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PERSONNEL AND
READINESS

The Honorable Mike D. Rogers
Chairman
Committee on Armed Services
U.S. House of Representatives
Washington, DC 20515

JUN 12 2024

Dear Mr. Chairman:

The Department's response to House Report 117–397, page 205, accompanying H.R. 7900, the National Defense Authorization Act for Fiscal Year 2023, "Study on the Connection Between Active-Duty Military Service and Family Building Challenges," is enclosed.

The report provides a review of the overall prevalence of infertility among active duty Service members (ADSMs) and their spouses; information on access to fertility treatment services; an assessment of the standard definition of infertility; information on availability of faith-based and spiritual support in meeting family-building challenges; an assessment of the connection between family-building challenges and retention; and recommendations to address family-building challenges experienced by members of the Armed Services. While the overall rate of diagnosed infertility among ADSMs and their spouses is low, family-building challenges encompass more than just infertility.

Thank you for your continued strong support for the health and well-being of our Service members and their families.

Sincerely,

[redacted]

Ashish S. Vazirani
Performing the Duties of the Under Secretary of
Defense for Personnel and Readiness

Enclosure:
As stated

cc:
The Honorable Adam Smith
Ranking Member

[redacted]

Report to the Committee on Armed Services of the House of Representatives

Study on the Connection Between Active-Duty Military Service and Family Building Challenges

June 2024

The estimated cost of this report or study for the Department of Defense is approximately $35,000 in Fiscal Years 2022 and 2023. This includes $5,000 in expenses and $30,000 in DoD labor. Generated on October 12, 2023.

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I. Summary

This report is in response to House Report 117–397, page 205, accompanying H.R. 7900, the National Defense Authorization Act for Fiscal Year 2023, which requests the Secretary of Defense provide a report on the connection between active duty military service and family building challenges and provide findings for each of the following elements:

(1) the prevalence of infertility among Active-Duty Service Members and their spouses disaggregated by age-group;

(2) the number and percentages of Active-Duty Service members and their spouses with diagnosed infertility who have access to fertility treatment services at Military Treatment Facilities;

(3) the number and percentages of Active-Duty Service members and their spouses with diagnosed infertility who do not have access to fertility treatment services at Military Treatment Facilities;

(4) an assessment on whether the standard definition of infertility, as defined by the Centers for Disease Control and Prevention, in any way limits members of the Armed Forces from receiving timely infertility diagnosis;

(5) an assessment of the availability of faith based and spiritual support in meeting family building challenges;

(6) an assessment of the connection between family building challenges and retention;

(7) recommendations to address family building challenges experienced by members of the Armed Services; and

(8) any other data or information the Secretary deems relevant.

The Department recognizes that the military introduces unique challenges to family building, including unpredictable separations between partners, disruptions to treatment due to relocation and/or deployment, and challenges accessing care due to the location of duty stations and lack of coverage for potential treatments. While the overall rate of diagnosed infertility among active duty Service members (ADSMs) and their spouses is low, family building challenges encompass more than just infertility.

II. Elements of the Report

Data provided in this report reflects information consistent with previously published reports on infertility by the Department of Defense (DoD) (DoD, 2020), via the methodology detailed in Appendices 1 and 2. Due to the clinical data specificity in this report, data comparisons to external self-reported survey data should be interpreted with caution.

Element 1

The prevalence of infertility among ADSMs and their spouses disaggregated by age-group.

Between Calendar Years (CYs) 2013 and 2021, the Military Health System (MHS) provided care to more than 5.3 million ADSMs and ADSM spouses (more than 3.7 million ADSMs and 1.6 million individual ADSM spouses). Of those, 118,997 had a diagnosed case of infertility, resulting in a global infertility prevalence rate of 221.56 cases per 10,000 persons, or 2.22 percent during the observed time (Table 1). These findings are consistent with those reported previously by the Department (DoD, 2020), as similar methodologies were used to allow for comparisons over time. As a point of national comparison, the Centers for Disease Control and Prevention (CDC) reports that, "among married women aged 15 to 49 years with no prior births, about 1 in 5 (19 percent) are unable to get pregnant after one year of unprotected sex (infertility)" (CDC, 2023). However, as noted previously, these rates are not directly comparable due to significant differences in data methodology and data collection processes.

Table 1: Total Cases and Prevalence of Diagnosed Infertility Overall and by Sex Among ADSMs and ADSM Spouses, CYs 2013-2021

	N	Rate^	Percentage†
Grand Total Population	5,370,831		
Grand Total Infertility Cases	**118,997**	**221.56**	**2.22%**
	N	**Rate^**	**Percentage†**
ADSM Population	3,757,527		
Total Infertility Cases	**57,929**	**154.17**	**1.54%**
Female*	18,554	49.38	0.49%
Male	39,375	104.79	1.05%
ADSM Spouse Population	1,613,304		
Total Infertility Cases	**61,068**	**378.53**	**3.79%**
Female*	58,471	362.43	3.62%
Male	2,597	16.10	0.16%

*Female of childbearing potential was defined as a female ADSM or female ADSM spouse between the ages of 17 and 45.
^Rate per 10,000 persons
†Number of cases identified divided by the total grand total population, ADSM population, or ADSM spouse population as appropriate and then multiplied by 100 as a standard percentage

When disaggregated by beneficiary category, age group, and sex (Table 2), the infertility prevalence rate among ADSMs increases by age, peaks in the 30-34 age group for both sexes, and then gradually decreases. A decrease in diagnosed infertility among those 35 years and above is likely due to a lower rate of individuals seeking the medical care required for an infertility diagnosis, as opposed to improved odds of spontaneous conception. ADSM spouses show a similar general trend of increased infertility prevalence with increasing age. This data is consistent with national data that show a woman's peak reproductive years are between the late teens and late 20s. By age 30, a woman's fertility (the ability to get pregnant) starts to decline, with a more rapid decline in the mid-30s, and by 45, has generally declined so much that getting pregnant naturally is unlikely (ACOG, 2023). Similarly for males, peak fertility is around 25-29 years old, and sperm quality begins to decline at 30. (Path Fertility, n.d.)

Table 2: Prevalence of Diagnosed Infertility by Age Group and Sex Among ADSMs, CYs 2013-2021

	N	Rate^	Percentage†
ADSM Population	3,757,527		
Total Infertility Cases	**57,929**	**154.17**	**1.54%**
Female*	**18,554**	**4.94**	**0.49%**
<20	114	6.14	0.61%
20-24	3,069	165.41	16.54%
25-29	4,967	267.71	26.77%
30-34	5,265	283.77	28.38%
35-39	3,867	208.42	20.84%
40-44	1,224	65.97	6.60%
45+	48	2.59	0.26%
Male	**39,375**	**10.48**	**1.05%**
<20	73	1.85	0.19%
20-24	4,907	124.62	12.46%
25-29	10,876	276.22	27.62%
30-34	11,481	291.58	29.16%
35-39	7,856	199.52	19.95%
40-44	3,124	79.34	7.93%
45+	1,058	26.87	2.69%
ADSM Spouse Population	1,613,304		
Total Infertility Cases	**61,068**	**378.53**	**3.79%**
Female*	**58,471**	**36.24**	**3.62%**
<20	662	11.32	1.13%
20-24	10,874	185.97	18.60%
25-29	19,436	332.40	33.24%
30-34	16,526	282.64	28.26%
35-39	8,428	144.14	14.41%
40-44	2,456	42.00	4.20%
45+	89	1.52	0.15%

Male	**2,597**	**1.61**	**0.16%**
<20	3	1.16	0.12%
20-24	183	70.47	7.05%
25-29	592	227.96	22.80%
30-34	734	282.63	28.26%
35-39	542	208.70	20.87%
40-44	329	126.68	12.67%
45+	214	82.40	8.24%

* Female of childbearing potential was defined as a female ADSM or female ADSM spouse between the ages of 17 and 45.
^Rate per 1,000 persons
†Number of cases identified divided by the total grand total population, ADSM population, or ADSM spouse population as appropriate and then multiplied by 100 as a standard percentage

Among female ADSMs and ADSM spouses, the most common cause of infertility (among cases where a specific cause was identified) was anovulation (detailed in Table 3). In many cases, anovulation can be treated with lifestyle changes, medications that treat an underlying condition that is causing anovulation, or fertility drugs that can induce ovulation; these services may be provided by an individuals' Primary Care Manager (PCM) or Obstetrician/Gynecologist (OB/GYN). Among male ADSMs, the most common cause of infertility (among cases where a specific cause was identified) was azoospermia, while among male ADSM spouses, the most common cause of infertility was oligospermia, with azoospermia the second most common. In some cases, these etiologies may be corrected with treatment from a urologist at a military medical treatment facility (MTF), which in turn may lead to fertility. These services are available based on an MTF's provider types, although some specialties (e.g., OB/GYN or urology) may require referral depending on the MTF and their capacity. It is important to acknowledge that in males and females, whether ADSM or ADSM spouses, unexplained infertility is diagnosed in 15 to 30 percent of cases.

Table 3: Prevalence of Diagnosed Infertility by Diagnosis Category Among ADSMs and ADSM Spouses, CYs 2013-2021

	N	Rate^	Percentage†
ADSM Population	3,757,527		
Female* ADSM Population	643,441		
Total Female* ADSM Infertility Cases	**18,554**	**288.36**	**2.88%**
Anovulation	1349	20.97	0.21%
Tubal origin[a]	955	14.84	0.15%
Other specified origin	1943	30.20	0.30%
Unspecified origin	14307	222.35	2.22%
Male ADSM Population	3,114,086		
Total Male ADSM Infertility Cases	**39,375**	**126.44**	**1.26%**
Azoospermia	3980	12.78	0.13%
Oligospermia	3286	10.55	0.11%
Other male infertility	4436	14.24	0.14%
Infertility due to extratesticular causes	950	3.05	0.03%
Male infertility, Unspecified	26723	85.81	0.86%
ADSM Spouse Population	1,613,304		
Female* ADSM Spouse Population	1,479,344		
Total Female* ADSM Spouse Infertility Cases	**58,471**	**395.25**	**3.95%**
Anovulation	5,716	38.64	0.39%
Tubal origin[a]	2,406	16.26	0.16%
Other specified origin	4,557	30.80	0.31%
Unspecified origin	45,792	309.54	3.10%
Male ADSM Spouse Population	133,960		
Total Male ADSM Spouse Infertility Cases	**2,597**	**193.86**	**1.94%**
Azoospermia	241	17.99	0.18%
Oligospermia	257	19.18	0.19%
Other male infertility	266	19.86	0.20%
Infertility due to extratesticular causes	46	3.43	0.03%
Male infertility, Unspecified	1,787	133.40	1.33%

*Female of childbearing potential was defined as a female ADSM or female ADSM spouse between the ages of 17 and 45.
[a]Block, occlusion, or stenosis of the fallopian tubes
^Rate per 10,000 persons
†Number of cases identified divided by the total grand total population, ADSM population, or ADSM spouse population as appropriate and then multiplied by 100 as a standard percentage

Infertility classification type was defined using the International Classification of Diseases 9th Revision (ICD-9) and International Classification of Diseases 10th Revision (ICD-10) codes listed in Appendix 1.

While the above prevalence rates for infertility among ADSM and ADSM spouses are low, data may underreport the true burden of infertility within the DoD due to reporting on only diagnosed cases of infertility. As such, ADSM and ADSM spouses who do not seek medical care and/or treatment for infertility within the MHS are not captured. The ability to align the reported rates of infertility in multiple surveys with the medical diagnosis of infertility will continue to be a challenge as there can be divergence between clinical diagnosis and personal impression.

Element 2

The number and percentages of ADSMs and their spouses with diagnosed infertility who have access to fertility treatment services at MTFs.

Generally, all ADSMs and their spouses have access to MTF-provider diagnosis and treatment of the underlying physical causes of infertility. Additionally, to meet national accreditation requirements, eight MTFs[1] with OB/GYN Graduate Medical Education (GME) programs provide fertility treatment services such as Assisted Reproductive Technology (ART) (e.g., in-vitro fertilization). These programs offer reproductive endocrinology and infertility (REI) services (hereafter, OB/GYN GME REI), and are available to all ADSMs and ADSMs spouses based on their program capacity on a fee-for-service basis. The Department does not have a defined access standard for OB/GYN GME REI programs in contrast to those access standards required for TRICARE program covered benefits. ART services are not part of the TRICARE covered benefit.

The types and volume of services of each OB/GYN GME REI program is based on the number of providers, fellows, and residents participating, and the requirements of the GME program. These programs provide services on a first-come, first-serve basis, although accommodations can be based on urgency (e.g., onco-preservation). In CY 2020, six OB/GYN GME REI programs initiated over 1,500 ART cycles. Since then, one program began offering ART services in late 2023, and another is expected to begin offering ART services in 2024. Due to the complexities of examining the success of ART cycles, which must assess the entire pregnancy and birth, complete data is usually 2 years behind the current year. Data for the two new programs are anticipated to be available in 2026. Of note, non-essential healthcare services, including ART, were largely put on hold for a time during CY 2020 due to the coronavirus disease 2019 pandemic. These numbers may underrepresent the typical output of these programs but are the most current data available at the time of this report.

[1] Access to ART through OB/GYN GME REI programs is predicated on the availability of REI providers supporting these GME programs. Any change in the number of REI sub-specialty providers influenced by provider retention and the number of fellowship billets for training may impact these program capabilities or capacity at any time.

Table 4: Total ART Cycles CY 2020

OB/GYN GME REI Program	Location	Total ART Cycles
Walter Reed National Military Medical Center	Maryland	605
Tripler Army Medical Center	Hawaii	264
Womack Army Medical Center	North Carolina	171
Madigan Army Medical Center	Washington	129
Brooke Army Medical Center	Texas	140
Naval Medical Center San Diego	California	235
Wright Patterson Medical Center/88th Medical Group	Ohio	Began 2023
Naval Medical Center Portsmouth	Virginia	Began 2024
TOTAL		**1,544**

Element 3

The number and percentages of ADSMs and their spouses with diagnosed infertility who do not have access to fertility treatment services at MTFs.

The Department does not define or monitor an access standard for ADSMs or their spouses' needing services beyond what can be provided through their MTF (i.e., ART) or for those who are unable or unwilling to access services through an OB/GYN GME REI program for any reason (e.g., military obligation, geographically remote, unable/unwilling to bear an individual cost-share).

Element 4

An assessment on whether the standard definition of infertility, as defined by the CDC, in anyway limits members of the Armed Forces from receiving timely infertility diagnosis.

The standard definition of infertility, as defined by the CDC, does not limit ADSMs or their spouses from receiving a timely infertility diagnosis. The military medical benefit generally offers services for the diagnosis or treatment of an illness or injury, which includes diagnosis and specific treatments for the underlying physical causes of infertility in both males and females. A diagnosis for an ADSM or their spouse can be made at any medically appropriate time by a PCM, OB/GYN, and/or urologist. Infertility diagnosis and treatment may include services such as review of previous illnesses or injury, semen analysis, and hormone evaluation, as well as therapies such as surgical correction of structural causes of infertility or medications to promote ovulation that may then permit for conception through coitus.

Element 5

An assessment of the availability of faith based and spiritual support in meeting family building challenges.

A variety of faith-based and spiritual support programs are available across both military and community-based platforms to meet family building challenges. Military Chaplains offer non-medical counseling and represent over 170 religious organizations that meet the criteria to be represented with rites and rituals. While Military Chaplains do not provide formal counseling, they can provide short term, situation-focused support for a variety of issues and

concerns for ADSMs and their families, to include family building challenges. Additionally, numerous family building resources can be found throughout the commercial and private sector, including advocacy, education, and support and community groups.

Element 6

An assessment of the connection between family building challenges and retention.

There is no formally documented reason or required exit survey that captures why a Service member chooses to leave military service thus there is no clear, data-driven link between family building challenges and retention.

Element 7

Recommendations to address family building challenges experienced by members of the Armed Services.

The Department has no recommendations at this time.

Element 8

Any other data or information the Secretary deems relevant.

The Department has no other data or information to share relevant to this report.

III. Conclusion

The prevalence rates for medically diagnosed infertility among ADSMs and their spouses are low, but the data may underreport the true burden of infertility within the DoD. With this prevalence and a consistent methodology, the DoD can continue longitudinal studies applying the same scope to see linear changes. The ability to align rates of infertility based on differing methodology (i.e., medically diagnosed versus those reported in external surveys) will continue to be a challenge. However, family building challenges encompass more than just infertility. The military introduces unique challenges to family building, including unpredictable separations between partners, disruptions to treatment due to relocation and/or deployment, and challenges accessing care due to the location of duty stations and lack of coverage for potential treatments. The Department continues to assess all available opportunities to support family building to the extent authorized.

IV. Appendix 1: Methodology

Data in this report were primarily provided by DHA J5's Analytics & Evaluation Division using the methodologies outlined below. All data have been rounded to the nearest hundredth decimal point where applicable. To maintain consistency, all case definitions were based on previously used case definitions from "Study on Infertility in Members of the Armed Forces" (DoD, 2020).

Population: Data present in this report reflects the Active Component population and their lawful spouses. The Active Component population includes individuals serving in the Army, Navy, Air Force, or Marine Corps during the surveillance period (January 1, 2013 through December 31, 2021), including activated Reserve Component Service members. This excludes members of Space Force, Coast Guard, United States Public Health Service Commissioned Corps, and National Oceanic and Atmospheric Commissioned Officer Corps.

Diagnosis criteria: Infertility rates were based on encounter data and diagnoses codes from records routinely maintained in the MHS Data Repository for administrative billing purposes. Diagnoses were ascertained from administrative records of all medical encounter of individuals who received care in fixed (i.e., not deployed or at sea) medical facilities of the DoD or civilian facilities in the private sector care component.

Prevalence: The prevalence rate is the number of new and existing infertility cases (numerator) identified in the population of interest during the period of observation (denominator). For the purposes of this report, prevalence includes the following:

- For females, both ADSM and ADSM spouse, the inclusion criteria for clinical diagnosis were as follows:

    1. Two infertility diagnoses codes (see Appendix 2 for list) in an outpatient facility in the first or second position, or one infertility diagnosis in an inpatient facility in the first position during the time period of interest; OR

    2. Infertility diagnosis code (see Appendix 2 for list) in the first position in either inpatient or outpatient facility, in any prior year, with at least one infertility diagnosis, in any position, during the time period of interest (e.g., an individual with an infertility in the first position from 2017 could be confirmed as a case in 2020 if they have an encounter with an infertility diagnosis in any position);

    3. The denominator for infertility prevalence calculations was the total number of women of childbearing potential in the Active Component and women of childbearing potential who were a spouse to an Active Component Service member during the time period of interest. Childbearing potential was defined as a female between the ages of 17 and 45.

- For males, both ADSMs and ADSM spouse, the inclusion criteria for clinical diagnoses were as follows:

1. Infertility diagnosis (see Appendix 2 for list) in the first position in either inpatient or outpatient facility, during the time period of interest OR

2. Infertility diagnosis (see Appendix 2 for list) in the first position in either inpatient or outpatient facility, in any prior year, with at least one infertility diagnosis, in any position, during the time period of interest (same example above)

3. The denominator for infertility prevalence calculations was the total number of men aged 17 and above in the Active Component and men aged 17 and above who were a spouse to an Active Component Service member during the time period of interest.

Limitations:

- *Statistical significance*: That data made available from DHA Analytics and Evaluation were summarized as frequency data, and not raw data. Therefore, statistical testing could not be performed, and statistical significance cannot be determined.

- *Infertility*: The data provided within this report reflects only the period prevalence of infertility among ADSMs and ADSM spouses. The data may underreport for ADSMs who may have left service, for ADSMs and ADSM spouses who conceived during the observed time period, and for ADSMs and ADSM spouses who may have had an infertility diagnosis prior to 2013. Furthermore, the data provided within this report only accounts for individuals who were diagnosed with infertility through evaluation and/or treatment in the DHA system under the TRICARE benefit. Data is not available for ADSMs and ADSM spouses who did not seek medical care under the TRICARE benefit, or those who were not diagnosed with infertility but with a different condition possibly causing infertility. If an ADSM or ADSM spouse self-referred to a civilian provider for services not covered by TRICARE, there would be no record of the visit or of their diagnosis. The data does not address the actual proportion of infertility cases that eventually achieved pregnancy, just the initial diagnosis of infertility.

- *ADSM Spouse*: Spouses of ADSM can only be identified within the data if their sponsor (the ADSM) registers them as a dependent under their TRICARE benefit. If a ADSM spouse has their own health insurance policy (known as "other health insurance" (OHI)) in addition to a TRICARE benefit, OHI will be billed for services first, with TRICARE following. This may cause claims containing infertility diagnoses to not be received by TRICARE, and thus would not appear in this report, potentially leading to underestimates of infertility prevalence among ADSM spouses. Further, if a ADSM spouse has OHI but is not enrolled in a TRICARE plan option (i.e., Prime or Select), their claims data is not available at all within the DHA system, again resulting in the infertility prevalence rates reported here to likely be a further underestimation of the true burden of infertility on ADSM spouses.

    - Spouses are not identified in connection with a specific ADSM, but rather are identified using a unique flag which labels them as a spouse. Further, since this report includes nine years of data, it is possible for a ADSM to have registered multiple spouses, based on sequential marriages, in this time period. For this reason, the ADSM spouse denominator is not representative of the total number of married ADSMs.

V. Appendix 2: Diagnosis Codes for Case Definition of Infertility

	ICD-9	ICD-10	Description
Female Infertility	628.0	N97.0	Infertility associated with anovulation
	628.2	N97.l	Infertility of tubal origin (block, occlusion, stenosis of fallopian tubes)
	628.1, 628.4, 628.8	N97.8	Infertility of other specified origin (pituitary-hypothalamic, cervical or vaginal, age-related, etc.)
	628.9	N97.9	Infertility of unspecified origin
Male Infertility	606	N46	Male infertility
	606.0	N46.0	Azoospermia
		N46.0l	Organic azoospermia
		N46.02	Azoospermia due to extratesticular causes
		N46.021	Azoospermia due to drug therapy
		N46.022	Azoospermia due to infection
		N46.023	Azoospermia due to obstruction of efferent ducts
		N46.024	Azoospermia due to radiation
		N46.025	Azoospermia due to systemic disease
		N46.029	Azoospermia due to other extratesticular causes
	606.1	N46.l	Oligospermia
		N46.l l	Organic oligospermia
		N46.12 N46.121	Oligospermia due to extratesticular causes oligosoermia due to drug therapy
		N46.122	Oligospermia due to infection
		N46.123	Oligosoermia due to obstruction of efferent ducts
		N46.124	Oligospermia due to radiation
		N46.125	Oligosoermia due to systemic disease
		N46.129	Oligospermia due to other extratesticular causes
	606.8	--	Infertility due to extratesticular causes
	606.9	N46.9, N46.8	Male infertility, unspecified other male infertility

VI. Appendix 3: References

ACOG. (2023, February). *Having a Baby After Age 35: How Aging Affects Fertility and Pregnancy.* Retrieved from https://www.acog.org/womens-health/faqs/having-a-baby-after-age-35-how-aging-affects-fertility-and-pregnancy

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