Infertility Services for Veterans: Policies, Challenges, and Opportunities

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Abstract

Keywords

- infertility
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- ► military
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Infertility prevalence and care needs among male and female Veterans are understudied topics. The Veterans Health Administration (VHA) medical benefits package covers full infertility evaluation and many infertility treatments for Veterans but not, by law, for their spouses. In vitro fertilization (IVF) is also specifically excluded from this medical benefits package by regulation. Congress passed a law in 2016 that allowed VHA to provide IVF to Veterans and their legal spouses, and broader infertility benefits to the legal spouse, if the Veteran has a service-connected condition associated with his or her infertility, with some limitations. As the Veteran population becomes increasingly female, research efforts in reproductive health, including infertility, are expanding and evolving. This includes a nationwide study currently underway examining infertility among male and female Veterans and associations with military-related trauma, such as injury, posttraumatic stress disorder, military sexual trauma, and toxin exposure. In this review, we describe the state of the science and policy on infertility care in the VHA along with challenges and opportunities that exist within the VHA system.

Infertility: Brief Overview

Infertility is defined as a disease characterized by the failure to establish a clinical pregnancy after 12 months of regular, unprotected sexual intercourse or due to an impairment of a person's capacity to reproduce either as an individual or with his/her partner. Fertility interventions may be initiated in less than 1 year based on medical, sexual, and reproductive history; age; physical findings; and diagnostic testing. Infertility has been identified as a disease by the World Health Organization in 2009 (WHO), the American Society

for Reproductive Medicine (ASRM), and, most recently, by the American Medical Association (AMA) in a resolution approved at their 2017 annual meeting to support the WHO designation.³ Prevalence rates vary by the means of assessment, with current estimates in the U.S. reproductive-aged population of 15.5% (8.6–27.5%) for women⁴ and 12.0% (7–23.2%) for men.⁵ Causes in women include but are not limited to problems with ovulation, oocyte number or quality, uterine anatomy, tubal patency, pelvic scarring or inflammation, and sexual dysfunction. For men, causes of infertility include problems with erection or ejaculation and

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abnormalities in sperm number, motility, or function, and in approximately 40% of infertile couples, the male partner is either the sole cause or a contributing cause of infertility. Smoking and obesity play a role in both male and female infertility. In approximately 25% of couples, there is more than one factor involved, and in 15% of couples there is no identifiable cause after thorough evaluation.

Individuals and couples with infertility may have poor mental health outcomes such as increased risk of depression and suicide. Emerging evidence suggests an infertility diagnosis may also be a risk factor for the later development of other chronic diseases, such as cardiovascular disease and cancer.⁶⁻⁹ Furthermore, there are negative psychosocial outcomes for an infertile individual, couple, and family such as decreased social status, ostracism, marital conflict, and interpersonal violence. 10

Reproduction has long been acknowledged as a vital interest in U.S. society and internationally. In the 1940s, the U.S. Supreme Court declared procreation "one of the basic civil rights of man, fundamental to the very existence and survival of the race" (Skinner v. Oklahoma 1942). More recently, reproduction was designated by the Court as "a major life activity"; thus, infertility is worthy of the same protections as other disabilities (Bragdon v. Abbott 1998). In a similar pronouncement on the international stage, the WHO stated, "Infertility generates disability (an impairment of function), and thus access to health care falls under the Convention on the Rights of Persons with Disability." 11

Lack of access to effective infertility evaluation and treatment is a particularly concerning health care disparity in the United States and worldwide, often tied to socioeconomic status but also to geography, race, ethnicity, religion, sexual orientation, gender identity, marital status, and conscious or unconscious discrimination.¹² One study looking at the National Survey of Family Growth in the United States suggested that only 38% of nulliparous women with current fertility problems had received any infertility care services¹³; another study looking at in vitro fertilization (IVF) care worldwide estimated that only 24% of IVF need in the United States is being met, significantly lower coverage than most other highincome countries. 14 While IVF represents only approximately 3% of infertility services provided each year, 15 it is the most effective treatment available and, for some causes of infertility, the only effective treatment option.

Estimates of Veteran Infertility and Available Research

Infertility in Veterans has generally been an under identified and under studied disease, though research on this topic has increased in recent years. There are several possible reasons for this under representation in the Veteran health literature, including the fact that infertility is a disease of the reproductive-aged population and generally considered women's health issue, despite its approximately equal incidence in studied male and female groups. The limited studies of infertility in U.S. Veterans suggest a prevalence of the disease in Veterans Affairs (VA)-enrolled Veterans that is similar to the general U.S. populations when self-report is used (13.8% in male Veterans and 15.8-19% in female Veterans). 16,17 In contrast, medical record review reveals very low rates of infertility diagnosis in female Veterans (1.9%), ^{18,19} suggestive of the under identification by health care providers and unawareness and underutilization of VHA infertility care options by both patients and health care providers.

Urogenital injury from explosive devices is common among service members who have been in combat, with one in five experiencing this injury from Operation Enduring Freedom (OEF).²⁰ Additionally, genitourinary or spinal cord injury and pelvic trauma related to combat injuries were also common in previous combat operations.²⁰ Infertility is one of many possible outcomes of this trauma, and these combat-related injuries often mean IVF is the only option for conceiving a pregnancy.²¹ While direct injury to the urogenital region is a clear cause of infertility, research suggests there are other, less pathologically straightforward service-related causes of infertility. For example, studies have shown associations in Veterans between infertility and sexual assault¹⁷⁻¹⁹ and posttraumatic stress disorder 17,18 as well as between infertility and other mental health disorders such as depression. 18,19

VHA Policies on Infertility Coverage

The VHA recognizes the multigenerational importance of having biological children and that infertility can be associated with depression, adjustment disorders, reduced quality of life, grief, and feelings of inadequacy for both men and women.²² The Code of Federal Regulation describes the medical benefits package for the Veterans Health Administration, and within this package is listed coverage for infertility testing and certain treatments for VA-enrolled Veterans (38 C.F.R. § 17.38.). While IVF is specifically excluded from the medical benefits package, the VA was given the authority in 2016 to use funds in the medical services account to provide some Veterans with IVF care.

VHA Directive 1332, Infertility Evaluation and **Treatment**

As part of the VHA's medical benefits package, Veterans can get infertility testing and select treatments covered. This coverage is available to all Veterans regardless of service connectedness, relationship/marital status, gender identity, or sexual orientation. This policy provides coverage for the Veteran, but not any testing or treatments necessary for the non-Veteran partner. Additionally, IVF is specifically excluded from the medical benefits package. - Table 1 provides the specific medical benefits covered for the Veteran.²²

H.R.5325 (Public Law 114-223)—Continuing **Appropriations and Military Construction, Veterans** Affairs, and Related Agencies Appropriations Act, 2017, and Zika Response and Preparedness Act

Consistent with authority provided by the appropriations bill H.R. 5325 that became Public Law No. 114-223, VA published regulation (initially in January 2017 [https:// www.congress.gov/bill/114th-congress/house-bill/5325?q= %7B%22search%22%3A%5B%22cite%3APL114-223%22%5D%

Table 1 Infertility services covered for Veterans under VHA directive 1332

Benefits	Details
Preconception counseling	Management of any chronic medical and mental health conditions; genetic counseling and testing; immunizations; medication management; testing and treatment of infectious diseases; folate supplementation; nutrition counseling; and assistance with cessation of tobacco, alcohol, and other substance issues
Diagnosis of infertility	Blood work (e.g., follicle stimulating hormone, thyroid stimulating hormone, estradiol, testosterone) transvaginal, transrectal, pelvic, and saline-infused ultrasound, hysterosal-pingogram, semen function analysis, and evaluation of erectile dysfunction
Select treatments of infertility	Surgical correction of structural pathology, reversal of tubal ligation/vasectomy, oral and injectable hormonal therapies, intrauterine insemination for female Veterans, and sperm retrieval and erectile techniques for male Veterans
Gamete cryopreservation	Medically indicated retrieval and storage covered for up to 5 years

7D&r=1)] to provide infertility evaluation and treatment services, including assisted reproductive technology (ART) such as IVF, for certain Veterans and their spouses (who can be Veterans or non-Veterans). Policies describing the implementation of these regulations are soon to be published as VHA Directive 1334 (pending publication). Specifically, those Veterans who have a service-connected disability that results in the inability of that Veteran to procreate without the use of fertility treatment may, along with his or her legal spouse (who may or may not be a Veteran), access evaluation and treatment for infertility including using ART. By law, this policy mimics Department of Defense policy and is limited not only by the requirement of a service-connected condition leading to infertility but also by marital status, and it does not cover Veterans requiring donated sperm or eggs nor gestational surrogacy treatment. In March 2018, revised legislation H.R. 5895 (Public Law No. 115-244) was passed to continue this coverage using VA medical services funds with no end date, and to add adoption reimbursement for "covered Veterans."

Challenges and Opportunities

Challenges

The discrepancies seen between self-reported disease incidence and rates assessed by diagnostic codes suggest that infertility is an under-recognized disease in the VHA system, and this is substantiated by the anecdotal experience of reproductive health care providers in the system. VA patients and providers alike do not typically discuss reproductive life planning or problems with fertility, 23 perhaps due to a prevalent misunderstanding of what kinds of infertility care are provided within the VHA system. This is particularly true for male patients. Additionally, more education is needed for Veterans, VA clinicians, and clinicians in the community about available services for infertility evaluation and treatment. The Office of Women's Health Services has been working to increase awareness of these benefits to both Veterans and VA clinicians by conducting training and outreach efforts, and by developing internal and external communications. Additionally, the Office of Community Care and the Office of Women's Health Services have reached out to providers in the community to make them aware of these benefits and provide information on how to serve Veterans who need evaluation and treatment.

Beyond basic evaluation and treatment, infertility care is best provided by reproductive endocrinology and infertility (REI) specialists. Outside of very few exceptions, these specialists do not exist in the VHA system because the current need would not justify hiring and training these REI providers. Additionally, many infertility treatments require hightech infrastructure such as reproductive testing and IVF laboratories (each with their own federal certification systems) as well as specially trained nursing staff to assist in procedures and take calls from patients. Thus, to ensure quality, the VHA must partner with qualified REI clinics and providers in the community, many of who are unaware of this separate health care system that exists for Veterans and the fact that VHA provides coverage for many of their services. While the VHA has been working to create a network of REI providers and refining care coordination processes, Veterans with infertility, especially those eligible for IVF coverage, are too often waiting for care whose efficacy wanes as the female partner gets older.

Some causes of infertility are clear, such as in the case of those Veterans who have experienced pelvic trauma. While there are large numbers of Veterans with urogenital injury and/or spinal cord injuries and pelvic trauma related to their service, some of these service-connected Veterans and their spouses with resulting infertility will not qualify for the IVF benefit because they lost their ability to produce eggs or sperm or to safely or effectively maintain a pregnancy. This discrepancy in benefit coverage may impact the very Veterans the VHA was hoping to assist. Excluding unmarried Veterans and those Veterans needing donated gametes and/or a gestational surrogate to build their families also disparately excludes LGBT Veterans. However, the VHA cannot revise the IVF policy to include coverage for unmarried Veterans or these Veterans unless the DoD policy is changed or the law is changed to remove the linkage between DoD policy and VHA policy.

For many suffering with infertility, it is very difficult to accurately assess the precise etiology and physiological bases of their infertility using currently available tests, and half of cases with an identified cause have abnormalities found in both partners. Furthermore, approximately 15% of infertility is considered "unexplained" after a full evaluation. 24 Requiring a clear service-connected disability-related infertility diagnosis for infertility treatment of non-Veteran spouses or for IVF treatment of Veterans is thus both a clinical challenge and a huge practical hurdle for a VHA system that has little experience with this disease. This results in a significantly narrowed pool of Veterans who are eligible for the full infertility coverage that includes IVF. Elucidating and clarifying the physiologic connections between military service-related disability and infertility is both a challenge and an opportunity for VHA researchers and clinicians. Unless the law is changed to remove the service-connected disability requirement, health care providers in VHA will need more guidance on which clinical conditions may apply and how to query these connections.

Opportunities

The basic infertility evaluation and treatment that is covered by the VHA to all enrolled Veterans is quite comprehensive in comparison to other federal programs, such as Medicaid, and to many private insurance programs outside of the few states that have insurance mandates for infertility care. Public Law No: 114-223 (from legislation HR 5325) has also given the VA with the authority to provide much needed IVF services to wounded warriors and their spouses across the country. Once access to care and awareness is improved and administrative barriers addressed, VA has the potential to be an example to the rest of the country of how comprehensive infertility care is a vital and cost-effective component of reproductive health care and can result in important overall health benefits to the patient and family. However, to make this IVF benefit realized by all Veterans regardless of injuries, service connection, marital status, or sexual and gender status, additional legislative actions by Congress are necessary.

The VA is well positioned to examine how trauma and environmental stressors may interact with reproductive health for women, men, and families. Centralized medical and administrative records allow for comprehensive evaluation of past and present practices, risk factors, and outcomes, and work is ongoing to connect DoD and VA records, which would result in opportunities to examine Veteran health longitudinally and better identify exposures and the impact of past care. The Veteran patient population has unique and intense exposures to trauma, travel, environmental toxicants, and infectious diseases, which provides insight into possible outcomes and how genetic variability, history, and resilience may interact to affect these outcomes. The VA also has established research networks specifically focused on reproductive health outcomes but using multidisciplinary methods, such as the Women's Practice Based Research Network and the Reproductive Health Working Group.

The VHA's Office of Health Services Research and Development has also funded 19 Centers of Innovation (COINs) to reward research innovations and partnerships and ensure that research has the greatest possible impact on VHA policies, health care practices, and health outcomes for Veterans. In one such COIN, investigators are considering a

reproductive life planning tool to help patients and providers focus on a Veteran's reproductive desires. While this tool may improve preconception counseling in the VA and prevent unwanted pregnancies, this tool may also increase Veteran awareness of infertility benefits. Taking place in another COIN, whose tripartite focus includes women's health, is a 4year national mixed methods study of infertility prevalence, reproductive health and associations with sexual assault, combat-related trauma, and environmental exposures. The goal of this study is to hear from 3,000 reproductive-aged male and female Veterans and further uncover what is universal and what is unique about their reproductive life course and fertility outcomes, how to prevent and improve poor outcomes, and how the VHA can prepare to care for these women and men.

Conclusion

Infertility is an under-recognized cause of psychosocial suffering and poor medical outcomes, and is an understudied and under addressed issue in Veterans. By improving funding for reproductive health research and creating equitable legislation and policies for infertility coverage, the VHA has demonstrated their strong desire to improve multidisciplinary infertility services. There remains work to be done, understand, and improve access for many Veterans suffering with infertility. These legislative efforts and policies also create a unique opportunity to study infertility care and coverage for this population and illuminate options for prevention and care for a broader population.

Conflict of Interest None.

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