

chapter 10

Reproductive Health of Veterans

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Reproductive Health of Veterans

The largest health care delivery system in the Nation, the Veterans' Administration (VA), currently offers only limited treatment for infertility in its 172 medical centers and 227 outpatient clinics. Discussions both inside and outside the VA have focused on whether the inability to reproduce is a medical disability that should be treated by Veterans' Administration facilities with available medical technologies.

Are medical treatments for infertility technological luxuries, or are they part of a comprehensive system of health care, in keeping with the

goals and mission of the Veterans' Administration? Since infertility treatment often involves the examination and treatment of both partners, should the VA have authority to administer medical treatment to the nonveteran spouse? This chapter addresses some of the issues related to the reproductive health of veterans.

POPULATION OF VETERANS

There were nearly 28 million veterans living in the United States and Puerto Rico in 1985. The group ranges in age from Spanish American War veterans to some of the most recent veterans of the Nation's Volunteer Armed Services (fewer than 500 veterans under 20 years of age). In 1985, the veteran population declined by 177,000, as many more veterans died than were separated from the armed forces. Veteran deaths numbered 413,000 during fiscal year 1985, while net separations from the armed forces totaled 236,000. The total number of veterans is expected to continue declining in the absence of any major military personnel buildup. Approximately two of every five living veterans are from the World War II era (37 percent), with Vietnam era veterans constituting the second largest group (about **30** percent).

The median age of veterans in civilian life in 1985 was 52.9 years. This figure is likely to rise over the next two decades as a large number of World War II veterans reach 65. Veterans under the age of 45 constituted 35 percent of the total. Although the vast majority of veterans are male, there is a growing population of female veterans.

Male

In 1985, an estimated 26,671,000 male veterans constituted about 96 percent of the total veteran

population. Their median age was 52.9 years, with approximately 35 percent being under 45 and an additional 20 percent being in the 45 to 54 age group. Although male fertility may continue beyond age 54, this age is commonly used as an upper limit after which fertility is no longer a major concern for the vast majority of men. An estimated 79 percent of male veterans are married (21). If the incidence of infertility in the general population (8.5 percent of married couples 15 to 44 years old, see ch. 3) applies to a similar age group in the veteran population, then at least 627,000 male veterans between 18 and 44 may be part of an infertile couple.¹

This estimate makes no distinction between service-connected and non-service connected conditions that may contribute to the infertility. However, in 1985 approximately 16,000 male veterans under the age of 55 were on VA records with known service-connected medical conditions (rated at greater than 0-percent disability) that could cause infertility (see figure 10-1). The determination of service-connected conditions is discussed later in this chapter.

¹This figure likely underestimates the number of male veterans with infertility problems since no data are available on the incidence of infertility for males 45 to 54 years old. However, if a similar incidence of infertility does exist in the 45- to 54-age group, then an estimated 985,000 male veterans under 55 may be part of an infertile couple.

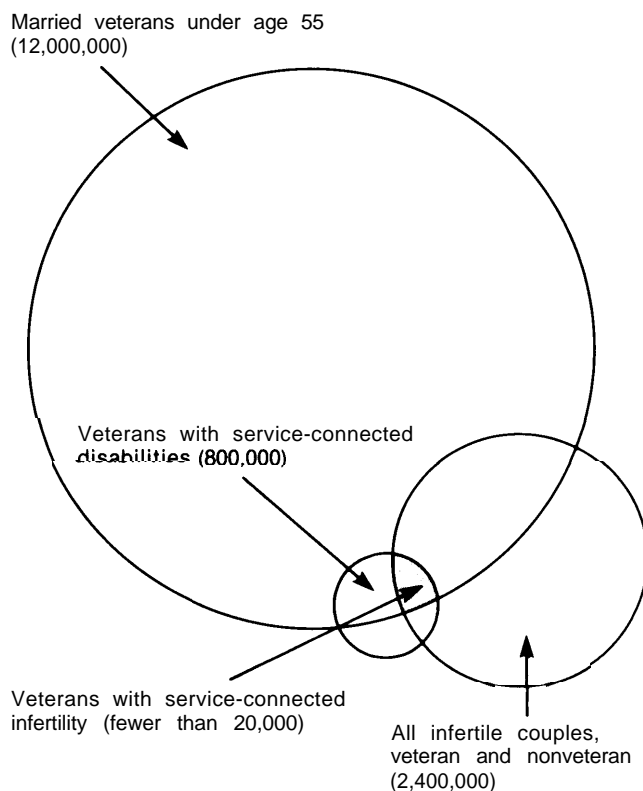
Female

The population of women veterans increased by about 15,000 between 1983 and 1985. Today, women constitute approximately 10 percent of active military personnel (21).

The majority of women veterans are comparatively young. In 1985, of the estimated 1,168,000 female veterans, approximately 54 percent were under 55 years of age. Some 42 percent were under the age of 45. Therefore, there were 490,560 women veterans 17 to 44 years of age (20,21), roughly the group of women who would most likely use and benefit from the treatment of infertility. In this group, approximately 70 percent (343,392) were married.

If the incidence of infertility in the general population is also applicable to the married female veteran population, then more than 29,000 women veterans were or are currently having problems conceiving a child. These figures approximate the total number of female veterans with possible infertility problems and make no distinction between service connected and non-service-connected disabilities or conditions. Data recently compiled by the VA indicate that the number of known female veterans with service-connected medical conditions that would result in infertility is actually much smaller: In 1985, between 1,200 and 1,300 female veterans on VA records had a service-connected medical condition (rated above 0-percent disability) that could contribute to infertility.

Figure 10-1.—Population of Veterans With Service-Connected Conditions Related to infertility: Comparison With Other Populations



SOURCE: Office of Technology Assessment, 1988.

FACTORS CONTRIBUTING TO INFERTILITY

General

Historically, infertility was thought to be a dysfunction of the female reproductive system. Today, male factors are believed to be the major reason for infertility in 20 to 40 percent of all infertile couples and to contribute to infertility in another 20 percent. Since infertility problems of men have not been studied as extensively as those of women, much less is currently known about the factors leading to and treatment of infertility in males.

Male infertility may be broken down into two broad categories: defects in spermatogenesis (the

production of viable sperm) and semen production, and defects in the transmission of sperm from the testes to the female reproductive tract.

Table 10-1 lists a breakdown of the population of male veterans on VA records with service-connected medical disabilities that can contribute to infertility (data from 1985).

Female factors are believed to account for, or contribute to, 50 percent of all infertility among couples. These factors are classified in at least three broad categories: defects in ovum (egg) production, tubal defects (transport), and implantation problems.

**Table 10-1 .-Service. Connected Conditions
Related to Infertility**

Condition	Number of veterans
Male veterans:	
Stricture of the urethra	2,459
Removal of the penis	68
Deformity of the penis	436
Complete atrophy of the testes	2,414
Removal of testes	6,268
Partial or complete removal of prostate	2,546
Spinal cord injury	1,660
Spinal cord disease	•
Other	•
Total	15,851
Female veterans:	
Inflammation of the cervix	283
Inflammation of the uterus	65
Inflammation of the uterine tubes	151
Removal of the ovaries	664
Atrophy of both ovaries	6
Pituitary condition	67
Other	•
Total	1,236

•Estimates unavailable

SOURCE: US Veterans' Administration, Department of Medicine and Surgery, White Paper, *Infertility* (Washington, DC: 1985).

Table 10-1 lists a breakdown of the population of female veterans on VA records with a medical disability that can result in infertility (data from 1985). The incidence of infertility associated with many of these pathological conditions is most likely similar in both the veteran and nonveteran populations. However, veterans may suffer from a subset of these conditions that occur more frequently among veterans or are of special concern to the VA medical centers.

It must be emphasized that these numbers are crude estimates of the population of veterans with service-connected disabilities that could result in infertility. It is not currently known how many male and female veterans with these or other service connected disabilities actually suffer from infertility.

Special Considerations

Post-Traumatic Stress Disorder

Some veterans of the Vietnam era suffer from a severe psychological disturbance known as post-traumatic stress disorder (PTSD), which in some instances can impair procreative ability. This may be of particular importance to male veterans who

suffer from psychogenic impotence or other sexual dysfunction as a result of PTSD. Although this form of sexual dysfunction can occasionally occur in otherwise healthy men for a variety of reasons related to stress, anxiety, and emotional disorders, impotence is more notably associated with physical causes such as normal aging, vascular disease, drugs, alcoholism, and diabetes. In the general population, impotence is not considered a major factor contributing to infertility (see ch. 4), since most of the men affected are over 50 years old.

Few data are available on the actual incidence of PTSD-induced sexual dysfunction in veterans. However, since the VA already has in place special programs to meet the medical and psychological needs of PTSD sufferers (6), adequate treatment of PTSD-induced infertility may already be available. In addition, as would be true in any infertility medical practice, experts would question the advisability of providing medical assistance for procreation to any individuals suffering from a potentially severe psychological condition such as PTSD without prior or concurrent treatment of the psychological disorder.

Agent Orange

Agent Orange is of particular concern to the Veterans' Administration and to Vietnam era veterans. The effects of exposure to herbicides such as Agent Orange on the general and reproductive health of veterans and their offspring have been the focus of considerable discussion and debate (7). Studies to date have failed to document definitive adverse reproductive effects in humans from occupational exposure to Agent Orange or its components.

Many veterans and veterans' groups have suggested that exposure to Agent Orange and other herbicides used in Vietnam has resulted in a variety of deleterious health effects, including birth defects in offspring and impaired reproductive function. One study of Vietnam veterans who were exposed to Agent Orange during shipping, handling, and loading of herbicides on aircraft; spray missions; and cleaning of airplanes and equipment found no significant adverse effects on fertility (9). In the same study, an excess of minor birth defects, such as moles, was found

among offspring of exposed personnel compared with offspring of nonexposed personnel.

A study based on the experiences of parents of babies born in metropolitan Atlanta from 1968 to 1980 contained no evidence to indicate that Vietnam veterans have been at greater risk than other men for fathering babies with birth defects, when all types of serious structural birth defects are combined (5). The Centers for Disease Control have been conducting additional studies of the health effects associated with Agent Orange exposure. It is currently unclear whether these studies will continue.

Because of the extensive publicity that this topic has received, many Vietnam veterans still in their reproductive lifespan remain concerned about the chance of birth defects in their offspring. Within this large group, some veterans may be reluctant to produce offspring because of previous known or even suspected exposure to Agent Orange. Although the scientific data do not support their concern, this may not mitigate the worries of individual veterans about possible serious birth defects of their offspring.

To what extent will the concerns of these veterans affect their procreative desires and ability? In view of the lack of overwhelming corroborating or contradicting data on possible birth defects resulting from Agent Orange, alternative reproductive methods such as artificial insemination

by donor or ovum donation could be made available to these veterans. On the other hand, in the absence of definitive data linking Agent Orange exposure and reproductive and birth defects, is providing infertility services on this basis really warranted? Although the majority of Vietnam veterans have already had children, approximately 15 to 20 years remain in the normal reproductive lifespan of the youngest members of this group, who may only now be considering having a child or additional children.

Radiation

Exposure to ionizing radiation can lead to infertility (18). Between 1945 and 1963, the U.S. Government exploded approximately 235 nuclear devices in the atmosphere over the American Southwest and the Pacific Ocean. The Department of Defense estimates that approximately 222,000 military personnel participated in those tests. A number of veterans present at the test sites have reported either sterility or low sperm count to the National Association of Radiation Survivors, an organization that compiles data on primary illnesses of participants at nuclear test sites (15). Most of these veterans are beyond the age at which infertility is a major concern. However, since the last atmospheric tests were conducted in 1963 it is possible that a small population of veterans under 55 have radiation-induced or -aggravated infertility and wish to have children.

INFERTILITY TREATMENT BY THE VETERANS' ADMINISTRATION

At the moment, most VA medical facilities provide only limited treatments that could be considered as infertility services. Since the agency does not classify infertility as a primary disability, the VA is of the opinion that it does not have statutory authorization to perform artificial insemination or in vitro fertilization (IVF) (19). The medical treatment that is or can be provided by the VA may involve relatively simple procedures such as sperm counts, hormone measurements, and drug administration. However, even these simple procedures can be provided only in connection with the treatment of an underlying disability. The actual extent of treatment may vary widely from facility to facility, depending on the

expertise of the medical staff. In fiscal year 1985, VA medical facilities recorded a total of 2,475 medical and surgical procedures that could have been associated with infertility treatment (see table 10-2).

It is clear from table 10-2 that some procedures associated with infertility are being performed in VA medical facilities. According to these data, however, surgical procedures most commonly associated with infertility treatment—e.g., repair of fallopian tubes and repair of vas deferens and epididymis—were not performed in any VA medical facility in fiscal year 1985. In addition, it is clear that little, if any, infertility treatment for

Table 10-2.—Infertility-Related Procedures Performed by the Veterans' Administration^a

Procedure	Number of cases
Male veterans:	
Excision of hydrocele	230
Excision of varicocele	758
Repair of spermatic cord and epididymis . . .	0
Repair of vas deferens and epididymis	0
External penile prostheses	19
Internal penile prostheses	1,468
Female veterans:	
Wedge resection of the ovary	1
Repair of fallopian tubes	0
Insufflation of fallopian tubes	0
Artificial insemination	0
Total	2,476

^aThis list does not account for all medical procedures that are associated with infertility treatment that may have been administered in VA medical facilities in 1985. In addition, neither the age of these patients nor their eligibility status (service-connected or non-service-connected condition) is considered in this list. Age is particularly important in cases of internal penile prostheses, since older men are the most likely candidates for this procedure.

SOURCE U S. Veterans' Administration, Department of Medicine and Surgery, Pulmonary and Infectious Disease Program, Washington; DC, personal communication, 1987.

female veterans is currently done in VA facilities. However, these numbers do not take into account the medical treatments provided for veterans by outside health care facilities and by professionals under contract with the VA. For example, many VA facilities do not provide in-house gynecological health care for female veterans. These services may be provided by local facilities or gynecologists who are under contract with the VA. Therefore, it is possible that some infertility services related to gynecological health care are being provided for female veterans in this manner.

Some additional information is available that pertains to treatment of one subpopulation of infertile veterans, spinal cord injury patients. The outlook for fertility in paraplegic men after spinal cord injury is poor; the outlook for paraplegic women is often better. These paralyzed men often

(but not always) suffer from impotence because of neurological deficits in the spinal cord. The impairment in reproductive function depends on the level of the spinal cord that is damaged and the severity of the injury. The level of the spinal cord lesion is important in determining the sexual sequelae. From a practical standpoint, erections sufficient for intercourse can be achieved by less

than 25 percent of spinal cord injured males. Likewise, the ability to ejaculate normally is retained by less than 10 percent of these individuals (3).

Compounding problems of impotence and ejaculatory dysfunction, paraplegics with prolonged intermittent or continuous catheterization-related prostatitis, epididymitis, and epididymo-orchitis can frequently develop obstructive lesions of the reproductive tract and damage to the testes. In addition, spermatogenesis can be severely impaired in many paraplegics and in most cases is at least reduced. The reasons for this reduction in sperm production are unclear, but increased scrotal temperature and recurring reproductive tract infections may be contributing factors. However, if there are functional testes with some ongoing testosterone production and spermatogenesis, the major problem in procreating reproducing becomes transmission of sperm to the female reproductive tract.

Several VA Spinal Cord Injury Centers (there are 20 in the United States) have been conducting research and some clinical trials on vibrational and electrical induction of ejaculation of paraplegics during infertility treatment (see box 10-A). The West Roxbury (MA) VA Spinal Cord Injury Program is conducting research on the use of electroejaculation and vibration-induced ejaculation to treat the sexual dysfunction and resulting infertility of paralyzed veterans. Although this program is in its formative stage, it has been successful in inducing ejaculation in a number of spinal cord injury patients. In addition, the program is conducting tests of the pharmacological treatment of impotence.

Another program, at the Palo Alto (CA) VA Medical Center, has had some success with electroejaculation of paralyzed veterans as well. The Spinal Cord Injury Center there has reported a live birth as a result of electroejaculation of a paralyzed veteran, sperm washing, and subsequent artificial insemination of the veteran's wife. (The artificial insemination was performed in collaboration with a private gynecologist, since the VA is not authorized to perform this procedure.) Pregnancies and live births to wives of paraplegics have been reported using these and alternative techniques in other, non-VA medical centers (1,2,3).

Box IO-A.—Obtaining Semen From the Spinal Cord Injured

Although sperm may be decreased in number and quality in paraplegics, there can be sufficient amounts to achieve pregnancy by normal or medically assisted means. A number of techniques can be used to obtain semen from spinal cord injury patients, although this area of research is in its infancy.

Intrathecal neostigmine injection has largely been abandoned because of the risks and the report of at least one death resulting from this procedure. However, this approach for inducing ejaculation, which uses injection of a pharmacologically active substance into the nervous system, has yielded several pregnancies (3).

Electroejaculation has been used in farm animals for many years and was first applied to paraplegic men in 1948. This involves electrical stimulation of the nerve complex that controls ejaculation. This stimulation is applied via electrodes placed in the patient's rectum with a device similar to those shown in figure IO-2. A number of pregnancies have been reported using this approach (1,3).

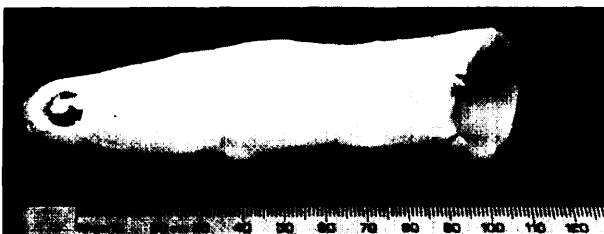
Vibratory-induced ejaculation has also been used successfully in spinal cord injury patients, although its applications are more restricted than electroejaculation. Direct application of vibratory stimulation to the penis of paraplegic men can elicit reflex erection and ejaculation. However, depending on the time since injury and the level and severity of the spinal cord lesion, electroejaculation may be the method of choice.

In a few patients, **radio wave-activated nerve stimulators** have been implanted in the abdomen around the hypogastric plexus, a nerve complex involved in reproductive function. When patients apply a suitable radio transmitter over the implanted receiver, electrical impulses stimulate ejaculation (3).

Several other approaches have been used to collect semen from spinal cord injury patients. The use of **semen capsules** (cannulae implanted into the vas deferens) to collect semen in a reservoir fashion has been reported (3). Recently, a pregnancy has been reported in a couple with a male partner paraplegic following **direct aspiration of sperm from the vas deferens combined with intrauterine insemination** (2).

SOURCE: Office of Technology Assessment, 1988

Figure 10-2.—Devices Used in Electroejaculation Procedures



Hollow rectal probes constructed of silicone rubber reinforced with nylon mesh. Electrodes (metallic circle) are made of silver and connected to stimulator.



Rectal probes manufactured from solid bars of polyvinyl chloride. Unlike hollow probes, these devices have built-in temperature sensors that are connected to a monitor.

SOURCES: G.S. Brindley, "Sexual and Reproductive Problems of Paraplegic Men," *Oxford Reviews of Reproductive Biology*, vol. 8 (Oxford, U. K.: Clarendon Press, 1986); and C.J. Bennett, J.W.T. Ayers, J.F. Randolph, et al., "Electroejaculation of Paraplegic Males Followed by Pregnancies," *Fertility and Sterility* 48:1070-1072, 1987.

VETERANS' ELIGIBILITY FOR HEALTH CARE

General

Title 38 U. S. C., Sections 601, 603, 610, 612, and 620, define eligibility of veterans for hospital, nursing home, domiciliary, and medical care by the VA. As a result of legislation enacted in 1986 (Public Law 99-272), three different categories of eligibility for veterans' health care now exist.

Veterans in the first category must be provided hospital care by the VA and maybe provided nursing home care, within the resources Congress appropriates. This group includes service-connected disabled veterans, veterans exposed to Agent orange or radiation, former prisoners of war, pre-World War II veterans, and veterans unable to pay for medical care. To qualify for care on grounds of inability to pay, a veteran with no dependents must have an annual income under \$15,000, or under \$18,000 with one dependent. Veterans receiving pensions or eligible for Medicaid are automatically considered unable to pay (22).

Veterans in the second category will receive hospitalization and other medical care to the extent resources and facilities are available. This group includes veterans seeking medical treatment for non-service-connected disabilities who do not fall into any of the groups in the first category and whose incomes do not exceed the \$15,000/\$18,000 thresholds. If their incomes are below \$20,000 (in the case of veterans with no dependents), or \$25,000 (with one dependent), the medical care will be free. If their income is higher, then the veterans fall into the third category of eligibility.

The third group of veterans is expected to pay for some of their care, by making copayments or covering all the cost, including the cost of nursing home and outpatient care. In addition, the VA now has authority to obtain reimbursement from a veteran's health insurance plan for health care provided in VA facilities. However, both the copayments and any reimbursement from health insurers go directly to the U.S. Treasury and not into the VA operating budget. With the enactment of the copayment policy and reimbursement of the U.S. Treasury from private health insurance companies, it might be more feasible to provide

infertility services for infertile veterans. It should be pointed out that, at this time, most health insurers do not cover infertility services such as IVF. However, other infertility services such as hormone treatment, laboratory tests, semen analysis, and ovulation monitoring may be covered by such providers. The costs associated with these latter procedures constitute a significant portion of all infertility treatment expenses (see ch. 8).

Outpatient Care

The policies just discussed deal mainly with inpatient health care. The eligibility for outpatient care is not the same. Overall, most veterans are not eligible for comprehensive outpatient care, but are generally eligible only for care to obviate a need for hospitalization (i.e., acute care) or to continue care begun on an inpatient basis. There is no requirement, as there is for veterans in the first category needing hospital care, that outpatient care be furnished to any particular veteran (Title 38 U. S. C., Sec. 612).

In some geographical locations, such as the Sun Belt States, home to a larger population of older veterans requiring medical care, availability of outpatient medical treatment for non-service-connected disabilities is limited. Nevertheless, the VA currently provides a significant amount of outpatient care for many veterans. This is of particular relevance to infertility services because as various infertility treatment methods become more sophisticated they may be routinely performed on an outpatient basis. This trend should be considered when evaluating statute changes.

Disabilities

Title 38 U.S.C., Section 601.1, defines disability as "a disease, injury, or other physical or mental defect." Further classification of various disabilities for purposes of compensation by the VA are outlined in the Code of Federal Regulations, Title 38, Part 4. Although a number of medical conditions associated with infertility are classified as disabilities, the resulting infertility is not. It is because of this determination that the VA believes it does not have the legal authority to provide in-

fertility treatments such as artificial insemination or IVF.

Service-Connected Determination

Service-connected determination is given to any injury or disease incurred or aggregated during active wartime or peacetime service. Veterans must have been discharged or separated from the service under other than dishonorable conditions. To receive medical care for the condition, it must be rated as a disability by the VA. This has posed a problem for veterans who have service-related conditions that result in impaired fertility, since infertility per se is not considered a medical disability and therefore does not qualify for compensation. Although infertility is not a compensable disability, the underlying injury or disease that actually causes the infertility may qualify as a disability.

The determination of service connection, however, is not always clear. Because of the lack of data on male reproductive physiology, it can be extremely difficult to diagnose male infertility as the reason a couple is unable to conceive, let alone to determine the factors contributing to this condition. At present, the most common diagnosis for male factor infertility is idiopathic—i.e., of unknown cause (see chs. 4 and 6).

Although this lack of knowledge about male infertility can make attributing a low sperm count to a specific service-related event difficult, there are a few instances that can be more easily identified. For example, infertility or sterility can result from orchitis (testicular inflammation) resulting from mumps (especially in adulthood). If this infection was contracted while in active military service and subsequent male infertility is diag-

nosed (decreased sperm number or motility, or decreased testosterone production), service-connected designation can be made with confidence. For an individual with similar symptoms and a service record of exposure to relatively low levels of ionizing radiation, on the other hand, the determination is far from clear. Although radiation in large amounts can clearly impair testicular function and fertility, the effects of low levels are controversial and not well understood (18).

A similar but somewhat less problematic situation exists for service-connected designation of female infertility. Female infertility problems can more often be readily ascribed to a particular condition such as blocked or scarred fallopian tubes resulting from pelvic inflammatory disease. However, here too uncertainty about cause and effect occurs.

Because of the lack of knowledge about all possible factors contributing to infertility in men and women, many determinations of service connection will remain problematic. Evaluation of service connection or aggravation is best made on a case-by-case basis by physicians trained in infertility.

Compensation

Compensation for service-connected disabilities amounts to monthly financial payments if the rating of the disability, as determined by the local rating boards, is judged greater than 0 percent. In 1987, compensation ranged from \$69 per month for a 10-percent rating to \$1,355 per month for a total (100-percent) disability rating. Adjustments to these figures may be made, depending on number of dependents and circumstances.

COSTS OF INFERTILITY SERVICES

As described in detail elsewhere in this assessment (see ch. 8), the costs of infertility services vary considerably depending on the factors leading to the infertility and the types of diagnostics and treatments required. OTA estimates that the costs of infertility services for couples in the gen-

eral population can range from \$2,000 to more than \$22,000, depending on the severity of the problem. In 1986 an estimated \$1 billion was spent on infertility-related services. If the VA were to provide medical treatments to overcome infertility, how much would it cost?

The VA has estimated the cost of providing “services to achieve pregnancy in a veteran, or a veteran’s spouse, if necessary to overcome a service-connected disability which impairs the veteran’s procreative ability” to be \$580,000 in the first fiscal year and \$4.1 million over five fiscal years (8). However, at least one veterans’ advocacy group questions the accuracy of these numbers (11).

Although OTA has estimated the costs of infertility services for couples in the general population, any accurate estimate of possible costs to the VA of providing infertility services will remain elusive until criteria are established for the following variables:

- What population of veterans would be eligible for infertility services? Those with service-connected conditions only? Which service-connected conditions would be excluded?
- How many eligible veterans actually would seek infertility treatments? In 1982, in the general population only about 55 percent of the

identified infertile couples reported they wanted to have a baby. Only about one-third of the infertile couple population actually sought out infertility treatment (see ch. 3). Would the same percentages hold for infertile veterans?

- What types of infertility services would be provided? All? Would reproductive technologies such as IVF and gamete intrafallopian transfer be excluded?
- Would treatments be limited to the veteran partner of an infertile couple or include the nonveteran spouse as well? This would not only change the number of patients undergoing infertility treatment but would also significantly affect the kinds of treatments available.
- Where would infertility treatments be located? If the VA elects to provide all infertility treatments in-house, then considerable startup and maintenance costs would result. On the other hand, providing services on a contract or one-time grant basis would cost considerably less.

VETERANS’ ADVOCACY GROUPS

The Paralyzed Veterans of America (PVA) is a national, nonprofit service organization for paralyzed veterans founded in 1946 and chartered by Congress in 1971. PVA has a membership of approximately 14,000 and is an advocate for 250,000 paralyzed American veterans, an estimated 175,000 nonveteran paralyzed Americans, and all US veterans.

Of particular interest to PVA are veterans with service connected spinal cord injuries or diseases. This group, estimated by the VA at approximately 1,660 (though a somewhat higher estimate is suggested by PVA), can suffer from infertility problems due to neurological deficits that result in impotence and low sperm count and motility. The PVA advocates the amendment of 38 U.S.C. to provide medical care and treatment for secondary disabilities and functional impairments resulting from primary disabilities (13). This would presumably cover treatment of infertility with procedures

such as artificial insemination, IVF, and gamete intrafallopian transfer.

In addition to the issue of infertility treatment, PVA believes that specific changes in Title 38 should be made to cover not only currently available medical and surgical treatments for infertility, but other emerging technologies as well, as they become available.

Another veterans’ group that has been an active advocate on this issue is the Vietnam Veterans of America. This organization recently represented an infertile female veteran in a claim against the VA. In this case, the female veteran from California petitioned the VA to pay for IVF to overcome her infertility, which was the consequence of a service-connected medical condition. After the VA denied this request, a tort claim against the VA was filed. A cash sum for IVF was awarded to the woman (17).

Amendment of 38 U.S.C. to allow the VA to provide medical services to overcome service-connected disabilities affecting procreation is also supported by the Veterans of Foreign Wars of the United States, which feels that such a program is long overdue (4). Other veterans' groups supporting such a change include the American Legion and the American Veterans of WWII, Korea, and Vietnam (AMVETS) (10,14).

Although many of these groups support amendment of 38 U.S.C. to allow procreative services, at least one veterans' group stated that "it was more concerned with possible erosion of medical benefits for our Nation's veterans than for the expansion of experimental medical treatments" (12).

ADDITIONAL VA CONSIDERATIONS

Several additional considerations are related to veterans and the VA. First, the VA's responsibility is unclear in the event of complications from infertility treatments. Who would be responsible, for example, if there were a complicated pregnancy following infertility treatments? The VA currently contracts out care for complicated pregnancies, since normal, uncomplicated pregnancies are not considered disabilities. Since the VA does not provide in-house obstetric services in most of its facilities, this issue would have to be resolved.

In addition, there is the question of responsibility in the event of an offspring with birth defects. Title 38 U. S. C., Section 351, requires that a medical condition or complication that results from medical treatment provided by the VA will itself be treated as a medical disability by the VA and render the VA fully liable for any medical malpractice claims. This may make the VA responsible for the medical care of the female partner dur-

ing and after pregnancy as well as the resulting offspring. This would be the case only if the VA medical staff provided treatment within VA facilities. Such liability for birth defects or malpractice is passed on to the contractor in instances where particular medical treatments are provided on a fee-for-service basis by non-VA personnel (16). The potential for liability may be an important consideration in thinking about enlarging the VA's role in providing infertility treatment.

It should also be noted that at least two other federally sponsored programs currently cover some infertility services. Both the Civilian Health and Medical Program of the Uniform Services and Medicaid currently provide some types of reimbursement for infertility services (see ch. 8).

Other ethical and legal questions concerning the access and delivery of various infertility treatments are considered elsewhere in this report (see chs. 9, 11, 12, and 13).

SUMMARY AND CONCLUSIONS

Nearly 28 million veterans live in the United States. The overwhelming majority (96 percent) are male, 55 percent of whom are below the age of 55. Female veterans are disproportionately younger than male veterans; 490,560 female veterans are between ages 17 and 44. The number of male veterans is decreasing, while the number of female veterans is increasing.

The Veterans' Administration offers only limited treatment for infertility in its 172 medical centers and 227 outpatient clinics. Since infertility treat-

ment often involves the examination and treatment of both partners, and the VA has authority to administer medical treatment solely to veterans, the VA lacks authority to treat a nonveteran spouse of an infertile couple. Most important, the VA does not classify infertility as a primary disability, thus severely limiting the treatment available to veterans.

In 1985, about 16,000 male veterans and more than 1,200 female veterans had known service-connected medical conditions that could contrib -

ute to infertility. Among the men, the conditions ranged from removal of the testes or prostate to spinal cord injury. Among the women, the conditions ranged from removal of the ovaries to inflammation of the fallopian tubes or cervix.

Spinal cord injury is of special concern both to the VA (which supports 20 spinal cord injury centers) and to veterans' advocacy groups. The outlook for fertility after spinal cord injury in paraplegic men (although not women) is often poor. Erection and ejaculatory dysfunction, compounded by infections of the reproductive tract, are common. Research at VA spinal cord injury centers on the use of electroejaculation and vibration-induced ejaculation is likely to offer hope for fertility to veterans—and ultimately nonveterans—with spinal cord injuries. Ironically, even when

sperm are obtained through these procedures by VA physicians, insemination of the veteran's non-veteran wife cannot be undertaken within the VA.

Although OTA has estimated how much infertility services cost in the general population, estimating similar costs to the VA if it were to provide these services remains problematic until criteria are established for a number of variables. These include specification of the eligibility of veterans and/or spouses for infertility services and types of procedures to be provided. In addition, other factors such as whether these services would be provided in-house or contracted to other facilities will greatly affect estimates. Until these questions are answered, meaningful cost estimates will remain elusive.

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