:** Given that 40% of women/gender-diverse Veterans using VHA had at least one community care visit, VHA needs to continue investing in effective care coordination programs.

## **SPECIAL TOPIC 1: CHRONIC DISEASE AND REPRODUCTIVE HEALTH**

### **Topic Author: Megha Shankar, MD**

Women/gender-diverse Veterans who use VHA reproductive health services have a higher burden of chronic disease than their non-Veteran counterparts. Chronic diseases, particularly cardiovascular, rheumatic, and neurological disease, have important implications for reproductive health care and outcomes in family planning, pregnancy/infertility, and menopause.

#### **Cardiovascular Disease**

Women/gender-diverse Veterans are at a higher risk of cardiovascular disease compared to their non-Veteran counterparts,<sup>13</sup> impacting management of family planning, pregnancy, and menopause.

Cardiovascular disease influences decisions around contraception. Combined hormonal contraception (CHC) is generally not recommended in patients with cardiovascular disease due to risk of vascular complications. In addition, the Depo-Provera injection has theoretical risks for patients with cardiovascular disease that may outweigh benefits.<sup>14</sup> Given the burden of cardiovascular disease in reproductive age Veterans (age <45 years), providers should screen for and counsel Veterans on cardiovascular disease risk during family planning discussions.

Women/gender-diverse Veterans with medical comorbidities, such as cardiovascular disease, have higher rates of unintended pregnancy due to hormonal contraception contraindications, as above, and thus subsequent pregnancy complications related to these comorbidities.<sup>15,16</sup> Essential hypertension is a risk factor for gestational hypertension, pre-eclampsia, and eclampsia. Veterans with risk factors, including genetic predisposition and lifestyle factors, may develop gestational diabetes. Both gestational hypertension and gestational diabetes are risk factors for development of essential hypertension and type 2 diabetes after pregnancy. These issues reinforce the need for VHA primary care providers to recognize and manage these pregnancy-related risks during the preconception and postpartum periods and counsel Veterans appropriately.

Hormone therapy is often used to treat menopausal symptoms, and women/gender-diverse Veterans use menopausal hormone therapy at higher rates than the general population.<sup>17</sup> Additionally, menopause symptoms, such as sleep disturbances, increase cardiovascular disease risk.<sup>17</sup> Data from the Women's Health Initiative (WHI) and recommendations from the North American Menopause Society (NAMS) provide guidance around hormone therapy for treatment of symptoms of menopause.<sup>18,19</sup> Contraindications to hormone therapy include history of breast cancer, coronary heart disease, a previous venous thromboembolic event (VTE) or stroke, active liver disease,

unexplained vaginal bleeding, high-risk endometrial cancer, or transient ischemic attack (TIA). No cardiovascular contraindications exist for local hormone therapy (such as a vaginal estrogen cream for vaginal dryness or urogenital syndrome of menopause). Primary care providers should calculate breast cancer risk and 10-year cardiovascular risk as part of considering hormone treatment for symptoms of menopause. The decision to use hormone therapy for menopause is a nuanced one requiring shared decision making between patient and clinician.

### **Rheumatic Diseases**

Rheumatic diseases, including autoimmune and musculoskeletal conditions, are common in women/gender-diverse Veterans and affect decisions about family planning, pregnancy, and menopause.

CHC is contraindicated in patients with autoimmune conditions that increase risk of blood clots, such as lupus.<sup>14</sup> Individuals with severe musculoskeletal complaints or immobility related to service-connected conditions or conditions like multiple sclerosis may have issues using self-applied forms of contraception, like the vaginal ring.

Individuals with certain autoimmune diseases are at higher risk for miscarriage and infertility due to their propensity for thrombosis. For certain individuals on teratogenic medications related to their rheumatic disease, pregnancy prevention is important to prevent poor fetal outcomes. At the same time, pregnancy can sometimes ameliorate autoimmune diseases, such as rheumatoid arthritis. Individuals on chronic pain medications related to their rheumatic disease need good preconception care specifically around medication management.<sup>15</sup> Care coordination between primary care, gynecology, and rheumatology is crucial to ensure patient safety around medication treatment and pregnancy intention.

Veterans with musculoskeletal conditions going through menopause may also have difficulty using the vaginal ring for local vaginal symptoms of menopause. A small subgroup of individuals with rheumatic disease, specifically those at high risk for blood clots, should avoid using systemic hormonal therapy for menopausal symptoms. Providers should discuss appropriate hormone therapy (such as local estrogen therapy) for menopausal symptoms with patients who cannot tolerate systemic therapy.<sup>19</sup>

### **Neurological Disease**

Headaches and traumatic brain injury are common in reproductive age women and gender-diverse Veterans<sup>20</sup> These conditions can affect family planning. For example, CHC is contraindicated for patients who experience migraines with aura.<sup>14</sup>

Medication management for patients with neurological disorders is particularly important during preconception care, while on contraception, during pregnancy, and while breastfeeding to avoid common medication interactions.

CHC also is currently not recommended for patients taking certain anticonvulsants (including phenytoin, carbamazepine, barbiturates, primidone, topiramate, oxcarbazepine)<sup>14</sup> as they induce hepatic enzymes and make CHC less effective. CHCs reduce plasma levels of lamotrigine, though they may still be used given that the benefits may outweigh risks regarding pregnancy; clinicians may decide to increase the lamotrigine dose to compensate. With monitoring, clinicians may decide to use CHCs in patients with traumatic brain injury, other neurological conditions like seizures, and mental health issues such as bipolar depression.

### **Conclusion**

Chronic diseases may impact the reproductive health of women/gender-diverse Veterans. There are several areas to consider for contraceptive management, hormone therapy for menopause, and pregnancy. Care coordination between primary care, obstetrics and gynecology, and specialty care is vital to ensure the reproductive wellbeing of women/gender-diverse Veterans with chronic disease.

## 2.2 Reproductive and Sexual Health Diagnoses Among Women/Gender-diverse Veterans Using VHA in FY18

### 2.2.1 Reproductive and sexual health diagnoses overall

**Table 2. Frequency of reproductive and sexual health diagnoses among women/gender-diverse Veterans using VHA in FY18 (N=510,179)**

Reproductive and sexual health diagnoses <sup>a</sup>	N	%
Reproductive organ disorders—other <sup>b</sup>	58,702	11.5
Urinary conditions (including incontinence)	63,230	12.4
Menopausal disorders	30,158	5.9
Menstrual disorders	35,699	7.0
Vaginitis, STI, and other pelvic inflammatory conditions	30,362	6.0
Benign breast conditions	30,537	6.0
Contraceptive care management	34,952	6.9
Osteoporosis	15,027	2.9
Abnormal breast conditions	19,551	3.8
Pregnancy-related	16,775	3.3
Abnormal cervical screening	10,298	2.0
Breast cancer	9,663	1.9
Sexual dysfunction	5,748	1.1
Any gynecological cancer	3,287	0.6
Female infertility	5,244	1.0

<sup>a</sup> While osteoporosis, breast cancer, benign breast conditions, and abnormal breast conditions are not technically reproductive/sexual health diagnoses, they are included as screening for, incidence, and treatment of these conditions is closely related and has important implications across the reproductive life span. Similarly, contraceptive care management is a clinical care procedure rather than a diagnosis but is included as it is an essential and high demand RSH service. <sup>b</sup> Reproductive organ disorders—other includes fibroids, ovarian cysts, polycystic ovaries, benign gynecologic neoplasms—other, prolapse of female genital organs, and carcinoma in situ-female reproductive-other.

**Findings:** Table 2 shows the overall frequency of RSH diagnoses among women/gender-diverse Veterans using VHA in FY18. Frequencies of RSH diagnoses ranged from 0.6% (any gynecological cancer) to 12.4% (urinary conditions including incontinence). The top seven most frequent RSH were urinary conditions(including incontinence) (12.4%, N=63,230), reproductive organ disorders—other (11.5%, N=58,702), menstrual disorders (7.0%, N=35,699), contraceptive care management (6.9%, N=34,952), vaginitis, STI, and other pelvic inflammatory conditions (6.0%, N=30,362), benign breast conditions (6.0%, N=30,537), and menopausal disorders (5.9%, N=30,158).

**IMPLICATIONS:** Women/gender-diverse Veterans have RSH needs that are both age-specific (e.g., contraception, menstrual disorders, menopausal disorders) and that occur across the life span (e.g., urinary disorders including incontinence). VHA must continue to ensure that high-quality, equitable RSH services are accessible for all Veterans. While VHA continues building internal capacity to provide high-demand RSH services on-site, some low volume care (e.g., gynecologic-oncology, infertility care) may need to occur through VHA-authorized community care. Continued investments are needed in care coordination for RSH services, most likely to be provided through VHA-authorized community care, along with tools to assist Veterans in navigating across systems.

**Topic Authors: Alexandra K. R. Schule, JD; Kristin O. Haeger, MPH, MAT; and Jacob R. Eleazer, PhD**

In recognition of the increasingly diverse Veteran population, U.S. Government Accountability Office (GAO) conducted a review of VA's data collection and reporting procedures on Veterans' sociodemographic characteristics, including gender, race, ethnicity, and sexual orientation. In October 2020, GAO published its findings that VA has not systematically implemented linked data collection and, notably, 89% of Veterans' electronic health records did not have gender identity fields populated.<sup>6</sup> As of January 2022, 84% of these gender identity fields remain unpopulated, while data collection on sexual orientation has yet to be systematically implemented.<sup>21</sup> This lack of accurate gender identity and sexual orientation information is concerning because, relative to their cisgender straight counterparts, LGBTQ+ Veterans are at increased risk of adverse health outcomes due to minority stress, access issues, and health care discrimination.

**Data Collection Limitations for LGBTQ+ Veterans**

Without VA or VHA-level data, researchers are left to rely on national level survey data as a proxy, although the data from these surveys is often inconsistent, varying based on the wording of surveys and whether sexual orientation and gender identity are grouped together. Additionally, unlike other sociodemographic characteristics, people may be hesitant to disclose their sexual orientation and/or gender identity, which can suppress the true prevalence of the population of LGBTQ+ people.<sup>22</sup> Despite these limitations, surveys are crucial to understanding LGBTQ+ public health issues. Currently, it is estimated that 8.0% of adults age 18+ in U.S. households identify as lesbian, gay, bisexual, or transgender.<sup>23</sup> Like several other historically marginalized communities, LGBTQ+ people are overrepresented in the military and Veteran populations relative to the general population. For example, drawing on Pentagon data, it is estimated that since the transgender ban was lifted in 2016, approximately 14,700 transgender Service members have and/or currently serve, making up 0.7% of the military, whereas transgender people make up 0.6% of the general population.<sup>24</sup> With the end of Don't Ask, Don't Tell and the ban on open trans military service being lifted, it is anticipated that the number of Veterans identifying as LGBTQ+ will continue to grow.<sup>25,26</sup> Through important policy changes, VA has made significant progress in improving data collection on sex and gender since the 2020 GAO report. Moving forward, full implementation of these policy changes will be crucial for accurate reporting and, ultimately, ensuring access to VA reproductive health services for all Veterans.

**Reproductive Health Considerations for LGBTQ+ Veterans**

The LGBTQ+ population skews young, with approximately two-thirds being of reproductive age. However, LGBTQ+ people encounter barriers to reproductive/sexual health care due to health care discrimination, stigma, misgendering, and systemic deficits in medical training on LGBTQ+-specific health. This results in lower rates of health care utilization. For example, transgender men and gender-diverse people with cervixes are less likely to get routine cervical cancer screening, even though they are more likely to have abnormal results while on hormonal therapy.<sup>27</sup> Additionally, given that LGBTQ+ Veterans are more likely to have experienced military sexual trauma (MST), pelvic and genital exams, necessary for routine care and some fertility services, can be stressful experiences and must be conducted in a way that is gender affirming and trauma informed.<sup>28</sup> LGBTQ+ Veterans may have also encountered various barriers to family building, such as VA providers who misunderstood or were unaware of VA benefits or other LGBTQ+ Veterans who are misinformed regarding the Medical Benefits Package. Furthermore, cis- and heteronormative assumptions about family building in the health care system and general population can present unique challenges and stressors for LGBTQ+ Veterans that may intersect with other mental health conditions prevalent in the Veteran population.

**Fertility and Family Building Considerations and VA Services for LGBTQ+ Veterans**

LGBTQ+ Veterans who engage in sexual activity involving sperm and oocytes (i.e., eggs) are at risk for pregnancy. Gender affirming hormone therapy does not prevent pregnancy, even in individuals who are amenorrheic (i.e., lack a regular menstrual period). VA offers a range of contraceptive options, including methods that are non-hormonal, e.g., copper intrauterine devices (IUDs), and will not interfere with gender affirming hormone therapy. Those at risk of pregnancy who are amenable to having a baby should speak

with their VA primary care provider about preconception care, including taking folic acid at least one month prior to conception. Veterans who intend to use their own gametes to conceive and/or their own uteri to carry a pregnancy should discuss their overall health with their health care provider, including any medications they are taking and/or plan to take during pregnancy. While many medications are safe to use prior to and during pregnancy, others may cause reduced fertility and/or malformation of the embryo. However, there may be alternative treatment options available. Post-pregnancy and throughout any period of breast/chestfeeding, Veterans should communicate with their health care providers to discuss the start or re-start of any medications.

Notably, LGBTQ+ Veterans who are expanding their families may need fertility services, despite not having an infertility diagnosis. Many VA fertility services are available to all eligible and enrolled Veterans, including laboratory blood testing, surgical correction, diagnostics and treatment, intrauterine insemination (IUI),<sup>3</sup> sperm processing/washing, hormonal therapies, and genetic counseling and testing. Other fertility services are available to Veterans who meet specific eligibility requirements. For example, Veterans with medical indications, including Veterans who are transgender or gender-diverse and undergoing hormone therapy or gender affirming surgical procedures which may impact fertility, may be eligible for oocyte and sperm retrievals, and/or cryopreservation of gametes/ovarian tissue.

For a small subset of Veterans, VA offers the above-discussed fertility services to the Veteran and their legal spouse and offers service connected in-vitro fertilization (IVF); however, the need for donor gametes, donor embryos, and/or surrogacy make the couple ineligible. The strict eligibility criteria are based on legislation passed in 2016 and cannot be overturned by VA policy. The eligibility criteria result in numerous Veterans, particularly couples with same-sex gametes, being excluded from these services. Veterans who do not meet the eligibility criteria may choose to self-pay for IVF or use non-VA health insurance, depending on coverage by state. In these cases, the IVF medications needed by the Veteran, but not the Veteran's partner/spouse, may be covered by VA.

Alternatively, or in addition to the fertility services outlined above, some LGBTQ+ Veterans may elect to pursue adoption. Although VA provides adoption reimbursement benefits, these benefits, like the IVF benefit, are only available to Veterans with service-connected infertility. Couples with same-sex gametes or unpartnered individuals have additional barriers to establishing that a service-connected condition is tied to an infertility diagnosis since they may not engage in sex which could result in pregnancy and therefore are less likely to receive an infertility diagnosis. For example, 15% of infertility of unknown etiology is generally diagnosed after 12 months of procreative sex. This estimate excludes couples who have same-sex gametes or Veterans who are unpartnered/celebrate with no known prior cause for infertility (e.g., known anovulation) as they do not generally engage in regularly occurring unprotected procreative sex. Additionally, because surrogacy is not paid for by VA and is cost prohibitive for most Veterans, for those with testes in a same-sex relationship or who are unpartnered, the only viable option for using family building benefits from VA is the service-connected infertility adoption benefit. For Veterans with testes in same-sex relationships or who are unpartnered without documented service-connected infertility, family-building options are limited to paying out-of-pocket for surrogacy (upwards of \$100,000 in the U.S.) or having a friend or family member donate oocytes and carry a baby for them.

For parents interested in breast/chestfeeding their children, VA offers services and support, including but not limited to, classes, lactation counseling and education, and equipment. Lactation induction is offered for Veterans, including transgender men, transgender women, cisgender men, nonbinary and genderqueer Veterans, and Veterans who are non-gestational partners in same-sex relationships. VA can also connect Veterans to lactation community groups and resources.

## Conclusion

VA is actively working to create a welcoming and inclusive environment for LGBTQ+ Veterans and employees. To address gaps identified by the GAO report, VA is rolling out comprehensive data collection of sexual orientation and gender identity in electronic health records. It has also implemented gender pronouns in digital spaces, such as email, to reduce instances of misgendering in the workplace. Furthermore, LGBTQ+ Veterans are eligible for reproductive and sexual health services at VA, including preconception counseling, contraception, and screening for and vaccination against STIs. However, VHA must operate under statutory

<sup>3</sup> Donated sperm are allowed to be used in IUI paid under the Medical Benefits Package if a Veteran with a uterus pays for procurement/washing/processing of donated sperm. Conversely, VA will pay to wash/process a Veteran's sperm to be used by a non-Veteran, although the IUI procedure itself would not be covered for a non-Veteran.

requirements, which limit family building options for LGBTQ+ Veterans, especially same-sex couples. Furthermore, while VA policies, services, and care coordination have been expanded in recent years to address the unique needs of LGBTQ+ Veterans, there is still room for improvement. VA must work to address the minority stress, access issues, and health care discrimination that LGBTQ+ Veterans face to adequately serve all Veterans.

### 2.2.2 Reproductive and sexual health diagnoses by age group

RSH needs change across the life span from menarche, through the stable reproductive years, and into menopause. While some RSH needs are tied to specific life phases (e.g., pregnancy, menopause), others may occur across multiple phases or the entirety of the life span (e.g., sexual function, cervical health, etc.). Given the changing age distribution of women/gender-diverse Veterans using VHA, it is important to understand RSH diagnoses by age to ensure the adequacy of current services and plan for future needs.

**Table 3. Frequency of reproductive and sexual health diagnoses among women/gender-diverse Veterans using VHA in FY18 by age group**

Reproductive and sexual health diagnoses <sup>a</sup>	18–44	45–64	≥ 65
	(N=208,187)	(N=234,270)	(N=67,556)
	%	%	%
Reproductive organ conditions—other <sup>b</sup>	15.3	9.9	5.2
Urinary conditions (including incontinence)	10.1	12.9	17.8
Menopausal disorders	1.8	9.8	5.3
Menstrual disorders and endometriosis	12.7	3.8	0.5
Vaginitis, STI, and other pelvic inflammatory conditions	9.2	4.3	1.9
Benign breast conditions	5.4	7.0	4.5
Contraceptive care management	15.0	1.6	0.1
Osteoporosis	0.1	3.1	11.2
Abnormal breast conditions	1.6	5.4	5.0
Pregnancy-related	7.8	0.2	N/A
Abnormal cervical screening	3.4	1.3	0.4
Breast cancer	0.4	2.5	4.6
Sexual dysfunction	1.6	1.0	0.2
Any gynecological cancer	0.3	0.8	1.2
Female infertility	2.4	0.1	-

<sup>a</sup> While osteoporosis, breast cancer, benign breast conditions, and abnormal breast conditions are not technically reproductive/sexual health diagnoses, they are included because screening for, incidence, and treatment of these conditions are closely related and have important implications across the reproductive life span. Similarly, contraceptive care management is a clinical care procedure rather than a diagnosis but is included given it is an essential and high demand RSH service.<sup>b</sup> Reproductive organ disorders—other includes fibroids, ovarian cysts, polycystic ovaries, benign gynecologic neoplasms—other, prolapse of female genital organs, and carcinoma in situ—female reproductive—other.

**Findings:** Table 3 shows the overall frequency of RSH diagnoses among women/gender-diverse Veterans using VHA in FY18 by age group (18–44, 45–64, ≥65). RSH needs varied across the life span. While some diagnoses were age-specific (e.g., menstrual conditions), others were of similar magnitude across age groups (e.g., benign breast conditions).

**Figure 1** shows the top five most frequent RSH diagnoses in each age group in FY18. For those 18–44 years old, the two most frequent RSH diagnoses were reproductive organ disorders—other and contraceptive care and management (15.3% and 15.0% respectively), followed by menstrual disorders (12.7%); urinary disorders including incontinence (10.1%); and vaginitis, STI, and other pelvic inflammatory conditions (9.2%). For those 45–64 years old, the most frequent RSH diagnosis was urinary disorders including incontinence (12.9%), followed by reproductive organ disorders—other (12.9%), menopausal disorders (9.8%), benign breast conditions (7.0%), and abnormal breast conditions (5.4%). Among those 65+ years old, the most frequent RSH diagnosis was urinary disorders including incontinence (17.8%), followed by osteoporosis (11.2%), menopausal disorders (5.3%), reproductive organ disorders—other (5.2%), and abnormal breast conditions (5.0%).

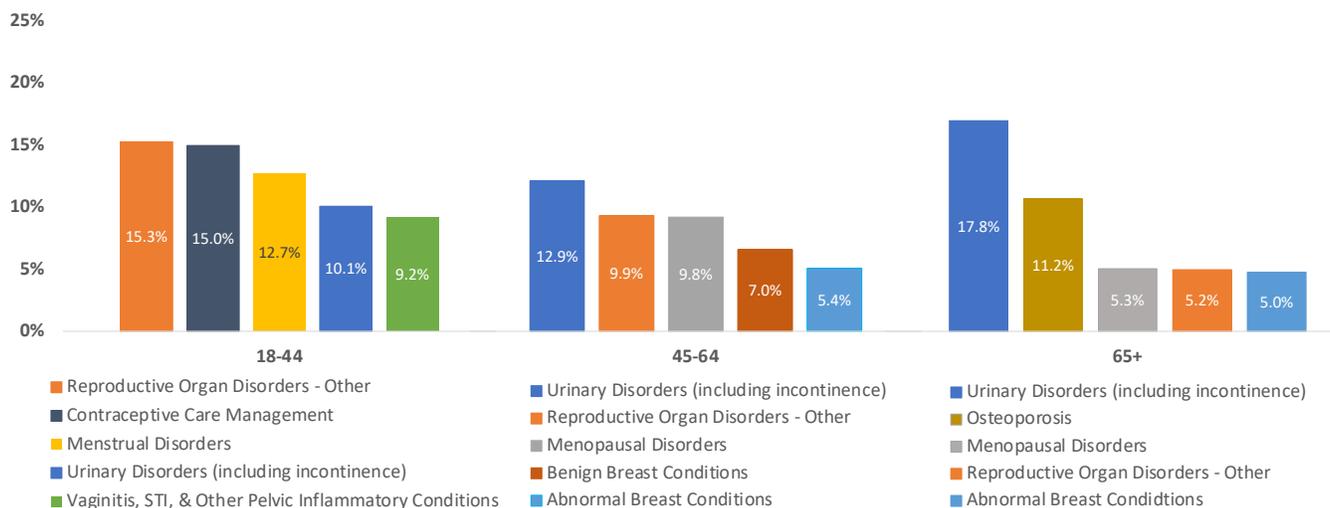


Figure 1. Top five reproductive and sexual health diagnoses among women/gender-diverse Veterans using VHA in FY18 by age group (18–44, 45–64, 65+)

**IMPLICATIONS:** The RSH needs of women/gender-diverse Veterans change over the life span; therefore, demand for services will reflect the shifting age distribution of those using VHA. Findings also indicate high demand for care for urinary conditions (including incontinence) across all age groups. Given this observation, continued investment in a variety of services for treating these conditions is necessary as the need is unlikely to decrease. Similarly, given the continued high frequency across all age groups of reproductive health organ conditions—other, VA needs to continue to build capacity to provide gynecological care both on-site at VHA medical centers and through VHA-authorized community care.

Another area of need is care for vaginitis, STI, and other pelvic inflammatory conditions. While these are among the top five RSH diagnoses only for those 18–44 years old, recent VHA data suggests lower than optimal screening rates for STIs among all women/gender diverse Veterans,<sup>29</sup> raising a concern about potential underdiagnosis. Therefore, it is essential to determine effective ways to meaningfully increase STI screening among all Veterans.

Given the high demand among those 18–44 years old for contraceptive management, continuing to develop this service so that it is truly patient-centered and consistent with changing paradigms in care is essential. Finally, for those 45–64 and 65+, there is continued need to better understand and develop programs to address menopausal symptoms and in particular, the intersection between the menopause transition and mental health.

**Topic Author: Carolyn J. Gibson, PhD, MPH**

The menopause transition is a period of vulnerability for mental health and well-being, with risk for negative mood symptoms, depression, and related comorbidity, such as insomnia, well-established in community samples.<sup>30</sup> Women/gender-diverse Veterans have a high prevalence of mental health risk factors and diagnoses across the life span.<sup>31</sup> Additionally, almost half of women/gender-diverse Veterans who are served by VHA are aged 45–64<sup>31</sup> and likely to be in or affected by the menopause transition. However, little published research to date has focused on Veterans' mental health during this vulnerable period of transition. The small body of research that exists supports increased risk for mental health concerns for Veterans during and after the menopause transition, particularly in the context of bothersome menopause symptoms. In the Women's Health Initiative, the negative impact of common menopausal vasomotor symptoms on health-related quality of life was stronger among postmenopausal Veterans than their civilian peers.<sup>32</sup> In two studies of Veterans of all ages receiving psychiatric evaluations in a single VHA Women's Health Center, a large proportion of participants (18% in a pilot evaluation,<sup>33</sup> 31% in a larger sample<sup>34</sup>) reported emotional problem intensification during perimenopause.

Several studies have used national VHA electronic health record data to examine associations between mental health diagnoses and common comorbidities with documented menopausal symptoms or disorders and/or menopausal hormone therapy, a proxy for bothersome menopause symptoms. Key findings are summarized below:

- Compared with women/gender-diverse Veterans without any reproductive health diagnoses, a higher proportion of Veterans with documented menopausal disorders and other reproductive health diagnoses have comorbid mental health conditions and increased VHA health care utilization.<sup>35</sup>
- Women/gender-diverse Veterans aged 45 and older with a documented mood, anxiety, and/or posttraumatic stress disorder were more likely to be prescribed menopausal hormone therapy than those without mental health diagnoses.<sup>36</sup>
- In 2001, the release of a Women's Health Initiative clinical trial led to a reversal in clinical recommendations and rapid decrease in menopausal hormone therapy use nationwide. Over the subsequent three years, Veterans with depression, posttraumatic stress disorder, and/or alcohol use disorder were less likely to discontinue menopausal hormone therapy than those without such diagnoses.<sup>37</sup>
- Prescribed menopausal hormone therapy and/or menopausal symptoms were associated with increased likelihood of chronic pain,<sup>38</sup> higher-risk opioid prescribing (long-term opioid receipt, high-dose long-term opioid receipt, and long-term opioids co-prescribed with other central nervous system depressants) in Veterans with chronic pain.<sup>39</sup>
- Menopausal hormone therapy was associated with a more than two-fold increased risk of death by suicide in a national sample of Veterans aged 50 and older, potentially capturing complex comorbidity and a range of often co-occurring, frequently unmeasured mental health risks related to the menopause transition and beyond.<sup>40</sup>

### 2.2.3 Reproductive health and sexual health diagnoses by race/ethnicity

This section examines the sex-specific reproductive health needs of women/gender-diverse Veterans across racial and ethnic groups. This section provides rates of diagnoses for Veterans with White, Black, or Hispanic race/ethnicity based on VHA administrative data (**Table 1**), but not for racial/ethnic subgroups where small numbers made meaningful comparisons difficult (see Table 4 for a breakdown of SRH diagnoses among American Indian/Alaska Native, Asian, or Native Hawaiian/Other Pacific Islander women/gender diverse Veterans). While race is a social construct, real biological consequences are tied to racism as evidenced by widespread and well-documented racial inequities in health outcomes in the U.S.<sup>41,42</sup> Some of the starkest examples of these inequities are evident in reproductive health and health care. For example, Black individuals are more than three times more likely to die due to pregnancy-related causes than are White individuals, and when compared with their White counterparts, they have higher burden

of disease, poorer outcomes related to uterine fibroids, and greater mortality from endometrial cancer.<sup>43</sup> While VHA provides an enhanced access environment that can potentially mitigate these inequities, a growing body of literature suggests that the enhanced access afforded by VHA is necessary, but not sufficient, for eliminating discrimination/inequities/racism. This highlights the fact that elevated risks for adverse reproductive outcomes, specifically for Black Veterans, remain regardless of income, education, and/or marital status.<sup>44,45</sup> Additionally, Black and Hispanic women/gender-diverse Veterans are, on average, younger than White women/gender-diverse Veterans using VHA; therefore, their reproductive health needs differ. Understanding the current RSH needs of Veterans by race/ethnicity is essential for program planning and addressing inequities. Patterns of reproductive and sexual diagnoses among AI/AN, Asian, and NH/OPI women/gender diverse veterans are distinct from other racial/ethnic groups and warrant further investigation. However, our ability to understand implications or reasons for these patterns is limited by the relatively small number of women/gender diverse veterans in these groups.

**Table 4. Frequency of reproductive and sexual health diagnoses among women/gender-diverse Veterans using VHA in FY18 by race/ethnicity**

Reproductive and sexual health diagnoses <sup>a</sup>	White N=273,954	Black N=150,244	Hispanic N=36,760	AI/AN N=6,352	Asian N=7,605	NH/OPI N=5,390
	%	%	%	%	%	%
Reproductive organ conditions—other <sup>b</sup>	10.5	13.5	13.8	11.6	11.7	11.6
Urinary conditions (including incontinence)	13.6	11.5	12.2	12.9	9.9	12.3
Menopausal disorders	6.5	5.7	4.4	5.4	3.8	5.7
Menstrual disorders and endometriosis	6.0	8.3	9.8	7.1	8.4	8.4
Vaginitis, STI, and other pelvic inflammatory conditions	4.5	8.7	7.4	5.5	5.4	5.0
Benign breast conditions	6.0	6.5	6.0	5.9	4.8	5.9
Contraceptive care management	6.4	6.6	11.2	7.8	10.4	6.8
Osteoporosis	4.3	1.3	1.7	2.5	2.1	2.4
Abnormal breast conditions	4.1	4.1	2.5	3.8	2.4	3.5
Pregnancy-related	3.0	3.2	5.7	3.4	4.9	4.3
Abnormal cervical screening	2.1	1.8	3.0	1.7	2.8	2.2
Breast cancer	2.2	1.8	1.2	1.4	1.1	1.9
Sexual dysfunction	1.2	1.0	1.5	1.1	1.1	1.0
Any gynecological cancer	0.9	0.4	0.4	0.6	0.4	0.6
Female infertility	0.8	1.2	1.7	1.1	1.8	1.5

<sup>a</sup> While osteoporosis, breast cancer, benign breast conditions, and abnormal breast conditions are not technically reproductive/sexual health diagnoses, they are included because screening for, incidence, and treatment of these conditions are closely related and have important implications across the reproductive life span. Similarly, contraceptive care management is a clinical care procedure rather than a diagnosis but is included as an essential and high demand RSH service. <sup>b</sup> Reproductive organ disorders—other includes fibroids, ovarian cysts, polycystic ovaries, benign gynecologic neoplasms—other, prolapse of female genital organs, and carcinoma in situ-female reproductive-other.

**Findings:** Table 4 shows the frequency of RSH diagnoses among White, Black, and Hispanic women/gender-diverse Veterans using VHA during FY18. Many of the largest differences in frequency by race/ethnicity were among age-specific conditions. For example, menstrual disorders were more common among Black and Hispanic Veterans than among White Veterans; Black and Hispanic Veterans tend to be younger than White Veterans. Conversely, menopausal disorders were more frequent among White Veterans relative to Black or Hispanic Veterans. Contraceptive management, pregnancy-related conditions, and abnormal cervical cancer screenings were all notably higher among Hispanic Veterans compared with White and Black Veterans in FY18.

**Figure 2** shows the top five most frequent RSH diagnoses among White, Black, and Hispanic women/gender-diverse Veterans in FY18. Across all three racial/ethnic groups, reproductive organ disorders—other (White 10.5%, Black 13.5%, Hispanic 13.8%) and urinary conditions (including incontinence) (White 13.6%, Black 11.5%, Hispanic 12.2%) were the top two most frequent RSH diagnoses in FY18. Among White Veterans using VHA in FY18, the remaining top five RSH diagnoses were menopausal disorders (6.5%), contraceptive care management (6.4%), and benign breast conditions (6.0%). Among Black Veterans using VHA in FY18, the remaining top five RSH diagnosis domains were vaginitis, STI, and other pelvic inflammatory conditions (8.7%), menstrual disorders (8.3%), and contraceptive care management (6.6%). Among Hispanic Veterans using VHA in FY18, the remaining top five RSH diagnoses were contraceptive care management (11.2%), menstrual disorders (9.8%), and vaginitis, STI, and other pelvic inflammatory conditions (7.4%).

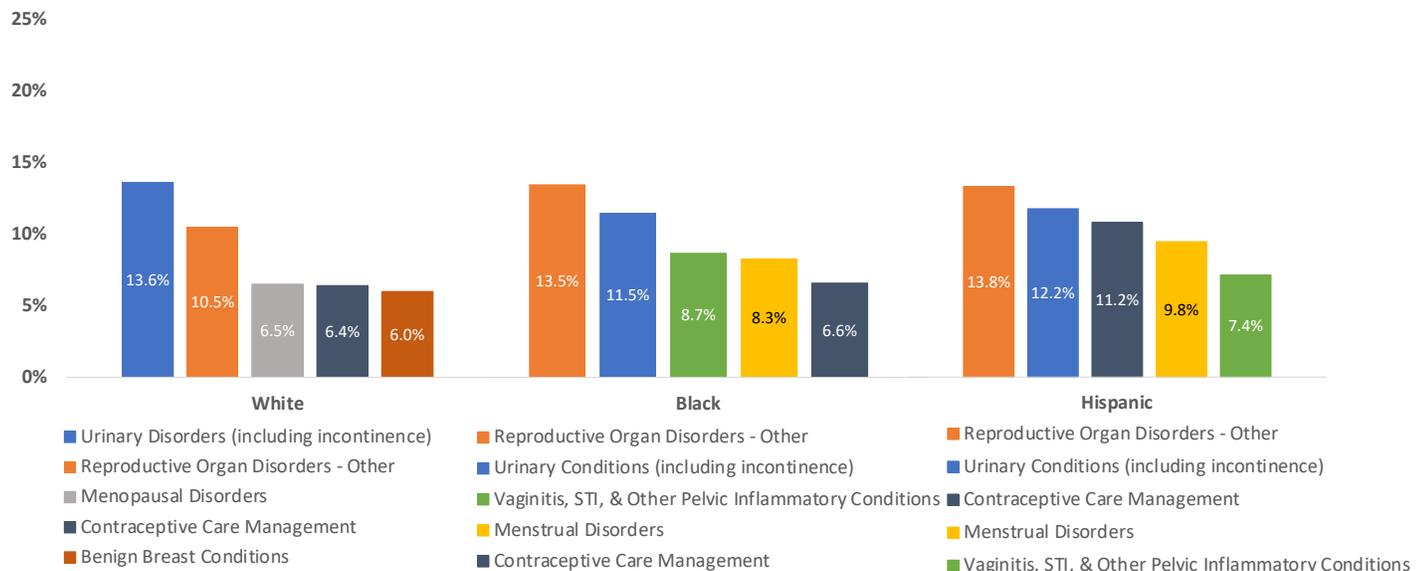


Figure 2. Top five reproductive and sexual health diagnoses among women/gender-diverse Veterans using VHA in FY18 by race/ethnicity (White, Black, Hispanic)

**IMPLICATIONS:** When examining the intersection of race/ethnicity with age, some racial/ethnic groups are younger than others. Black and Hispanic women/gender-diverse Veterans are, on average, younger than their White counterparts and more likely to be in their reproductive years (18–44 years old). Thus, Black and Hispanic women/gender-diverse Veterans have more need for contraceptive care management and treatment of menstrual disorders. Conversely, White women/gender-diverse Veterans tend to be older and nearer to menopause, resulting in a greater need for management of menopausal disorders. The data presented here do not allow for comparisons in quality of care or outcomes. However, recent data indicate that at least some racial inequities in RSH services and outcomes are evident within VHA.<sup>9,11,12,46,47</sup> As VHA continues to build capacity to provide patient-centered RSH services, VHA must ensure that this care is also culturally competent. Additionally, across all racial/ethnic groups, the two most frequent RSH diagnoses were reproductive organ conditions (other) and urinary conditions (including incontinence). These conditions were also among the top five reproductive health diagnoses with the greatest absolute increases in frequency between FY10 and FY18 in all groups. Therefore, building capacity for treating urinary conditions is critical to meet the needs of Veterans using VHA health care. Additionally, reproductive organ conditions—other as a category incorporates a diverse range of conditions; a more detailed examination of these conditions and how they vary by race/ethnicity in terms of frequency and outcomes is needed. Finally, there is a growing demand for breast care for benign and abnormal conditions, which also is an area requiring more research.

## **SPECIAL TOPIC 4: PATIENT-CENTERED REPRODUCTIVE HEALTH CARE: MEETING VETERANS' NEEDS FOR FAMILY PLANNING SERVICES**

**Topic Authors: Lisa Callegari, MD, MPH; Sonya Borrero, MD, MPH**

Patient-centered care—care that is respectful of and responsive to individual preferences, needs, and values—is recognized by the National Academies of Medicine as a core domain of health care quality.<sup>48</sup> As outlined in its 2018–2024 Strategic Plan, delivering patient-centered, personalized care and focusing on optimizing patient experiences of care are key strategic and operative priorities for VHA.

Patient-centeredness is particularly critical in family planning care, given the highly personal nature of conversations about reproduction and sexuality. A patient-centered approach in family planning care must emphasize patient values and preferences and support individual autonomy in decisions about family formation. Such an approach includes treating individuals and their decisions with respect, empathy, and understanding; fostering a trusting relationship; offering information to meet individuals' needs, which could include contraception, fertility services, and/or services to optimize health prior to desired pregnancies; and prioritizing individual preferences and values using strategies such as shared decision making.<sup>49,50</sup> Patient-centered family planning care is particularly important for low-income Veterans, disabled Veterans, and Black, Indigenous, and other Veterans of color, given the U.S.' long history of infringement on reproductive freedoms, including forced sterilization, in these populations.<sup>51</sup>

Over the past 10 years, VHA research and operational partners have joined forces to investigate Veterans' experiences and preferences related to VHA family planning care and to develop interventions that enhance delivery of patient-centered care and support Veterans' autonomy in reproductive decisions.

### **Understanding Veterans' Experiences and Preferences**

The Examining Contraceptive Use and Unmet Need Study (ECUUN), a national telephone-based survey of over 2,300 women Veterans aged 18–44 years receiving primary care at VHA, provided novel insights into Veterans' experiences of and preferences related to family planning care. Highlights include the following.

- Veterans were as likely as age-matched samples from the general U.S. population to experience unintended pregnancy and abortion, with those Veterans who are single or experiencing poverty and housing instability more likely to seek abortion services.<sup>52</sup> [The abortions reported by survey respondents for this report would not have been related to their VHA care. Abortion and abortion counseling have been excluded from the medical benefits package since it was created in 1999. However, as a result of the recent Supreme Court decision that overturned *Roe v. Wade*, certain states have begun to enforce abortion bans that create urgent risks to the lives and health of pregnant Veterans and VA beneficiaries. Therefore VA has determined that providing access to abortion-related medical services is needed to protect the lives and health of Veterans. Specifically, VA has acted to help to ensure that, irrespective of what laws or policies States may impose, eligible Veterans and CHAMPVA beneficiaries will be able to obtain abortions when: 1) the life or the health of the pregnant Veteran or VA beneficiary would be endangered if the pregnancy were carried to term; or (2) the pregnancy is the result of an act of rape or incest. Abortion counseling is now available to all eligible Veterans and CHAMPVA beneficiaries.]
- Among Veterans capable of pregnancy, only 44% reported receiving any family planning services (either discussion of contraception or optimizing health prior to pregnancy) from a VHA primary care physician in the past year. (*Quinn et al., under review*)
- Over 10% of racial/ethnic minority women Veterans reported experiencing race-based discrimination when receiving care in VHA settings, with perceived racial/ethnic discrimination associated with lower likelihood of prescription contraception use, especially IUDs and implants.<sup>53</sup>
- Significant differences exist in preferences for contraceptive methods by self-identified race/ethnicity, demonstrating that contraceptive choice is highly preference-sensitive. On average, Black Veterans were less likely to feel that method effectiveness was extremely important to them. Black and Latinx Veterans were more likely to prefer methods that do not contain hormones, compared to White Veterans.<sup>54</sup>

- Preference for lack of hormones, but not preference for method effectiveness, is associated with use of sterilization among Veterans.<sup>55</sup>
- Contraceptive knowledge was low among all Veterans, but Black and Latinx Veterans had lower knowledge scores than White Veterans, suggesting that improved contraceptive education is needed to address disparities and promote equity.<sup>56</sup>
- Note: transgender men were not included in this study. This represents an opportunity to further explore the contraceptive needs of the transmasculine population, particularly as testosterone is not an effective contraceptive method and is potentially teratogenic.<sup>57-61</sup>

Several qualitative studies provide additional insights into Veterans' experiences and preferences regarding family planning care.

- In interviews among a subset of Veterans surveyed in the ECUUN study, barriers to contraceptive use included poor efficiency of VHA systems, limited contraceptive counseling and patient education, low patient awareness of services, and poor interactions with providers.<sup>62</sup>
- A 2019 qualitative study highlighted negative experiences both in the military and VHA around family planning care (e.g., perceived gender-based discrimination and pressure to choose certain contraceptive methods, perceived judgment of their reproductive choices, and a lack of continuity with providers) and positive experiences (e.g., feeling respected, receiving comprehensive information about options, and having their perspectives and concerns elicited).<sup>10</sup>
- A 2012 study found that female Veterans felt their preferences and opinions were not considered in discussions about contraception, with some describing feeling pressured to use certain methods.<sup>63</sup>

### **Promoting Patient-centered Family Planning Services in VA**

With the goal of improving the quantity and quality of family planning counseling and care in VA, Health Services & Development (HSR&D) researchers developed MyPath, a patient-facing web-based reproductive decision support tool. Designed to be used in conjunction with primary care visits, MyPath's objectives include augmenting Veterans' knowledge related to fertility and contraception; optimizing health before pregnancy; facilitating high-quality reproductive decision making; and supporting patient-centered interactions with providers that emphasize Veterans' values, preferences, and needs.

Preliminary pilot data indicate high acceptability of MyPath among Veterans and primary care physicians and promising effects on Veterans' knowledge and decision making quality.<sup>64</sup> In partnership with the Office of Women's Health, researchers are currently evaluating MyPath, delivered to Veterans prior to primary care visits by text message, in a multi-site pragmatic randomized controlled trial. As it can be incorporated in virtual care models and is highly scalable, MyPath has the potential to impact Veterans' experiences and outcomes in today's rapidly evolving health care landscape and to reach vulnerable Veterans, including those residing in rural areas.

Future work should focus on characterizing and centering the needs of the growing population of Veterans from marginalized groups, including Black, American Indian/Alaska Native, and LGBTQ+ Veterans, who often experience lower quality care and poorer reproductive health outcomes.<sup>65,66</sup> Efforts to improve patient-centeredness and quality of care must also address inequities and close gaps in quality of care for marginalized populations.

## 2.2.4 Reproductive and sexual health diagnoses by rurality

Approximately one-third of women/gender-diverse Veterans using VHA health care reside in rural or highly rural areas. In the U.S., health care shortages in rural areas are frequently reported, including shortages in RSH services.<sup>1,2</sup> Recognizing the challenges of providing rural health care, VHA has invested heavily in telehealth technology and in establishing CBOCs that can provide basic primary care and, occasionally, mental health care services. However, CBOCs are unlikely to be able to provide more specialized RSH services.<sup>67</sup> Further, women/gender-diverse Veterans who live in rural areas tend to be older, and, therefore, their RSH needs may be different than those who live in more urban environments. Understanding the RSH needs of Veterans by rurality is particularly critical given expansions in telehealth due to the coronavirus disease 2019 (COVID-19) pandemic and potential delays in non-urgent care that could only be provided in person, e.g., IUD insertion/removal. Notably, it is also unclear to what extent these changes may persist post-pandemic.

**Table 5. Frequency of reproductive and sexual health diagnoses among women/gender-diverse Veterans using VHA in FY18 by rurality**

Reproductive and sexual health diagnoses <sup>a</sup>	Urban N=373,853	Rural/Highly Rural N=134,631
	%	%
Reproductive organ conditions—other <sup>b</sup>	11.7	11.0
Urinary conditions (including incontinence)	12.2	13.0
Menopausal disorders	5.7	6.6
Menstrual disorders and endometriosis	7.3	6.1
Vaginitis, STI, and other pelvic inflammatory conditions	6.5	4.6
Benign breast conditions	5.9	6.2
Contraceptive care management	7.3	5.8
Osteoporosis	2.7	3.6
Abnormal breast conditions	3.7	4.3
Pregnancy-related	3.4	3.1
Abnormal cervical screening	2.1	1.8
Breast cancer	1.8	2.1
Sexual dysfunction	1.1	1.2
Any gynecological cancer	0.6	0.8
Female infertility	1.1	0.8

<sup>a</sup> While osteoporosis, breast cancer, benign breast conditions, and abnormal breast conditions are not technically reproductive/sexual health diagnoses, they are included because screening for, incidence, and treatment of these conditions are closely related and have important implications across the reproductive life span. Similarly, contraceptive care management is a clinical care procedure rather than a diagnosis but is included given it is an essential and high demand RSH service. <sup>b</sup> Reproductive organ disorders—other includes fibroids, ovarian cysts, polycystic ovaries, benign gynecologic neoplasms—other, prolapse of female genital organs, and carcinoma in situ—female reproductive—other.

**Findings:** Table 5 shows the frequency of RSH diagnoses among women/gender-diverse Veterans using VHA by rurality in FY18. Compared with rural/highly rural-dwelling Veterans, those who were urban-dwelling had a greater frequency of RSH diagnoses that are associated with younger age. For example, 7.3% of urban-dwelling Veterans had an indication for contraceptive care management compared with 5.8% of rural and highly rural-dwelling women Veterans. These results likely reflect known trends of younger Veterans being more likely to live in urban locations.

**Figure 3** shows the top five most frequent RSH diagnoses among women/gender-diverse Veterans using VHA in FY18 by rurality. In both groups, the most two most frequently-occurring RSH diagnoses were urinary conditions including incontinence (urban 11.7%; rural/highly rural 13.0%) and reproductive organ conditions—other (urban 12.2%; rural/highly rural 13.0%).

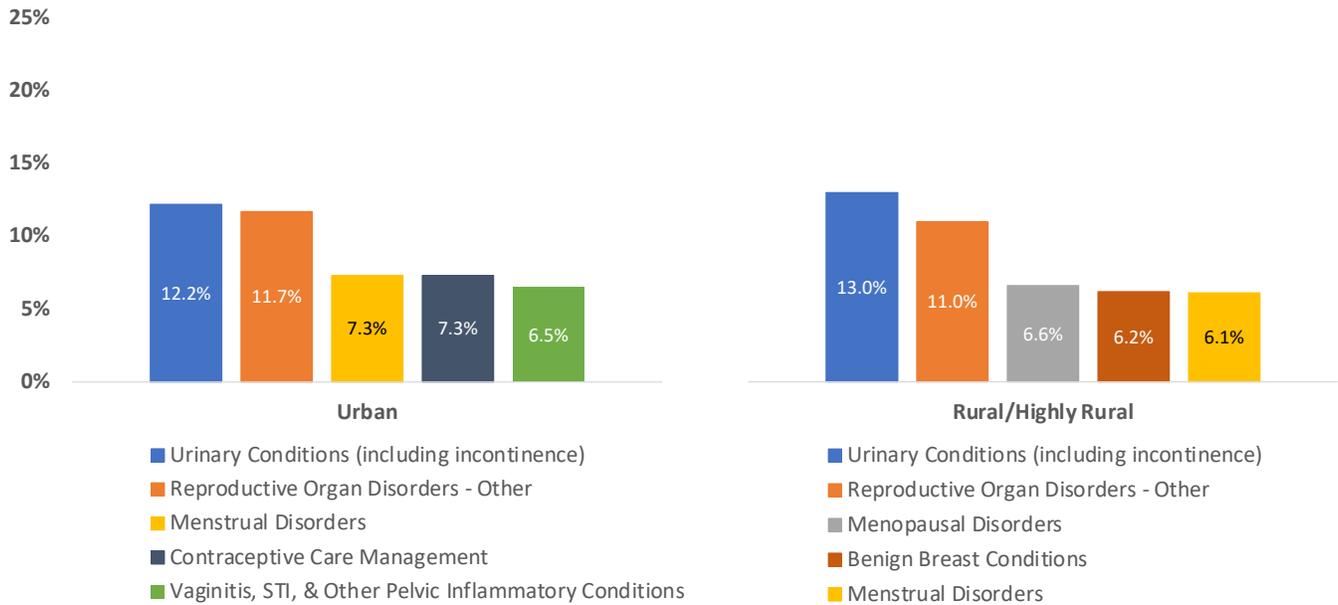


Figure 3. Top five most frequent reproductive and sexual health diagnoses among women/gender-diverse Veterans using VHA in FY18 by rurality

Among those who were urban dwelling, the remaining top RSH diagnoses included menstrual conditions (7.3%), contraceptive care management (7.3%), and vaginitis, STI, and other pelvic inflammatory conditions (6.5%). Among rural and highly rural Veterans, the remaining top RSH diagnoses were menopausal conditions (6.6%), benign breast conditions (6.2%), and menstrual disorders (6.1%).

**IMPLICATIONS:** Rural and highly rural-dwelling women/gender-diverse Veterans have different RSH needs than their urban-dwelling counterparts, aligning with the observation that a greater proportion of the rural/highly rural group are older. Ensuring access to needed RSH services may be more challenging for rural/highly rural-dwelling Veterans as there is already a documented shortage of these services in rural settings.<sup>1,2</sup> Exploring whether telehealth can help address some of these issues, entering into innovative partnerships with local organizations, and using mobile service models may help facilitate access to RSH care in rural and highly rural areas.

### 2.3 Changes in Demographic Characteristics and Reproductive and Sexual Health Diagnoses Among Women/Gender-diverse Veterans Using VHA from FY10–FY18

This section details changes in both demographics and RSH diagnoses between FY10 and FY18. Given the rapid growth in the number of women/gender-diverse Veterans using VHA for health care, even a small change in the percentage of Veterans with a particular diagnosis may translate to a large increase in the absolute number of Veterans with that diagnosis. Therefore, in this section, we discuss changes in demographics and RSH diagnoses both in terms of changing frequencies (percentage with a given characteristic/diagnosis) and absolute numeric increases (difference in the number of Veterans with a given characteristic/diagnosis) over time.

### 2.3.1 Changes in demographics among women/gender-diverse Veterans using VHA from FY10 to FY18

**Findings:** There was a slight shift upwards in age distribution of women/gender-diverse Veterans using VHA from FY10 to FY18 (**Table 6**). The change in age distribution likely reflects a shift in new enrollees in VHA and aging among those continuously enrolled. While the shift in age distribution was subtle, the absolute numbers have increased dramatically, nearly doubling across all age groups.

**Table 6. Demographic characteristics, health profile, and health care utilization of women/gender-diverse Veterans using VHA in FY10 and FY18**

Demographic characteristics	FY10 (N=317,122)		FY18 (N=510,179)	
	N	%	N	%
<b>Age</b>				
18–44	134,338	42.4	208,187	40.8
45–64	141,257	44.5	234,270	45.9
≥ 65	41,492	13.1	67,556	13.2
<b>Race/ethnicity</b>				
White, non-Hispanic	190,705	60.1	273,954	53.7
Black, non-Hispanic	84,160	26.5	150,244	29.4
Hispanic	17,391	5.5	36,760	7.2
American Indian/Alaska Native	2,557	0.8	6,352	1.2
Asian	3,292	1.0	7,605	1.5
Native Hawaiian/Other Pacific Islander	2,421	0.8	5,390	1.1
Multi-race <sup>a</sup>	3,228	1.0	N/A	N/A
Unknown	13,368	4.2	29,874	5.9
<b>Rurality</b>				
Urban	202,335	63.8	373,853	73.3
Rural	108,729	34.3	130,538	25.6
Highly rural	3,735	1.2	4,093	0.8
Island <sup>b</sup>	N/A	N/A	485	0.1
<b>Service-connected condition</b>				
None	139,069	43.9	160,089	31.4
0–49 percent	92,592	29.2	111,760	21.9
50–99 percent	68,908	21.7	178,550	35.0
100 percent	15,775	5.0	58,251	11.4
<b>Health profile</b>				
≥ 1 Mental health condition	135,690	42.8	265,401	52.0
≥ 1 Medical health condition (Excluding RH conditions)	279,984	88.3	467,622	91.7
≥ 1 RH condition	145,372	45.8	215,341	42.2
<b>Community care utilization</b>				
≥1 Non-VHA medical care encounters <sup>c</sup>	85,827	27.1	207,290	40.6

<sup>a</sup> Due to updates in WHEI's race/ethnicity algorithm, there is no "multi-race" category in FY18; <sup>b</sup> There was no "Island" category in FY10 data. VHA began classifying patients with insular island residence in the PSSG's "URH" field in FY14Q4; <sup>c</sup> The FY10 counts for ≥1 non-VHA medical care encounter includes any encounter recorded in the FY10 Fee inpatient/outpatient files. The FY18 counts for ≥1 non-VHA medical care encounter includes any community care encounter recorded in the FY18 Fee inpatient/outpatient files or the PIT Professional or PIT Institutional claims datasets with service dates in FY18, (PIT Data accessed 5-11-2021).

In terms of race/ethnicity, from FY10 to FY18, the percentage of women/gender-diverse Veterans using VHA who identified as Black increased from 26.5% to 29.4%. At both time points, the largest group of women/gender-diverse Veterans using VHA were White, and the second largest group were Black. Notably, the percentage who identify as Hispanic, American Indian/Alaska Native, Asian, or Native Hawaiian/Other Pacific Islander is also growing.

From FY10 to FY18, the percentage of women/gender-diverse Veterans using VHA who lived in rural or highly rural areas decreased by about ten percentage points. Additionally, the percentage of women/gender-diverse Veterans using VHA with 50–99 percent service-connection increased from 21.7% to 35.0% and the percentage with 100 percent service-connection increased from 5.0% to 11.4%. This represented net increases of 109,642 Veterans and 42,476 Veterans, respectively.

The percentage of women/gender-diverse Veterans using VHA with a mental health diagnosis increased from 42.8% in FY10 to 52.0% in FY18. There were only minor increases (<5%) in the percentage with either a non-reproductive health medical condition or a reproductive or sexual health diagnosis during this time-period. However, since the overall number of women/gender-diverse Veterans using VHA increased, even these small changes represented substantial changes in the absolute number of Veterans with these conditions. The number with any reproductive health diagnosis increased from 145,372 in FY10 to 215,341 in FY18.

Finally, the percentage of women/gender-diverse Veterans using VHA who had at least one community care visit increased from 27.1% to 40.6% from FY10 to FY18, corresponding to a more than a doubling in absolute number from 85,827 in FY10 to 207,290 in FY18.

**IMPLICATIONS:** Women/gender-diverse Veterans are aging, but approximately 40% are still within their reproductive years (18–44 years old). VHA will need to continue to build capacity to meet the RSH needs of younger women/gender-diverse Veterans (e.g., contraception, pregnancy care), while simultaneously developing programs and plans for caring for those over 45 years old (e.g., breast care, pelvic floor disorders, menopausal symptom management). Women/gender-diverse Veterans continue to constitute one of the most racially and ethnically diverse groups of VHA users. Ensuring access to equitable, culturally competent reproductive and sexual health care is essential if VHA is to be seen as the provider of choice among women and gender diverse Veterans. The number of women/gender-diverse Veterans who were at least 50 percent service-connected increased dramatically between FY10 and FY18. This is likely a combination of retention of ongoing VHA users and the addition of new VHA users. Those with highest service-connected condition ratings (50–100 percent) may be eligible for VHA care with no co-payment and, therefore, may be more likely to continue using VHA health care across the life span. Thus, it is likely that as these Veterans age, VHA will need to ensure access to reproductive and sexual health care with particular applicability to older Veterans, such as management of menopause and pelvic floor disorders. Finally, increased utilization of community care is likely due to a combination of policy changes, which make it easier for Veterans to opt for care in the community, and rising demand for services due to the dramatic increase in the number of women/gender-diverse Veterans using VHA. Increased utilization of community care underscores the need to continue to invest in effective care coordination and to raise awareness among non-VHA providers regarding the unique needs of women/gender diverse Veterans. This is particularly important given the high burden of medical and mental health comorbidities among these Veterans.

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### **Pregnancy Care Access for VHA-enrolled Veterans**

VHA-enrolled Veterans have pregnancy-care benefits through preconception, prenatal, and postpartum periods, but VHA largely does not provide on-site obstetric services due to a relatively low volume of Veterans seeking such care.<sup>68</sup> Obtaining pregnancy care from a non-VHA system creates potential for fragmentation of care. Challenges associated with accessing multiple systems of care may lead to delayed or inadequate prenatal and postpartum care.<sup>69-72</sup>

### **VHA Maternity Care Coordination Program**

In 2012, VHA established a policy designating VHA Maternity Care Coordinators (MCCs) to assist Veterans in their pregnancy care and coordination.<sup>73</sup> VHA's Maternity Care Coordination program helps ensure that Veterans have access to appropriate health care services during the perinatal and postpartum periods. Providing pregnancy care coordination between VHA sites of care and community maternity services is particularly important given Veterans' high prevalence of physical and mental health conditions that can negatively impact their pregnancy and birth outcomes.<sup>12,74-76</sup> Furthermore, there is a higher representation of Black, American Indian/Alaska Native, and rural individuals in VHA than in the general population, and these groups are known to experience disproportionately poorer pregnancy outcomes.<sup>12</sup>

### **Implementation and evaluation of VHA MCC Program**

Although the MCC program has been around for only a decade, several recent studies have evaluated its implementation and impact. Key findings include:

#### **Areas of Success:**

- 60 to 75% of Veterans who used VA maternity care reported working with an MCC during their pregnancy.<sup>77,78</sup>
- Veterans view MCCs as critical for their pregnancy care access and experience, assisting Veterans in navigating and coordinating both VHA and non-VHA care, resources, and billing issues.<sup>68,69</sup>
- A centralized VHA MCC telehealth program at the Veterans Integrated Services Network (VISN) level leverages resources and skills to serve Veterans across multiple geographic locations and rural areas.<sup>68</sup>
- Collaboration between MCCs and mental health providers improves perinatal mental health screening and care for pregnant and postpartum Veterans.<sup>68,79</sup>

#### **Areas for Improvement:**

- Racial inequities persist among Veterans accessing perinatal care, including the use of the MCC program.<sup>78,80</sup> MCCs should be equipped to intervene with cultural respect and cognizance of the social factors that impact health disparities.<sup>81-83</sup>
- MCCs need better information technology tools to track calls and workload, as well as more designated time to carry out coordination work.<sup>77</sup>
- MCCs need tools and training to ensure that the MCC program is welcoming and prepared to support LGBTQ+ Veterans (also see Special Topic 2).

### **Implications for Veteran Pregnancy Care**

Veterans experience unique and complex care challenges around pregnancy and the postpartum period. VHA MCCs play a key role in assisting Veterans to navigate VHA benefits and multiple care systems. Positive outcomes have been reported for the MCC program; however, more ongoing research using a variety of methods is needed to evaluate the implementation of the program across VHA and its systematic impact on Veterans' pregnancy care and outcomes. The MCC program has valuable potential to improve care for

historically disadvantaged and high-risk Veteran populations.<sup>84</sup>As such, VHA facilities must fully resource MCC programs with the necessary staffing, tools, and access to specialty clinicians to equitably support Veterans through pregnancy and postpartum.

### 2.3.2 Changes in reproductive and sexual health diagnoses among women/gender-diverse Veterans using VHA, FY10–FY18

#### 2.3.2.1 Changes in reproductive and sexual health diagnoses overall, FY10–FY18

Findings: Table 7 shows the overall frequency of RSH diagnoses among women/gender-diverse Veterans using VHA in FY10 and FY18, and the change between these two time points. There was little change in the most frequent diagnoses over time, with reproductive organ disorders and urinary conditions (including incontinence) being the most prevalent diagnoses in both FY10 and FY18. Overall, the changes were mostly small, but given the influx of women/gender-diverse Veterans using VHA, these small shifts translated to a substantial increase in demand for care in terms of absolute numbers. For example, infertility among women/gender-diverse Veterans was one of the least common diagnoses in both FY10 and FY18, increasing only 0.4% in that timeframe. However, there was more than a two-fold increase in the absolute number of Veterans with these diagnoses (FY10 N=1,980; FY18 N=5,244).

**Table 7. Frequency of reproductive and sexual health diagnoses among women/gender-diverse Veterans using VHA in FY10 and FY18**

Reproductive and sexual health diagnoses <sup>a</sup>	FY10 (N=317,122)		FY18 (N=510,179)		ΔN	Δ(%)
	N	%	N	%		
Reproductive organ disorders—other <sup>b</sup>	38,362	12.1	58,702	11.5	20,340	-0.6
Urinary conditions (including incontinence)	37,668	11.9	63,230	12.4	25,562	+0.5
Menopausal disorders	26,968	8.5	30,158	5.9	3,190	-2.6
Menstrual disorders and endometriosis	22,979	7.2	35,699	7.0	12,720	-0.2
Vaginitis, STI, and other pelvic inflammatory conditions	21,464	6.8	30,362	6.0	8,898	-0.8
Benign breast conditions	20,343	6.4	30,537	6.0	10,194	-0.4
Contraceptive care management	19,516	6.2	34,952	6.9	14,436	+0.7
Osteoporosis	14,540	4.6	15,027	2.9	487	-1.7
Abnormal breast conditions	8,486	2.7	19,551	3.8	11,065	+1.1
Pregnancy-related	8,293	2.6	16,775	3.3	8,482	+0.7
Abnormal cervical screening	7,378	2.3	10,298	2.0	2,920	-0.3
Breast cancer	6,833	2.2	9,663	1.9	2,830	-0.3
Sexual dysfunction	2,409	0.8	5,748	1.1	3,339	+0.3
Any gynecological cancer	2,354	0.7	3,287	0.6	933	-0.1
Female infertility	1,980	0.6	5,244	1.0	3,264	+0.4

<sup>a</sup> While osteoporosis, breast cancer, benign breast conditions, and abnormal breast conditions are not technically reproductive/sexual health diagnoses, they are included because screening for, incidence, and treatment of these conditions are closely related and have important implications across the reproductive life span. Similarly, contraceptive care management is a clinical care procedure rather than a diagnosis but is included given it is an essential and high demand RSH service. <sup>b</sup> Reproductive organ disorders—other includes fibroids, ovarian cysts, polycystic ovaries, benign gynecologic neoplasms—other, prolapse of female genital organs, and carcinoma in situ-female reproductive—other.

**Figure 4** shows the five RSH diagnoses with the greatest absolute increases between FY10 and FY18. The five RSH diagnoses with the largest increases in absolute frequency were urinary disorders (including incontinence) (N=25,562), reproductive organ conditions-other (N=20,340), contraceptive care and management (N=15,436), menstrual disorders (N=12,720), and abnormal breast conditions (N=11,065).

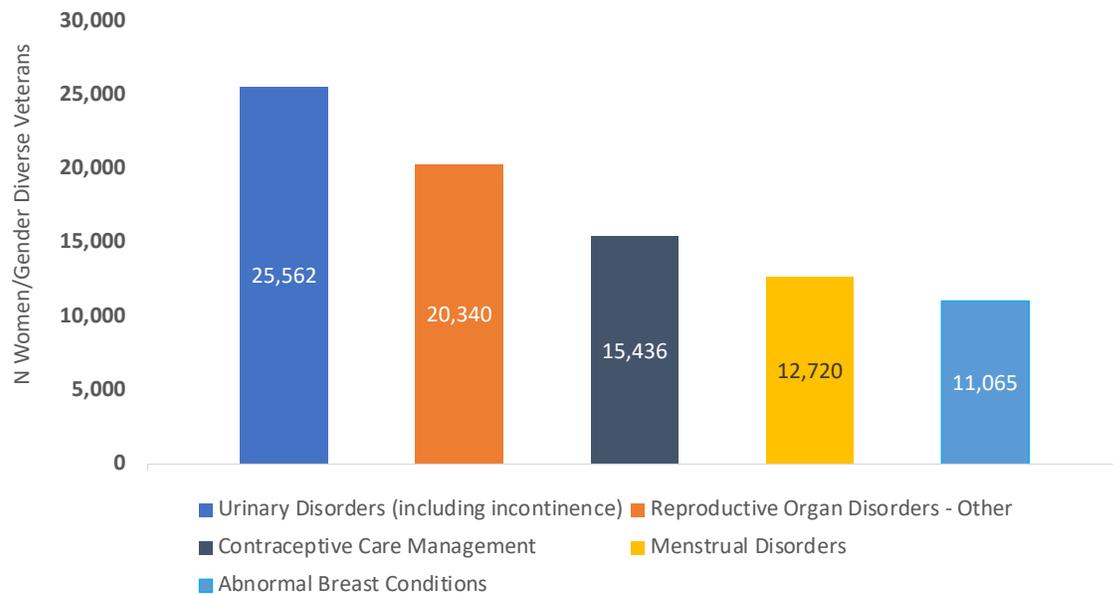


Figure 4. Five reproductive health diagnoses with the greatest absolute increases between FY10 and FY18

**IMPLICATIONS:** While core RSH needs of women/gender-diverse Veterans remain relatively consistent over time, the large increase in the number of these Veterans using VHA health care has led to a meaningful rise in the number of individuals needing these services. In particular, a growing need exists for gynecological care, including surgery, pelvic floor physical therapy, complex contraceptive counseling, and breast care. As VHA continues to increase capacity to provide reproductive and sexual health care for women and gender diverse Veterans, it needs to consider the geographic distribution of Veterans and related differences in demand. Additionally, given the increased use of community care following the enactment of the Veterans Access, Choice, and Accountability Act (CHOICE) Act and, thereafter, the VA Maintaining Internal Systems and Strengthening Integrated Outside Networks (MISSION) Act, VHA should consider both the demand for care and the external care environment when making decisions regarding increasing internal capacity to provide RSH services. In doing so, VA must take into account that some VHA facilities are in “gynecologist deserts,”<sup>2</sup> where a lack of gynecology services in the local community means that community care referrals cannot be used as an approach to address a lack of on-site gynecology services at VHA facilities

### 2.3.3 Changes in reproductive and sexual health diagnoses by age group, FY10–FY18

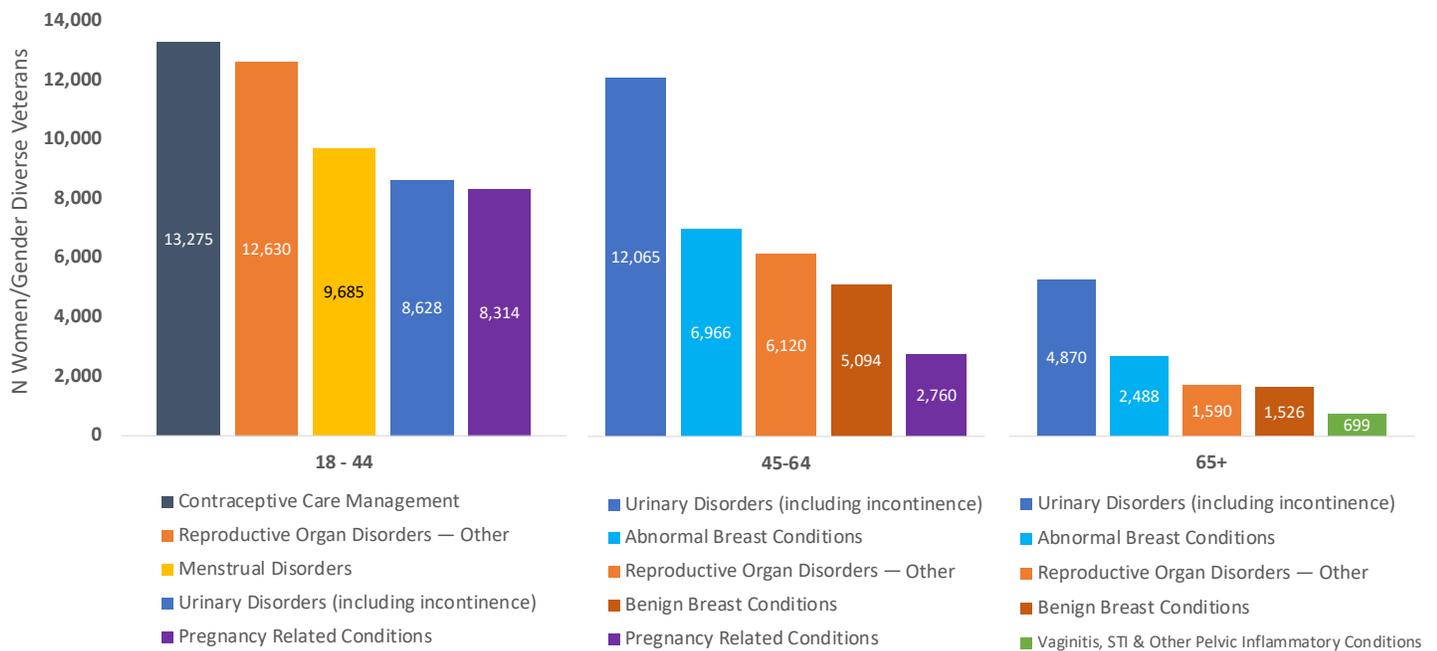


Figure 5. Top five sex-specific reproductive health diagnoses with the largest absolute increase in number of diagnoses, by age group (18–44, 45–64, 65+)

**Findings: Figure 5** shows the five RSH diagnoses with the largest absolute increases from FY10 to FY18 by age group (18–44, 45–64, 65+). Among those 18–44 years old, four of the five diagnoses with the biggest absolute increases were also the top five most frequent diagnoses for this age group. Notably, while not in the top five most frequent diagnoses, pregnancy-related conditions had the fifth largest absolute increase of any diagnosis in this age group. The largest absolute increase in any age group was observed for contraceptive care and management among those 18-44 years old (N=13,275).

## SPECIAL TOPIC 6: PREGNANCY-RELATED MORBIDITY AND MORTALITY

**Topic Authors: Deirdre A. Quinn, PhD, MSc, MLitt; Joan Combellick, PhD, MPH, MSN, CNM**

The U.S. has the highest maternal mortality among high-income countries. Severe maternal morbidity (SMM), defined as unintended outcomes of labor and delivery (e.g., acute heart failure, stroke, sepsis) within 42 days of birth that result in significant short- or long-term consequences to a person’s health,<sup>85</sup> is often used in research as a proxy for maternal mortality because it is more frequent and is considered a “near miss” for death. Despite increased attention in the media and at the local, state, and national policy levels, SMM rates have not improved in recent years and racial disparities have persisted.<sup>86</sup> However, progress is being made on improved data tracking and reporting systems,<sup>87</sup> implementation of maternal health safety bundles,<sup>88</sup> clinical workforce training and patient education, and the work of local and national advocacy organizations on behalf of differentially affected populations (e.g., Black Mamas Matter Alliance, SisterSong).<sup>89</sup> Research also suggests areas to prioritize going forward, many of which would align care in the U.S. with that in countries where pregnant people are significantly more likely to experience a healthy pregnancy and birth. These include expanding the midwifery workforce,<sup>90</sup> building a more integrated care system in regard to birth setting options,<sup>91</sup> targeting quality improvement, especially at institutions serving primarily Black individuals,<sup>92</sup> and universal access to pregnancy care,<sup>93</sup> including full Medicaid expansion to all pregnant individuals and Medicaid extension up to a full year post-delivery.<sup>94</sup>

Population characteristics, including the relatively high prevalence of multiple comorbid medical and mental health conditions that are associated with poor outcomes for pregnant and postpartum individuals, suggest

that Veterans may be at especially high risk for adverse pregnancy outcomes.<sup>75,95,96</sup> System- and provider-level factors may also impact pregnancy outcomes among Veterans. Pregnancy care for Veterans is contracted to community providers outside VHA through the Office of Community Care.<sup>97</sup> This referral process may lead to lack of coordinated services and care fragmentation,<sup>95,98</sup> system-level factors that have been associated with poor pregnancy outcomes.<sup>99</sup> Furthermore, community providers may be unprepared to comprehensively meet the needs of Veterans.<sup>100</sup> VHA has implemented innovations to address care coordination needs, including VHA-based Maternity Care Coordinators, who are assigned to pregnant Veterans to coordinate care and provide support and referral as needed, and educational programs for community providers about the unique needs and characteristics of Veterans.<sup>101</sup> Data from the Centers for Disease Control and Prevention (CDC) suggest that around 60% of pregnancy-related deaths overall in the U.S. are preventable regardless of health status,<sup>102</sup> reinforcing the importance of quality at the provider- and system-level for all pregnant and birthing people.

Two recent studies<sup>12,103</sup> used criteria published by CDC<sup>104,105</sup> to identify cases of SMM and pregnancy related mortality in national samples of reproductive-age Veterans.

Combellick et al.<sup>12</sup> conducted the first evaluation of SMM and pregnancy related mortality in pregnant Veterans who used VHA pregnancy benefits. This study investigated 9,829 pregnancies among 91,061 post-9/11 Veterans between January 2014 and December 2016. This study followed Veterans through the first year postpartum and was based on individual chart review to confirm findings of SMM. Results echoed those found nationally. High rates of mental health conditions, obesity, rurality, and racial disparities were noted among Veterans who experienced life-threatening pregnancy-related events. Forty-eight percent of all SMM events occurred in the postpartum period following discharge from the hospital, with the majority of these occurring during the first week. The most common morbidity events included systemic infection, high blood pressure disorders, blood clots, blood transfusion requiring more than four units of blood products, and heart failure.

In the second study,<sup>103</sup> Quinn et al. identified 31,592 pregnancy outcomes among 23,432 Veterans who used VHA and pregnancy benefits during FY 2010–2017. One or more SMM events from last menstrual period to within one year of pregnancy outcome were recorded for 2.5% of pregnancies (N=806). An SMM event complicated 3.4% of pregnancies among Black Veterans, 2.4% of pregnancies among White Veterans, and 1.7% of pregnancies among Hispanic Veterans ( $p < 0.001$ ). Excluding transfusion, the most common morbidity events included systemic infection, blood clots, acute heart failure, bleeding disorders, and the need for life support, such as ventilators. Black Veterans were 46% more likely than White Veterans to experience SMM (odds ratio = 1.46, 95% confidence interval: 1.24, 1.70). Parental death within one year of a pregnancy outcome was recorded for 21 pregnancies during the study timeframe; 7 of those deaths occurred within the first 42 days postpartum.

These two studies suggest the need to further refine case identification algorithms and implement ongoing pregnancy outcome surveillance mechanisms at VA. The Office of Reproductive Health is actively engaged in developing surveillance activities, program management, strategies to improve wrap-around perinatal care, and strategic partnerships to continue to address morbidity and mortality among pregnant and postpartum Veterans who use VHA pregnancy benefits.

Among those 45–64 years old, four out of five of the RSH diagnoses with the largest absolute increases were also among the top five most frequent diagnoses. The exception was menstrual disorders, which increased in this age group by 2,760 individuals between FY10 and FY18 but was not among the top five for frequency in this age group for either year. Absolute increases in the 45–64 years old age group were slightly smaller than among those 18–44 years old.

Among those 65+ years old, three of the top five RSH diagnoses with largest absolute increases in frequency were also among the top five most frequent diagnoses. Benign breast conditions and vaginitis, STI, and other pelvic inflammatory conditions were not among the top five most frequent conditions for this age group in either FY10 or FY18 but saw some of the largest absolute increases. Absolute increases were lowest among this age group.

**IMPLICATIONS:** The RSH needs of women/gender-diverse Veterans change over the life span and demand for services will reflect the shifting age distribution of those using VHA. However, while the number of Veterans 44–65 years old using VHA continues to increase, the largest absolute increases in frequency of RSH diagnoses were observed among those 18–44 years old. This likely reflects a combination of a substantial increase in the number of women/gender-diverse Veterans in this age group, greater age-related RSH needs (e.g., contraception, pregnancy, fertility), and increased reliance on VHA. Findings also indicate increasing demand for care for urinary conditions (including incontinence) across all age groups. Given this observation, continued investment in a variety of services for treating these conditions is necessary as the demand is unlikely to decrease. There is also a need to continue to build capacity to provide gynecological care both on-site at VHA medical centers and through community care. Another area of need is care for vaginitis, STI, and other pelvic inflammatory conditions. Specifically, there was a small but notable increase in STI diagnoses among those 65+ years old, suggesting that this may be an emerging area requiring additional attention. Therefore, it is essential to determine effective ways to meaningfully increase STI testing among all Veterans. Additionally, as the current cohort of 18–44-year-old women/gender-diverse Veterans ages, they will need expanded access to care for menopausal disorders and breast care.

### 3 Organization and Availability of Reproductive and Sexual Health Care for Women/Gender-diverse Veterans in VHA

Given the influx of women/ gender-diverse Veterans, VHA has had to rapidly increase capacity and expand RSH services. Reproductive and sexual health care includes both basic services, such as contraception (excluding IUD insertion/removal), and specialized services, such as gynecological surgery.<sup>67,106</sup> While many basic RSH services can be provided in the context of primary care, specialized services may not be available on-site. Some examples of specialized RSH services include IUD insertion/removal, gynecological surgery, gynecologic-oncology care, certain imaging (e.g., transvaginal ultrasound), and reproductive endocrinology. For the last 15 to 20 years, health care for women/gender-diverse Veterans within VHA has undergone a rapid transformation. This includes increasing the number of VHA medical centers with comprehensive women’s health clinics; training designated women’s health providers with the Women’s Health Mini Residency Program;<sup>107</sup> supporting the VHA gynecology workforce; and implementing care coordination programs for services including perinatal care, fertility treatment, cervical cancer screenings, and mammography. Comprehensive women’s health clinics function as “one-stop shops” and typically include primary care, gynecology, and mental health care services.<sup>108-110</sup> Nevertheless, a significant portion of reproductive and sexual health care continues to be covered by VHA through community providers.<sup>7</sup> Depending on the medical facility, the need for community care can be due to having insufficient demand to ensure quality of care, lack of resources (e.g., surgical care not offered), limited capacity, or geographic distribution of women and gender diverse Veterans.

This section describes the changes in the availability of RSH services between 2014 and 2019, using data from the WATCH survey. WATCH is a survey using key informants from every VHA health care system to assess availability and organization of health care for women/gender-diverse Veterans at the VISN, health care systems, and site levels. To consistently compare across years, findings presented here are limited to those at the health care system level. This typically means one VHA medical center with inpatient and outpatient care plus its affiliated CBOCs, which provide more limited services.

#### 3.1 Common Outpatient Procedures

Outpatient RSH procedures can be delivered either within primary care or specialty care, depending on the local setting and specialized training. Some may be performed by a primary care provider, while others require specialized training in gynecology or subspecialty care. This report summarizes availability of some of the most common of these procedures. These include provision of LARC, colposcopy, and endometrial biopsy.

LARC includes subdermal contraceptive implants as well as IUDs. LARC methods can be inserted and removed by a primary care provider with specialized training, a gynecologist, or another gynecology provider (such as a nurse practitioner or physician assistant). Colposcopy involves visual examination of the vulva, vagina, and cervix for signs of abnormal cells and potential biopsy of genital tissue for testing. This procedure is most frequently performed by gynecologists following referral from primary care due to an abnormal cervical screening (pap smear). Endometrial biopsy involves sampling of the uterine lining, primarily for evaluation of malignancy as a cause for abnormal uterine bleeding and is typically performed by a gynecologist.

**Findings:** Figure 6 shows availability of LARC, colposcopy, and endometrial biopsy across 140 VHA health care systems participating in WATCH from 2014 to 2019.

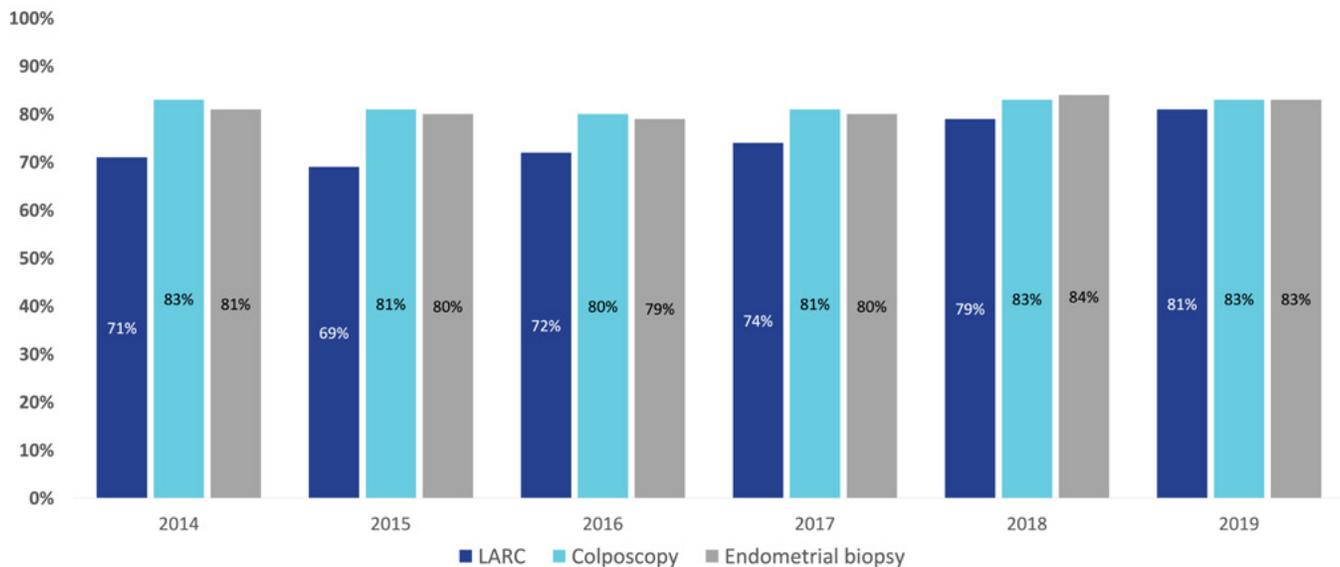


Figure 6. Availability of common outpatient reproductive and sexual health procedures among VHA health care systems, 2014–2019

**LARC:** Between 2014 and 2019, availability of LARC within VHA health care systems increased. In 2014, 71% of VHA health care systems reported that this service was available. This increased to 81% in 2019.

**Colposcopy:** Availability of colposcopy remained consistent during this time, with approximately 80% of all VHA health care systems reporting availability of this procedure.

**Endometrial biopsy:** Availability of endometrial biopsy remained consistent at about 80% of all VHA health care systems between 2014 and 2019.

**IMPLICATIONS:** The majority of VHA health care systems currently offer RSH outpatient procedures, such as LARC, colposcopy, and endometrial biopsies. Availability of LARC is essential for ensuring that women/gender-diverse Veterans have access to the full range of contraceptive options and can access care that aligns with their reproductive values. Both colposcopy and endometrial biopsy are essential services for diagnosing gynecological cancers and have remained consistently available in about 80% of VHA health care systems. However, findings by Zuchoski et al. indicate that coordination and follow-up for treatment of gynecological cancers in Veterans using VHA for care remains challenging.<sup>111</sup> Notably, care for gynecological cancer involves multiple sub-specialties (e.g., surgery, radiology) and much of the surgical and other treatment is sought out in the community. Thus, while provision of diagnostic procedures is important, VHA must ensure mechanisms for care coordination once gynecological cancer is diagnosed.

## 3.2 Specialized Reproductive and Sexual Health Services

Women/gender-diverse Veterans also require specialized RSH services. In this section, we describe availability within VHA health care systems of essential specialized RSH services, including transvaginal ultrasound, pelvic floor PT, gynecologic-oncology surgery, and fertility/infertility evaluation.

Transvaginal ultrasound is a critical tool for diagnosing various gynecological conditions. These ultrasound images can inform cancer risk-stratification, fertility potential, and surgical decision-making. Transvaginal ultrasonography is also necessary for the provision of emergent gynecological care and is an essential tool for evaluating gynecological emergencies. However, such ultrasounds require specialized equipment, cleaning protocols, and trained imaging personnel.

Pelvic floor PT is a specialized form of physical therapy that involves targeted pelvic floor exercises, manual therapy (such as internal trigger point therapy or external massage), electrical stimulation, vaginal dilators, and specialized biofeedback procedures. Physical therapists must have additional training and certification to perform pelvic floor PT. Patients with a range of issues, including chronic pelvic pain, urinary incontinence, prolapse, and sexual dysfunction, can benefit from pelvic floor PT. For women/gender diverse Veterans, there is increasing concern regarding the long-term impact on pelvic floor health from activities during military service, such as carrying heavy, ill-fitting packs across long distances, or the need to avoid urination in the field due to safety concerns while on active duty.<sup>112</sup> Pelvic floor disorders may also arise as a result of pregnancy, sexual trauma (including military sexual trauma), endometriosis, pelvic cancers, or menopause.

Subspecialty training is necessary for the evaluation and treatment of gynecological cancers. Gynecologic oncologists are subspecialists trained in the evaluation and treatment of gynecological cancers; this includes the use of surgical, chemotherapeutic, and radiation treatments. This section focuses on availability of gynecologic-oncology surgery, which is distinct from surgery for other gynecological conditions.

Fertility and infertility evaluation and treatment is a critical component of reproductive and sexual health care and one that has been the focus of legislative and policy debate as well as program development. Access to fertility/infertility evaluation and treatment is an essential component of health care that enables Veterans to grow and build their families. Fertility evaluation and treatment, excluding IVF, is included in the VHA medical benefits package and is available to all eligible and enrolled Veterans. IVF is only covered for certain Veterans who meet strict eligibility criteria. Given that an exceedingly small proportion Veterans are eligible for IVF, the focus here is solely on fertility evaluation and management.

### **SPECIAL TOPIC 7: FERTILITY CARE**

**Topic Authors: Alicia Y Christy, MD, MHSCR; Stephanie Edmonds, MD, MPH**

#### **Infertility Prevalence Among Veterans**

Although studies of infertility in U.S. Veterans are limited, existing data suggest a prevalence of self-reported history of infertility in VA-enrolled Veterans that is similar to the general U.S. population (13.8% in Veterans with testes and 15.8–19.0% in Veterans with ovaries and/or uteri).<sup>113–115</sup> When data from medical records are used as the data source, the reported rates of infertility diagnosis in Veterans with ovaries/uteri are very low (1.9%).<sup>116,117</sup> These findings suggest both under-identification by health care providers and lack of awareness and potential underutilization of VHA fertility care options by both patients and health care providers. However, there are significant gaps in the existing published research. More information is needed about the prevalence of infertility among Veterans, sociodemographic associations with infertility in this population, impact of military exposures on infertility, quality of life issues, and sexual health. VHA researchers are conducting studies in these topic areas and have published the results of some of these investigations.<sup>11,118</sup>

#### **VHA Coverage for Infertility Care**

Fertility testing and select treatments are included as part of VHA's medical benefits. This coverage is available to all Veterans regardless of the presence/absence of a service-connected condition, relationship/marital

status, gender identity, or sexual orientation but does not cover their partners. Notably, IVF is specifically excluded from the medical benefits package.

In 2016, Congress passed legislation giving VHA the authority to provide some Veterans with IVF if they had a service-connected condition that is the cause of their infertility, are married, and can, along with their legal spouse, collectively provide their own sperm, egg/ovarian tissue, and uterus (38 C.F.R. § 17.380). The legislation also included IVF as well as all fertility counseling and treatment available under the Medical Benefits Package, such as intrauterine insemination, to the spouse thereof (38 C.F.R. § 17.412). These strict requirements act as a barrier to Veterans accessing service-connected infertility services, including IVF, and gaps in coverage as indicated below.

### **Gaps in fertility coverage**

- Lack of coverage for the non-Veteran partner(s)
- Only Veterans meeting eligibility requirements can receive IVF
- Limit of 5 years for gamete preservation, which requires a medical indication
- No coverage for surrogacy
- No coverage for use of donor gametes/embryos

### **Specific gaps in service-connected infertility coverage include:**

- Prohibition against use of donor egg, sperm, or embryos and surrogacy
- Veterans who require donor eggs, sperm, or gametes, or surrogacy are excluded from existing coverage even if they pay for these themselves
- Ineligibility of unmarried Veterans
- Changes to the eligibility criteria would require additional legislation
- The strict eligibility criteria disproportionately disadvantage single Veterans and couples with same-sex gametes

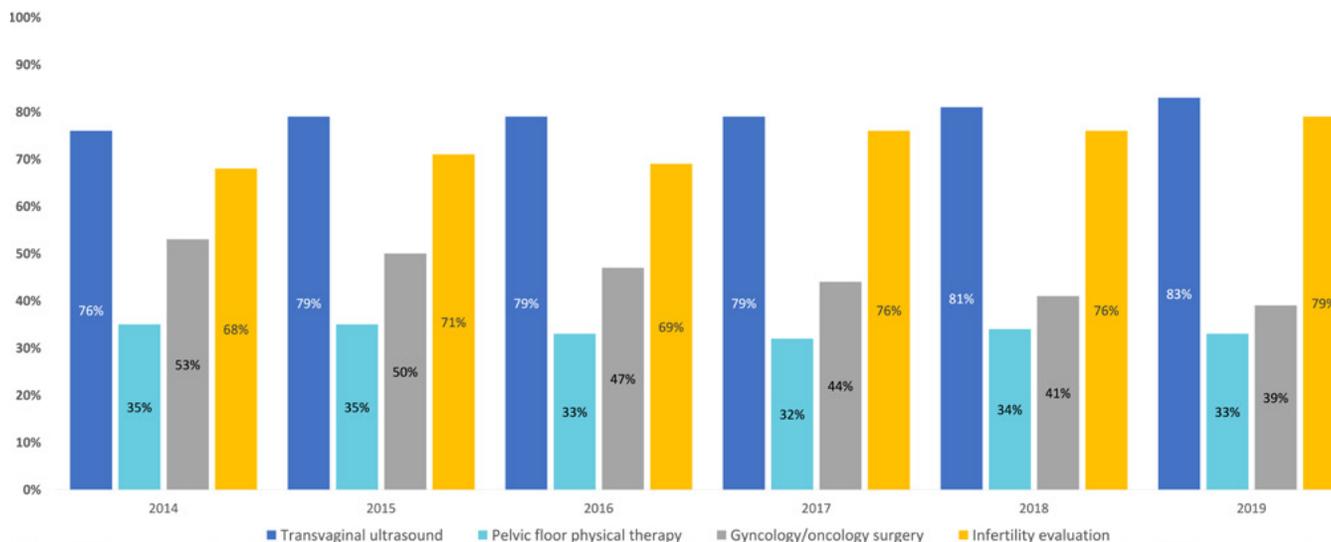


Figure 7. Availability of select specialized reproductive and sexual health care services among VHA health care systems, 2014–2019

**Findings: Figure 7** shows availability of specialized RSH services within VHA health care systems over time. Availability varied by type of service.

**Transvaginal ultrasound:** Of the 140 VHA health care systems surveyed in WATCH, the proportion that offered transvaginal ultrasound increased from 76% in 2014 to 83% in 2019.

**Pelvic floor PT:** Availability of pelvic floor PT within VHA systems has remained relatively stable between 2014 and 2019. Roughly one-third of VHA systems offer on-site pelvic floor PT.

**Gynecologic-oncology surgery:** Between 2014 and 2019, the percentage of VHA systems offering on-site gynecologic-oncology surgery decreased from 53% to 39%.

**Infertility evaluation and treatment:** Starting in 2017, WATCH asked about fertility evaluation and fertility treatment as two separate services; many initial fertility tests may be more readily available as they do not necessarily require specialized training. Availability of fertility evaluation appears to have increased steadily from 68% in 2014 to 79% in 2019.

**IMPLICATIONS:** The majority of VHA health care systems offer transvaginal ultrasound. However, this does not mean that it is available twenty-four hours a day, seven days a week (24/7), at all points of care within the health care system. This is of particular concern in emergency departments where patients may present with abnormal bleeding or gynecological concerns requiring urgent work-up.<sup>3</sup> It may not be feasible to have 24/7 on-site availability of transvaginal ultrasound at all VHA health care systems due to limited demand and resultant concerns regarding maintaining quality for low-volume procedures. Nevertheless, ensuring that policies and programs are in place to efficiently refer and coordinate care for patients requiring transvaginal ultrasound in emergent situations is essential.<sup>119</sup>

Given that urinary conditions (including incontinence) and reproductive organ disorders are among the five most frequent diagnosis domains across all age and racial/ethnic groups, increased pelvic floor PT capacity within VHA would improve ability to meet current needs and anticipated demand in this area. However, availability on-site has remained unchanged over time, and this type of care is not typically conducive to telehealth.

While availability of gynecological care and surgery has increased in VHA over time, few VHA health care systems offer on-site gynecologic-oncology care. This likely reflects concerns regarding having sufficient volume of cases to ensure quality of care for gynecological cancers. Continued reliance on non-VHA care for gynecologic-oncology surgery highlights the need for ongoing support for care coordination for Veterans with gynecological cancers. Care coordination in this setting involves care tracking, acting as a clinical point

of contact and as a patient liaison, and tracking records across health care systems.<sup>11</sup> Additionally, a lack of VHA gynecologic-oncology care may be particularly problematic in areas without such care in the community. Ensuring timely access to needed care for Veterans residing in these areas may involve the need to cover transportation and other costs associated with travel for care. Additionally, little to no information is available regarding availability and access to survivorship care, including cancer surveillance, mental health care, and overall reproductive health care (such as gamete cryopreservation for fertility).

The increase in availability of fertility evaluation is encouraging. However, provision of fertility care through VHA benefits remains challenging. While some VHA health care systems may be able to provide fertility evaluation and some basic treatments/medications (e.g., clomiphene citrate for ovulation induction), it is expected that the majority of fertility treatment will continue to be outsourced to community care providers. This raises important issues in terms of equity with respect to access. Availability of fertility treatment varies significantly in the U.S., with greater availability in urban versus rural and highly rural areas. Furthermore, there are known racial/ethnic inequities in terms of access, treatment, and outcomes of fertility treatment nationwide, and emerging evidence suggests similar inequities may be present within VHA.<sup>11</sup> VHA also is estimated to be the largest single provider of health care for lesbian, gay, bisexual, transgender, and queer (LGBTQ+) individuals. Historically, fertility treatment is largely designed around a heteronormative concept of family. Thus, as programs and policy regarding fertility treatment in VHA continue to evolve, providing equitable and inclusive access are key to ensuring that these policies and programs serve all Veterans.

### 3.3 Breast Care

While not gynecological care, breast care is frequently considered a part of reproductive health care as treatment can impact reproductive capacity and outcomes. Breast cancer is the most common cancer among cisgender women worldwide; it remains an ongoing concern for women as well as gender diverse Veterans who, like their non-Veteran counterparts, require regular mammography and follow-up, typically starting at 40–50 years old.<sup>4</sup> If an abnormality is detected, timely follow-up with additional imaging or biopsy is necessary. Breast biopsy, performed in the presence of a breast mass, can be performed in different ways (fine needle aspiration, core biopsy, excisional biopsy) and are performed by radiology or general surgery/surgical oncology, depending on the type of biopsy. Treatment depends on the cancer sub-type but can include different combinations of surgery, chemotherapy, and radiation. Following some types of surgery, Veterans may opt to undergo reconstructive surgery. Breast surgeons are most often general surgeons with specialized training in surgical oncology and/or breast surgery. Breast care also includes care for conditions other than cancer, such as breast cysts, infections, and pain, which are more frequent than breast cancer. Thus, Veterans have a variety of breast care needs. Here focus is on availability of mammography, breast biopsy, and breast surgery. This report focuses on women/ gender-diverse Veterans, and thus does not cover breast/chest health among Veterans listed as male on their birth certificates.

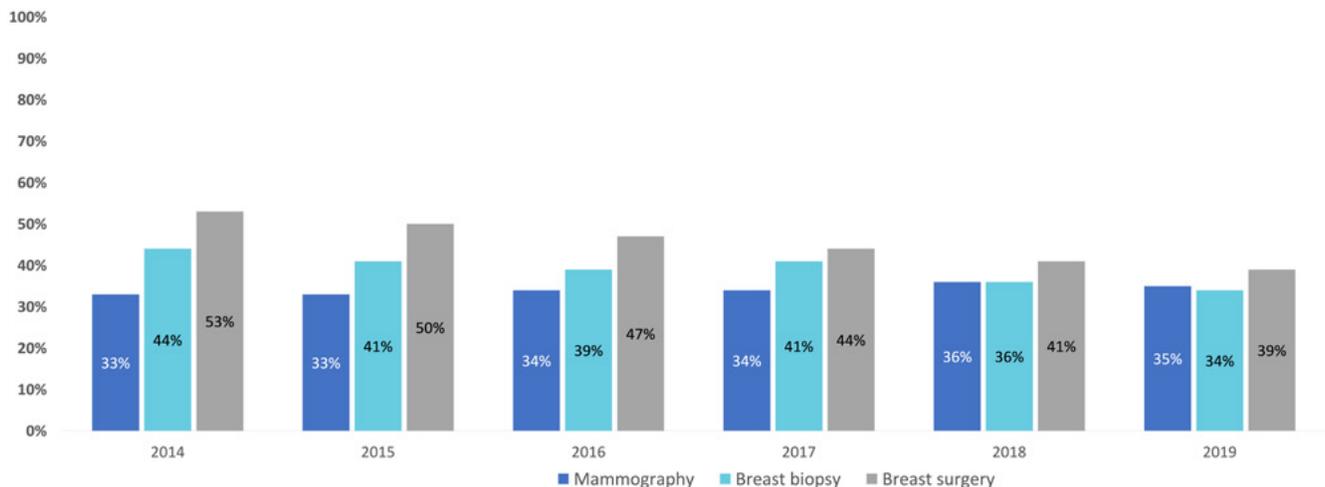


Figure 8. Availability of mammography, breast biopsy, and breast surgery among VHA systems, 2014–2019

**Findings:** Apart from pelvic floor PT, mammography and breast surgery were the RSH services least likely to be available within VHA health care systems of any of the reproductive health care services examined.

**Mammography:** From 2014 to 2019, approximately a third of VHA health care systems offered mammography on-site (33% in 2014, 35% in 2019).

**Breast biopsy:** Availability of on-site breast biopsy within VHA health care systems decreased between 2014 and 2019. In 2014, 44% of VHA health care systems reported offering breast biopsies, but this decreased to 34% in 2019.

**Breast surgery:** There was a steady decline in the availability of breast surgery at VHA health care systems between 2014 and 2019. In 2014, 53% of VHA health care systems reported having on-site availability of breast surgery; by 2019, this had decreased to 39%.

**IMPLICATIONS:** Mammography is an essential preventive health screening tool that is recommended annually beginning at age 40–50 (varies based on patient-provider shared decision making, individual risk factors, and professional society recommendations).<sup>4</sup> Women/gender diverse Veterans in an age group that requires regular mammography screening represents a significant portion of the women/gender-diverse Veterans using VHA health care; thus, these services are in high demand. Examining the feasibility of offering mammography on-site at all VHA health care systems is necessary. Additionally, ongoing efforts are needed to improve coordination of this preventive service, including timely follow-up for abnormal results. This is particularly true in the context of the COVID-19 pandemic, during which many routine preventive health screenings were temporarily suspended. There are still only a limited number of VHA health care systems that offer on-site breast biopsy, which is most commonly performed in radiology departments. The decline in breast surgery availability likely reflects a decrease in on-site availability of general surgeons specializing in surgical oncology and/or breast oncological surgery. There is limited data on why this trend exists and again emphasizes the need for care coordination and tracking of patients seeking cancer care in the community.

## 4. Conclusions

The number of women/gender-diverse Veterans using VHA RSH services is increasing rapidly. Thus, while the frequency of RSH diagnoses has remained relatively constant over time, there are large absolute increases in many of these diagnoses. The largest absolute increases were observed for diagnoses of urinary conditions (including incontinence) and reproductive organ conditions—other, regardless of age group, race/ethnicity, or rurality. While on-site availability of some key services related to these diagnoses (e.g., transvaginal ultrasound, endometrial biopsy) are increasingly available, others, such as pelvic floor PT, are much less commonly offered on-site. Better understanding of VHA and non-VHA care environment is needed to inform decisions regarding increased on-site availability of these services.

Given the growing number of young women/gender-diverse Veterans using VHA, large absolute increases in diagnoses were observed for RSH diagnoses linked to reproductive years (18–44 years old). Women/gender-diverse Veterans in this age group are more diverse by race/ethnicity as well as by sexual orientation and gender identity, highlighting the need to consider equity of services and outcomes as a key quality metric. This is particularly important as many of the same racial/ethnic inequities in reproductive health outcomes observed outside VHA are increasingly being documented within VHA. Such analyses are outside the scope of this report, but ideally need to be incorporated into regularly reported quality metrics at the site, VISN, and national levels.

Finally, a small but significant minority of women/gender-diverse Veterans using VHA health care face additional barriers to access, such as living in rural areas or being unhoused. For these Veterans, VHA may have some of the few reproductive and sexual health care providers in their area. Accessing specialized services such as gynecological surgery may require significant travel for rural dwelling Veterans. Veterans who live in urban areas without housing need safe places to heal after surgery. Identifying ways of increasing access to reproductive and sexual health services and reducing barriers to care for these groups of Veterans will require employing community partnerships, telehealth, and, when necessary, appropriate transportation and housing support.

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An epidemic is a spike in cases of a disease in a particular population over a specified period of time; if it spreads world-wide, it is a pandemic. Epidemics can impact reproductive health in a variety of ways, including limiting access to needed health care services (e.g., contraception and STI screening), directly affecting reproductive health outcomes (e.g., Zika), and impacting long-term health (e.g., HIV). Further, the impact of epidemics is greatest among those who are most marginalized. COVID-19 has exacerbated existing disparities in reproductive health care and access, in particular those resulting from structural racism.<sup>120</sup> Compared to non-Hispanic White people, Hispanic, Black, and American Indian or Alaska Native people have a 1.1–1.9 times greater risk of getting infected with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), a 2.8–3.4 times greater risk of being hospitalized, and a 2.0–2.4 times greater risk of dying.<sup>121</sup> This is in part because race/ethnicity are associated with underlying risk factors, including socioeconomic status, health care access, occupational risk (e.g., frontline workers and health care workers), and prevalence and severity of comorbidities.<sup>122</sup>

In 2020, family planning was impacted by COVID-19-related global disruptions to the supply chain and stock-outs of contraceptives.<sup>123</sup> Health care not considered medically necessary was canceled, delayed, or rerouted to telehealth appointments in many cases. Some prenatal appointments were diverted to telehealth and restrictions were placed on having visitors or support persons present for labor, delivery, and postpartum care. Providers reported that the rate of placement and removal of LARC decreased significantly, though telehealth services to provide contraceptives increased.<sup>124</sup>

The pandemic exacerbated existing inequities in pregnancy-related morbidity and mortality, especially among the most vulnerable.<sup>125</sup> In comparing COVID-positive, symptomatic individuals with uteri/ovaries aged 15–44 in the U.S. by pregnancy status, those who were pregnant had 3.0 times greater risk of intensive care unit (ICU) admission, 2.9 times greater risk of invasive ventilation, 2.4 times greater risk of extracorporeal membrane oxygenation (ECMO), and 1.7 times greater risk of death compared to nonpregnant individuals.<sup>126</sup> Stratifying by race/ethnicity, non-Hispanic Black and Hispanic/Latinx pregnant people were at greater risk of ECMO and death than their nonpregnant counterparts. Pregnant individuals of all races/ethnicities had increased risk of ICU admission relative to nonpregnant individuals, although risk was greatest among pregnant people who were Asian, Native Hawaiian/Pacific Islander, and multiple or other races.

VHA responded to the COVID-19 pandemic through nimble policy changes and a comprehensive response and operations plan to protect Veterans and the workforce.<sup>127</sup> Inpatient care was separated into COVID-19 and standard zones. Most outpatient care was provided via telehealth, for example, eliminating the need for in-person serum or urine pregnancy tests for maternity care consults. When prenatal appointments were diverted to telehealth, VHA provided hand-held fetal dopplers and broadband-equipped mobile devices to patients, if needed. Contraception was offered by mail; self-administered injections were available at some facilities. VHA offered vaccination to Veterans, including pregnant and postpartum Veterans, as well as VHA employees and the spouses of Veterans. They also reported data on cases, deaths, and vaccination rates disaggregated by race/ethnicity to identify and address potential disparities. As of July 23, 2021, VHA had conducted over 4.1 million tests, diagnosed more than 271,000 people with SARS-CoV-2, and vaccinated more than 3.6 million people. Over 50% of Veterans who use VHA were vaccinated, with Black and Asian patients having the highest rates of vaccination (54.4% and 57.6%, respectively) and American Indian or Alaska Native and multiple race patients having the lowest rates (45.1% and 47.5%, respectively).<sup>128</sup> By the summer of 2021, VHA's focus shifted to bringing back patients who postponed care. Looking to the future, policymakers need to broadly address underlying systemic inequities in health care delivery, such as racism resulting in disparities in pregnancy-related morbidity and mortality, before the next epidemic to ensure equitable and optimal health care access and delivery across the reproductive life span.

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