RESEARCH BRIEF

# The Women's Reproductive Health Survey (WRHS) of Active-Duty Service Members

## Summary Findings and Policy Implications

Women make up more than 16.5 percent of the active-duty force and serve in all military occupations. Therefore, their health and well-being are critical to overall force readiness.

Given the importance of service women's health and well-being, the 2016 National Defense Authorization Act (NDAA) required the U.S. Department of Defense (DoD) to provide service women access to comprehensive family planning and counseling services, including at health care visits before and during deployment and annual physical exams. The 2017 NDAA required DoD to conduct a survey of service members' experiences with family planning services and counseling. As a result of these mandates, in 2018 the Defense Health Agency asked the RAND Corporation to conduct a survey on select aspects of the health of active-duty service women (ADSW) to help determine whether their reproductive health needs were being addressed. To address this request, RAND developed the Women's Reproductive Health Survey (WRHS) of ADSW.

The WRHS represents the first DoD-wide survey of only women since 1998. The only requirements in terms of survey content were topics identified in the 2016 and 2017 NDAAs (e.g., access to contraceptive counseling and family-planning methods, experiences with use of contraceptives, and availability of preferred methods); the research team identified other related items to also include in the survey. Findings summarized here focus on

- health care utilization
- birth control and contraceptive use
- reproductive health during training, predeployment, and deployment
- fertility and pregnancy
- infertility.

### Health Care Utilization

The WRHS asked ADSW about their recent interactions with the Military Health System (MHS). These experiences can provide insight into the quality of care that ADSW receive through the military and their satisfaction with their interactions with the MHS.

More than half of ADSW in DoD (58.3 percent) and the Coast Guard (54.6 percent) needing care said that it was usually or always easy to get an appointment with an MHS provider. Smaller pro-

portions (close to 40 percent) said that it was usually or always easy to get an appointment with an MHS specialist or obstetrics-gynecology physician (OBGYN) or for care, tests, or treatment needed through the MHS.

TRICARE guidelines indicate that health care beneficiaries should see providers for routine care within seven calendar days of a request; well-woman visits (e.g., immunizations, pap smears, cancer screening) and referrals to specialists should happen within 28 days of the request. For primary care appointments, 61.0 percent of ADSW in DoD and 50.5 percent of those in the Coast Guard reported appointment wait times of no more than seven days, consistent with TRICARE guidelines. For OBGYN appointments, approximately 73 percent of ADSW in DoD and the Coast Guard reported appointment wait times of no more than 28 days, consistent with TRICARE guidelines. Similar proportions reported appointment wait times of no more than 28 days for specialists and other providers. Figure 1 shows the proportion of ADSW by service who were able to get appointments within TRICARE-established wait times for primary care (seven days) or OBGYN care (28 days).

Women's health clinics (WHCs) provide care for gender-neutral health issues (e.g., pain, musculoskeletal injuries), as well as traditionally "female" areas of health, such as family planning and contraceptives. Among DoD ADSW, 35.4 percent said that their installation or duty station had a WHC; nearly equal proportions said that it did not or they were not sure. Among Coast Guard ADSW, 3.9 percent said that their installation or duty station had a WHC. ADSW with a WHC at their installation reported that it was easier to get an OBGYN appointment than ADSW without a WHC. Among DoD ADSW, 20.1 percent used a WHC in the past 12 months (from the time of the survey); among Coast Guard ADSW, 2.6 percent did.

## Birth Control and Contraceptive Use

Nearly 30 percent of ADSW (28.2 percent DoD, 27.3 percent Coast Guard) reported currently using highly effective contraception (intrauterine device [IUD], implant, or sterilization); a little more than 30 percent (30.3 percent DoD, 32.4 percent Coast Guard) reported using other methods. Use of emer-

### Methods

The WRHS was a web-based confidential survey, fielded between August 2020 and November 2020. The representative sample included randomly selected ADSW in the U.S. Air Force, Army, Marine Corps, and Navy, excluding trainees and those above flag rank, and a census of Coast Guard ADSW below flag rank.[a] The total sampling frame was 249,128 ADSW.

The final analytic sample consisted of 23,950 ADSW who responded to the survey and completed at least 50 percent of questions on contraceptive access. The overall response rate was 17.8 percent, varying from 12.5 percent for the Navy to 38.0 percent for the Coast Guard.

Missing data were imputed using a sequential imputation model with predictive mean matching. Less than 4 percent of data were missing, most of which was due to survey drop-off. All analyses use analytic weights that are the product of design weights (which account for the sampling approach) and nonresponse weights (which account for differential propensity for response based on respondent characteristics). Use of the weights results in a representative sample on many important demographic and military characteristics (e.g., age, race/ethnicity, marital status, education level, number of dependents, service branch, pay grade, years of service, occupation code, recent deployment, and Armed Forces Qualification Test score). Readers interested in these differences should consult the full WRHS report at www.rand.org/t/RRA1031-1.

[a] Note that the Space Force is not included in the survey as a separate branch and is treated as part of the Air Force in the analysis. At the time of the survey, the female Space Force population was too small to sample on its own.

gency contraception in the past year was reported by 14.9 percent of DoD ADSW and 11.4 percent of those in the Coast Guard. Among those obtaining birth control in the past year, 44.4 percent of DoD ADSW and 28.5 percent of those in the Coast Guard did so from an MHS provider. DoD ADSW (18.3 percent) were also more likely than those in the Coast Guard (3.4 percent) to obtain emergency contraception from an MHS provider, although the most common source of such contraception for both groups was an over-the-counter purchase.

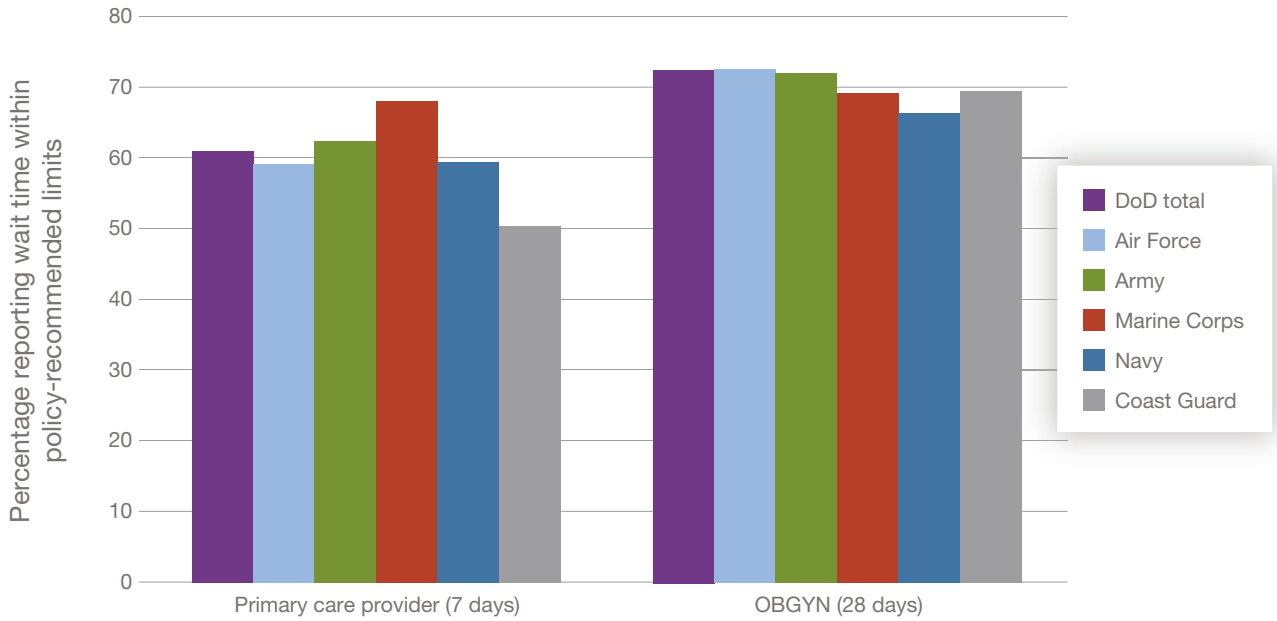
Most ADSW in DoD (78.4 percent) and the Coast Guard (62.7 percent) reported having a periodic health assessment (PHA) within the previous 12 months. Among those having PHA in the past year, 23.2 percent of DoD ADSW and 20.2 percent of Coast Guard ADSW discussed the benefits, side effects, and risks of different types of birth control; 21.2 percent of DoD ADSW and 18.0 percent of Coast Guard ADSW discussed using birth control methods to reduce or suppress menstruation; and 23.5 percent of DoD ADSW and 19.7 percent of Coast Guard ADSW discussed long-acting reversible contraceptives as part of the assessment. About 30 percent (30.4 percent DoD, 29.1 percent Coast Guard) discussed protection against sexually transmitted infections, including condom use. Among DoD ADSW, 14.4 percent discussed emergency contraception, as did

### Limitations

There are several limitations to this research. First, WRHS response rates were low, although higher than in many recent DoD-wide surveys. Second, for some groups (e.g., recently deployed Marine Corps ADSW), sample sizes are small. Third, the survey language did not specify whether care provided within the MHS refers only to direct care at military treatment facilities or also includes care elsewhere through TRICARE. The survey also did not explicitly include Coast Guard clinics as part of MHS care. Fourth, the survey was fielded during the COVID-19 pandemic, although the impact of the pandemic on the study is not necessarily obvious. The pandemic might have limited access to DoD email for remote workers or negatively influenced perceptions of available care, but it also might have led to greater schedule flexibility, affording time to complete the survey.

FIGURE 1

Received Appointment Within TRICARE-Established Wait Time



9.8 percent of Coast Guard ADSW. Among those who discussed long-acting reversible contraceptives, about 65 percent talked about advantages and disadvantages with their provider.

About half (50.5 percent in DoD, 41.9 percent in the Coast Guard) of ADSW who reported trying to access birth control through the MHS since joining the military said that they were able to do so without delay. But 18.3 percent of DoD ADSW and 21.0 percent of Coast Guard ADSW said that they have been unable at least once to get their preferred method of birth control from the MHS. Birth control pills were the most common preferred method not available, and lack of availability at a duty location was the most common reason for not obtaining a preferred method. Figure 2 shows the proportion of ADSW by service branch reporting no delay in accessing birth control through the MHS, as well as the proportions who were unable to get their preferred method at least once from the MHS.

Most ADSW (58.4 percent DoD, 52.4 percent Coast Guard) reported being comfortable getting birth control from an MHS provider. But 32.8 percent of DoD ADSW and 44.2 percent of Coast Guard ADSW said that they would be more comfortable getting birth control from providers outside the MHS. About 20 percent said that they had ever felt pressured by an MHS provider to use a specific type of birth control—most typically birth control pills, IUDs, or implants.

Among DoD ADSW, 16.8 percent reported that their menstrual cycle interferes with their job at least a week each month, as did 10.3 percent of those in the Coast Guard. Most ADSW (63.9 percent DoD, 60.3 percent Coast Guard) said that they have at some time needed or wanted to regulate or suppress menstruation since joining the military; they did so most often through use of birth control pills or IUDs.

## Reproductive Health During Training, Predeployment, and Deployment

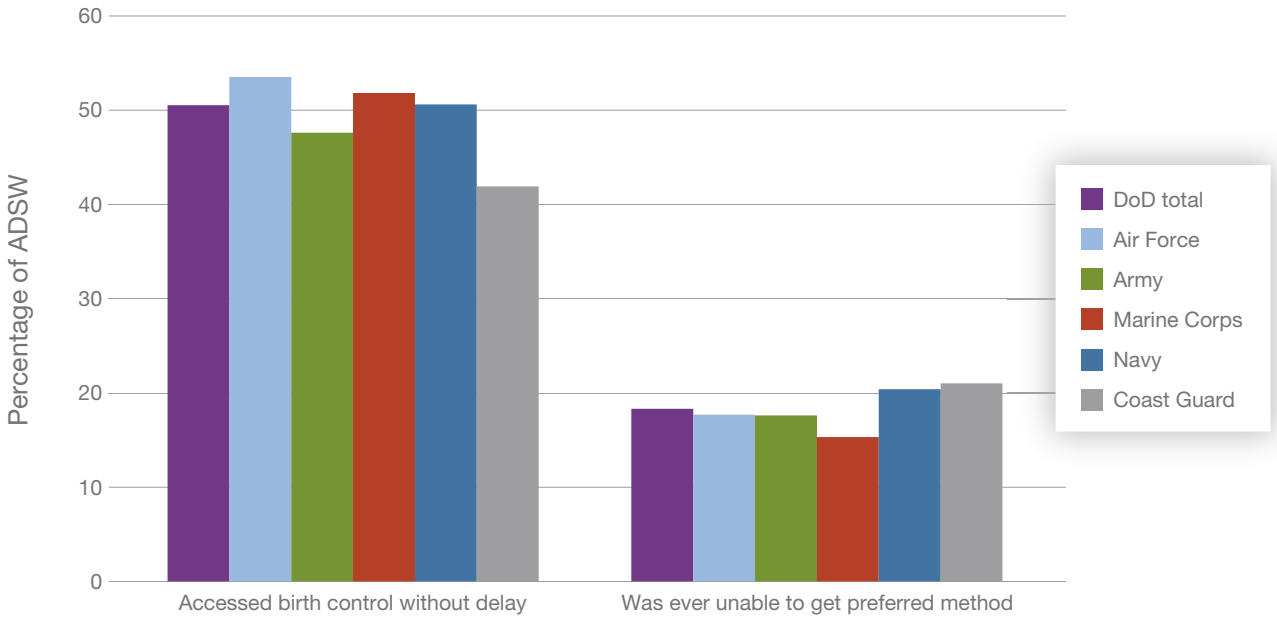
The WRHS asked about ADSW's experiences with contraceptive counseling prior to deployment, as well as access to their preferred birth control during deployment. Overall, 21.9 percent of ADSW in DoD and 28.4 percent in the Coast Guard reported being deployed within the past 24 months.

Among ADSW who deployed in the preceding 24 months, 18.1 percent of those in DoD and 9.1 percent of those in the Coast Guard received predeployment contraceptive counseling from an MHS provider.[1] Among

[1] The survey did not ask ADSW who did not get predeployment contraceptive counseling whether they received that counseling in another setting or whether they wanted contraceptive counseling.

FIGURE 2

Birth Control Access Through the MHS



deploying ADSW, 42.7 percent of those in DoD and 55.0 percent of those in the Coast Guard did not want or need birth control prior to deployment. Among those who did want or need birth control, most received their preferred birth control, but some did not, and many did not receive any method. Figure 3 summarizes contraceptive access through the MHS prior to deployment among ADSW who reported deploying in the past 24 months.

Most deployed ADSW (64.1 percent DoD, 69.4 percent Coast Guard) did not seek birth control or contraceptives while on deployment; among those who did, most did so through the MHS. To suppress or regulate menstruation during deployment, 19.4 percent of DoD and 18.0 percent of Coast Guard ADSW used birth control pills, and 11.9 percent of DoD and 12.5 percent of Coast Guard ADSW used IUDs. Figure 4 summarizes contraceptive access during deployment among ADSW who reported deploying in the previous 24 months. Note that individuals could indicate more than one method for receiving birth control.

The survey also asked about ADSW's reproductive health during training and deployment, specifically whether they had experienced a urinary tract infection (UTI) or a vaginal infection. Just over one-third of DoD (36.1 percent) and Coast Guard (34.7 percent) ADSW reported having a UTI or vaginal infection during field exercises or extended training since joining the military. Figure 5 summarizes the rates of these infections and related issues by service during training. Among ADSW deploying in the past 24 months, 21.1 percent of those in the DoD and 11.7 percent of those in the Coast Guard said that they had a UTI or vaginal infection during deployment. Most ADSW who reported such infections indicated that their frequency always or sometimes interfered with their military job performance or duties. Figure 6 summarizes the rates of these infections and related issues by service during deployment.

Among ADSW, 44.2 percent of those in DoD and 31.6 percent of those in the Coast Guard said that they often or sometimes lacked access to needed feminine hygiene products (e.g., tampons, sanitary napkins, pads) during training. Similarly, 48.4 percent of those in DoD and 32.0 percent of those in the Coast Guard said that they often or sometimes lacked a private place to address feminine hygiene needs, and 48.2 percent of those in DoD and 26.3 percent of those in the Coast Guard said that they often or sometimes lacked access to bathing facilities to address feminine hygiene

FIGURE 3

Birth Control Access Through the MHS Prior to Deployment (Among ADSW Deploying in Previous 24 Months)

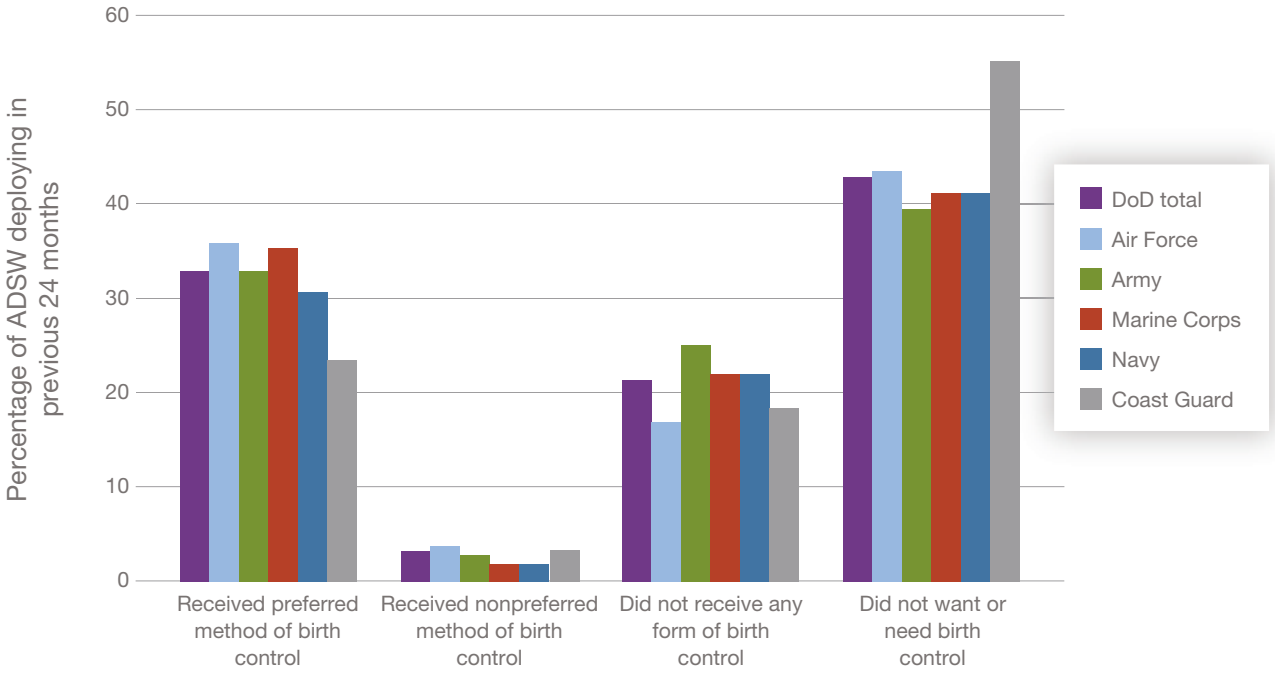


FIGURE 4

## Birth Control Access During Deployment (Among ADSW Deploying in Previous 24 Months)

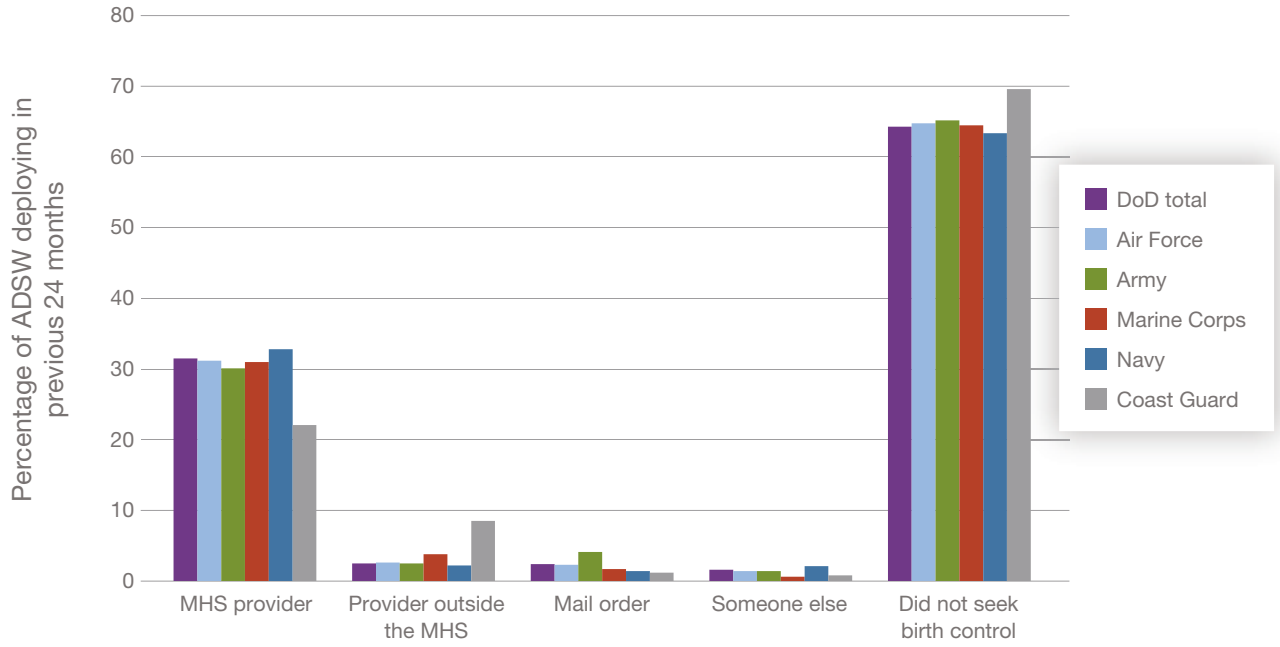
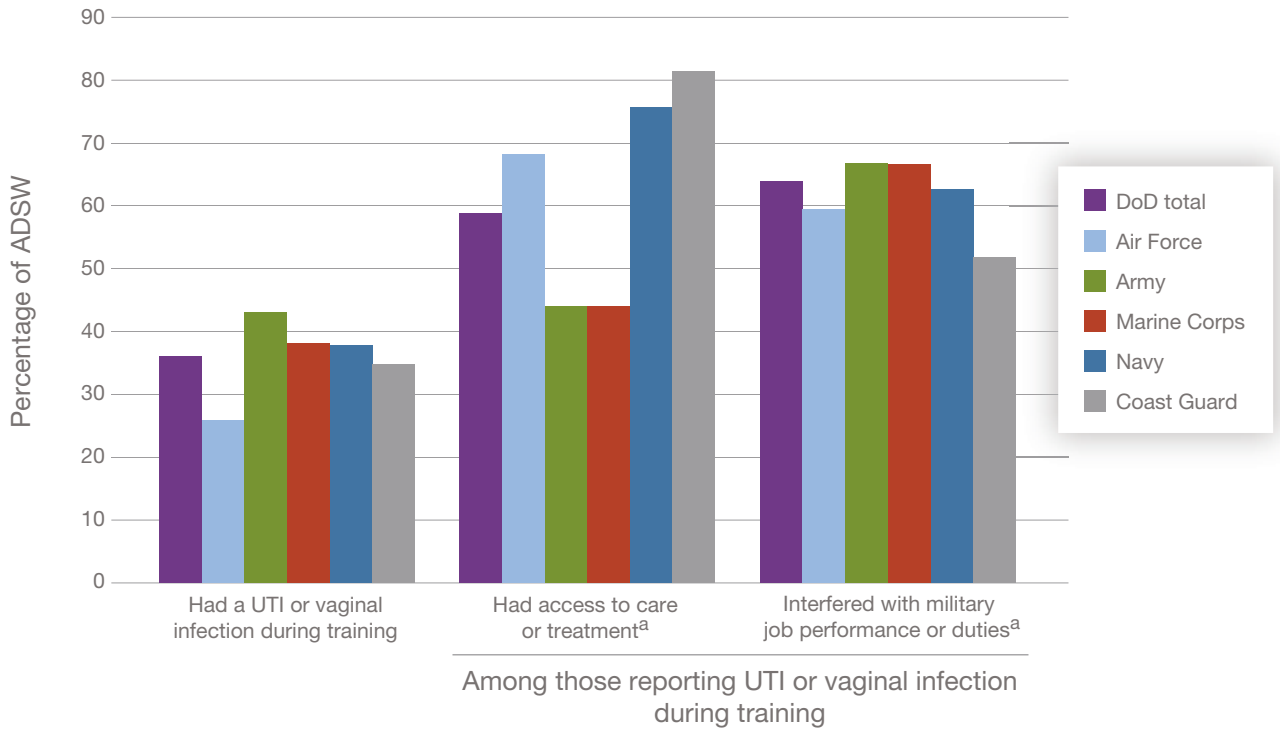


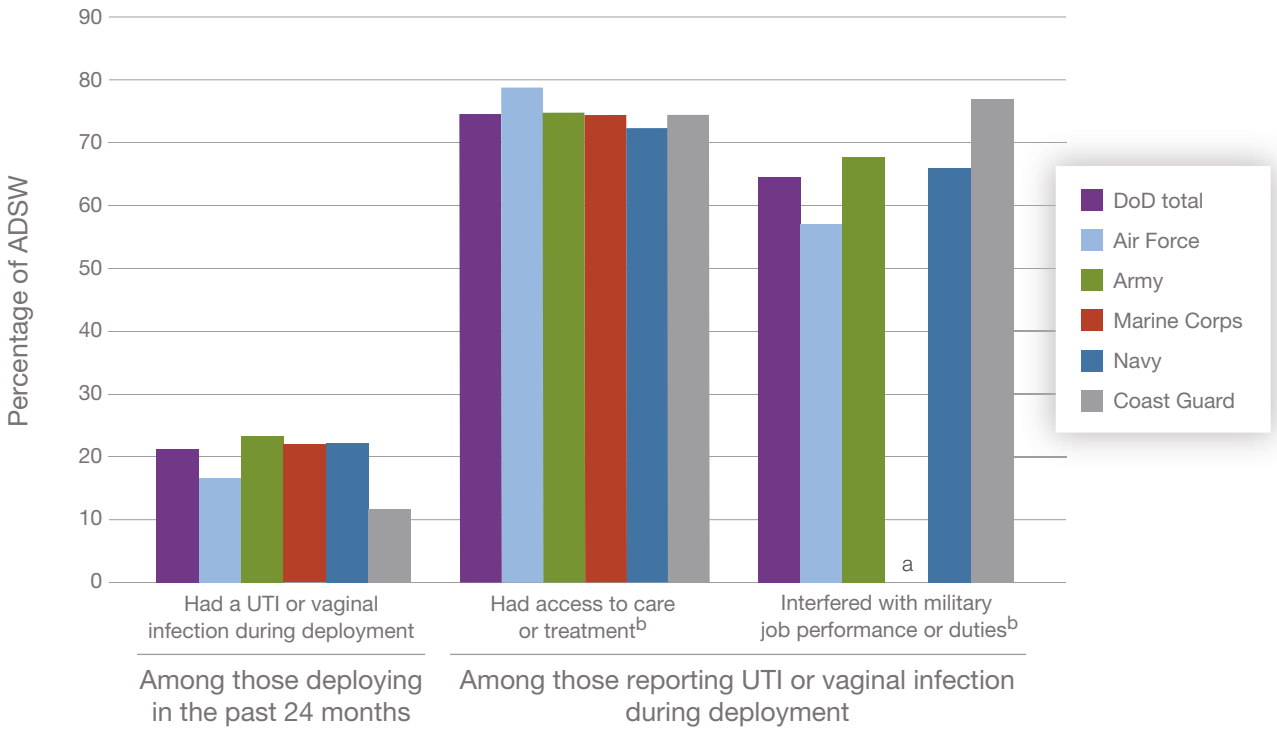

FIGURE 5

## UTI or Vaginal Infection During Training




[a] The bars represent ADSW who responded "sometimes" or "always."

FIGURE 6
UTI or Vaginal Infection During Deployment




[a] The Marine Corps estimate is suppressed due to small sample size. For more details, see the full report at www.rand.org/t/RRA1031-1.
[b] The bars represent ADSW who responded "sometimes" or "always."

needs. Among those who deployed in the preceding 24 months, about 30 percent said that they often or sometimes lacked access to feminine hygiene products or access to a private place or bathing facilities to address feminine hygiene needs.

## Fertility and Pregnancy

More than 40 percent of ADSW (42.6 percent DoD, 43.7 percent Coast Guard) have been pregnant since joining the military, and about 16 percent had been pregnant in the 12 months prior to the survey. Among those who were pregnant in the past year, 36.5 percent in DoD and 29.2 percent in the Coast Guard had an unintended pregnancy. Table 1 presents the proportions of ADSW by service branch who have been pregnant in the past year, as well as the percentage of pregnancies that were unintended.

For all DoD ADSW, multiplying the 16.2 percent of women who were pregnant in the 12 months prior to the survey by the 36.5 percent of pregnant women who said that they had an unintended pregnancy in the 12 months prior to the survey indicates that 5.9 percent of all ADSW had an unintended pregnancy in the past year. The proportion of women with unintended pregnancies was similar by service.

Among ADSW with an unintended pregnancy in the past year, 48.7 percent of those in DoD and 57.1 percent in the Coast Guard reported using no contraception in the month prior to their pregnancy. Among those who were using contraception, roughly equal proportions said either that their method failed or that they were using it inconsistently. Among ADSW with unintended pregnancies who were not using birth control, the most common reasons for not doing so included worries about the side effects and not thinking that they could get pregnant.

Among ADSW who gave birth in the preceding 12 months, 52.0 percent in DoD and 42.5 percent in the Coast Guard reported experiencing depressive symptoms during or shortly after the pregnancy. Among those with depressive symptoms, 39.3 percent of those

TABLE 1

Pregnancies in the Previous 12 Months for ADSW, by Service Branch

| | DoD Total | Air Force | Army | Marine Corps | Navy | Coast Guard |
|---|---|---|---|---|---|---|
| Among all ADSW | | | | | | |
| Pregnancy in the 12 months prior to the survey | 16.2% | 14.6% | 17.8% | 17.9% | 15.5% | 12.9% |
| Among ADSW pregnant in the 12 months prior to the survey | | | | | | |
| Unintended pregnancy | 36.5% | 30.7% | 39.7% | 35.1% | 38.2% | 29.2% |

in DoD and 43.3 percent of those in the Coast Guard sought help from a health care provider. Among all who were pregnant in the preceding 12 months, 41.6 percent of those in DoD and 29.4 percent of those in the Coast Guard talked to an MHS provider about postpartum depression during pregnancy or after delivery. Figure 7 summarizes maternal depression by service branch.

## Infertility

The WRHS assessed the prevalence of both *general infertility*, commonly defined as trying to get pregnant for 12 months or more without success, and *doctor-diagnosed infertility* unrelated to age.

Overall, 15.2 percent of DoD ADSW and 10.7 percent of those in the Coast Guard reported that they had tried to conceive for 12 months or more without success. Similarly, 12.4 percent of those in DoD and 12.1 percent in the Coast Guard said that a doctor had told them that they have fertility problems not related to age. About 2 percent (2.5 percent DoD, 1.9 percent Coast Guard) reported doctor-diagnosed fertility problems for their male partner. Figure 8 summarizes ADSW infertility rates by service branch.

Since joining the military, 12.8 percent of DoD ADSW and 7.1 percent of Coast Guard ADSW had talked to an MHS provider about ways to help them become pregnant, while 7.2 percent of DoD ADSW and 11.1 percent of Coast Guard ADSW had talked to a provider outside the MHS. Figure 9 summarizes where ADSW sought help by service branch. Note that ADSW could report talking to both MHS and other providers.

At the same time, 12.0 percent of DoD ADSW and 8.2 percent of Coast Guard ADSW reported wanting such help but not being able to get it. The most common infertility services or treatments received were advice, infertility testing, and drugs to improve ovulation. Many of these infertility services were more common outside than inside the MHS. Among ADSW receiving fertility treatment since joining the military, 82.7 percent in DoD and 86.3 percent in the Coast Guard reported TRICARE coverage for such services, but 31.1 percent of those in DoD and 29.2 percent in the Coast Guard reported out-of-pocket expenses as well.

Many ADSW also reported difficulties in continuing fertility treatment through the MHS. Among those who sought treatment through the MHS, 28.6 percent of those in DoD and 35.1 percent in the Coast Guard reported stopping treatment prior to becoming pregnant. Among the reasons for stopping treatment were a permanent change of station (PCS) move and the wait for services.

Cryopreservation ("egg freezing") is a method that women might use to try to prolong fertility, in an effort to postpone parenting until later in their careers. It is not covered by TRICARE. About 1 percent of ADSW (1.1 percent DoD, 0.9 percent Coast Guard) have undergone this procedure. About half of ADSW (53.4 percent DoD, 46.8 percent Coast Guard) said that they would consider it, but most of these said that they would do so only if costs were completely covered by TRICARE.

FIGURE 7

## Maternal Depression Among ADSW Who Were Pregnant in Previous 12 Months

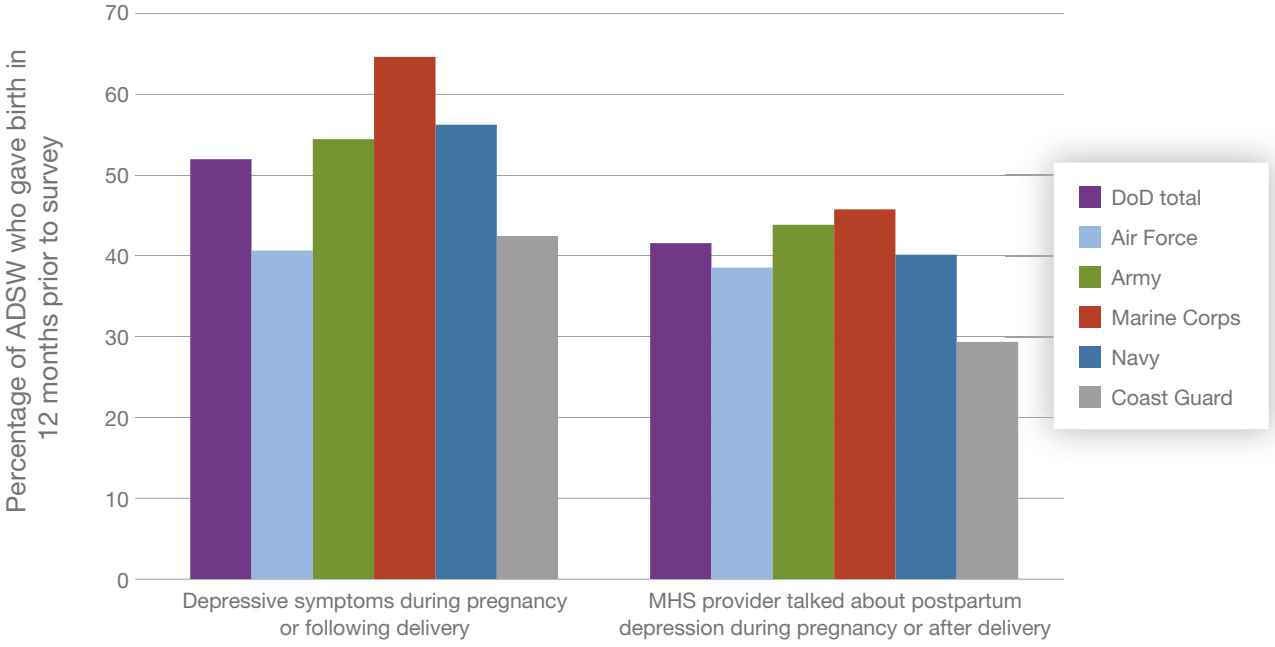



FIGURE 8

## Lifetime Infertility, by Service Branch

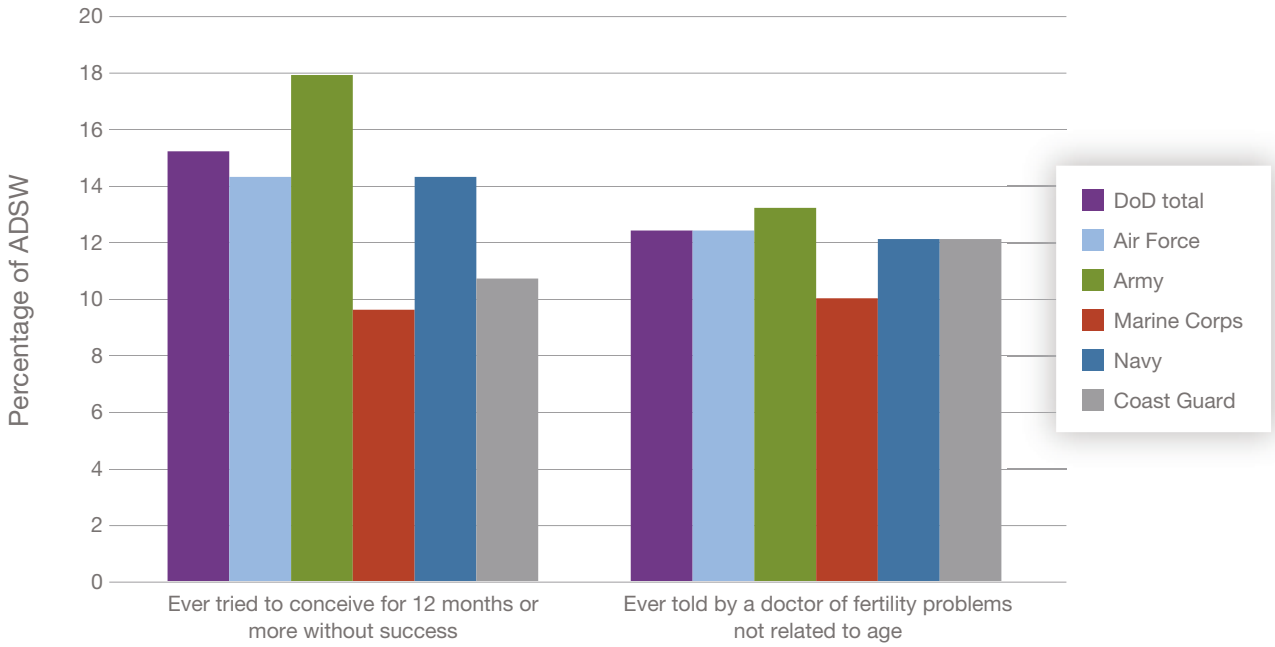
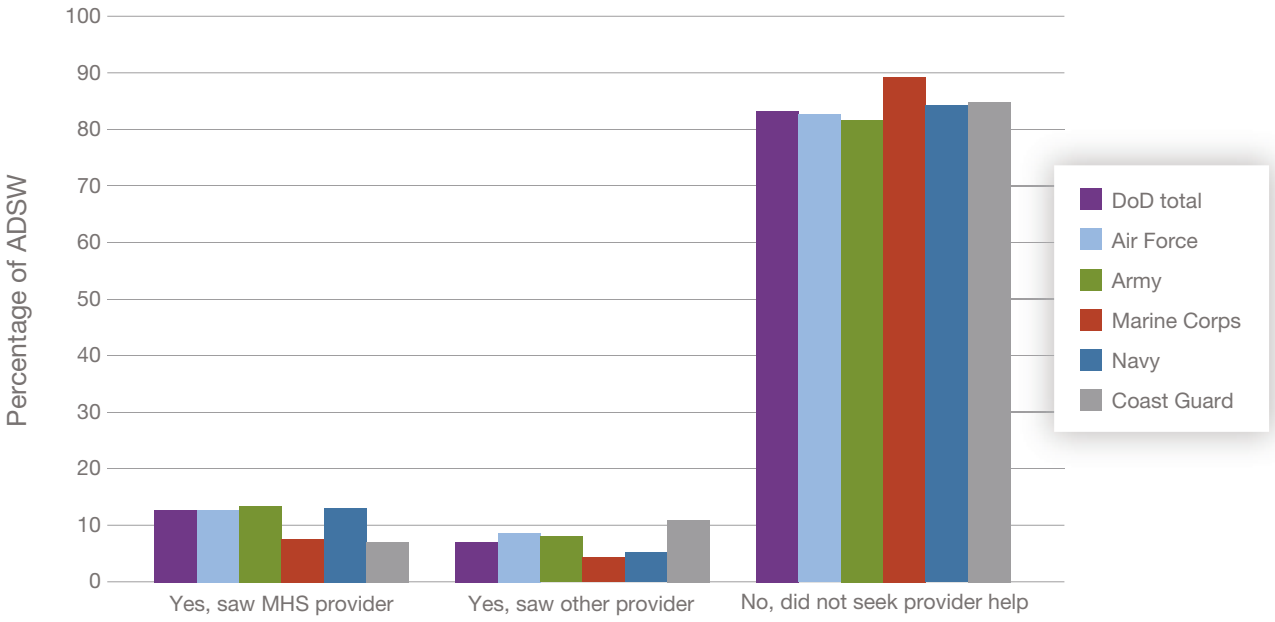


FIGURE 9

Saw Doctor Regarding Fertility Since Joining the Military




## Policy Implications

The WRHS was, in part, designed to help DoD identify reproductive health issues that may affect readiness and well-being among ADSW and how to address such issues. As a result, there are several policy implications related to the findings:

- DoD and the Coast Guard may improve health care utilization by expanding availability at WHCs. Survey results suggest that ADSW can access certain types of care, such as that by an OBGYN, more easily through a WHC but that WHCs are not widely available.
- Similarly, DoD and the Coast Guard could expand use of full-service contraceptive clinics where ADSW can obtain long-acting reversible contraceptives without delay, as well as opportunities for ADSW to access contraceptive counseling through the MHS. The MHS could also consider additional delivery modalities for contraceptive counseling.
- Incorporating alerts into the electronic health record system to remind providers to address contraception, including for menstrual suppression, during routine physical exams could ensure that all ADSW have access to contraceptive counseling. Automated alerts to providers at clinical encounters (e.g., PHA, well-woman visit) may help improve fidelity to the requirement of providing comprehensive contraceptive counseling. Alerts might also ask providers to indicate whether (1) they offered counseling and (2) ADSW were offered counseling but declined it so that the reasons behind apparently low rates of counseling receipt can be better understood.
- To improve reproductive health during deployment, DoD and the Coast Guard may wish to schedule predeployment appointments at least 90 days prior to deployment for ADSW. For ADSW who are initiating contraception (including for menstrual suppression or regulation), modifications to the dose or method may be necessary to minimize side effects or to achieve satisfactory regulation. A longer interval between predeployment appointment and deployment may also allow ADSW more time to obtain their preferred contraceptive method.

- DoD and the Coast Guard should consider strategies for improved access to feminine hygiene supplies, facilities, and treatment for urinary or vaginal infections during training and deployment, particularly for ADSW in the Army and Marine Corps. One potential strategy may include furnishing ADSW with self-test or self-treatment kits for UTIs and other urogenital health issues. However, ADSW must additionally have access to a health care professional (e.g., nurse practitioner) to ensure that infections are appropriately treated and resolve completely.
- To address high rates of unintended pregnancy, DoD and the Coast Guard may seek to improve ADSW's comfort in seeking contraception from the MHS and increase contraceptive counseling and access to highly effective contraception. Contraceptive failure, nonuse, or improper or inconsistent use was cited in most unintended pregnancies. Thus, education and encouragement of contraceptive use are vital.
- DoD and the Coast Guard may also wish to develop a comprehensive strategy to address maternal depression, including routine screening, with specific goals and milestones for reducing maternal depression.
- Finally, DoD and the Coast Guard may seek to improve access to medical fertility assistance. Locating fertility services closer to more ADSW, assisting with infertility service transitions for ADSW undergoing a PCS move, and shortening wait times would address some issues, as would expanding services covered by TRICARE.

**Abbreviations**

| | |
|---|---|
| ADSW | active-duty service women |
| DoD | U.S. Department of Defense |
| IUD | intrauterine device |
| MHS | Military Health System |
| NDAA | National Defense Authorization Act |
| OBGYN | obstetrics-gynecology physician |
| PCS | permanent change of station |
| PHA | periodic health assessment |
| UTI | urinary tract infection |
| WHC | women's health clinic |
| WRHS | Women's Reproductive Health Survey |

This brief describes work done in the RAND National Security Research Division and documented in *The Women's Reproductive Health Survey (WRHS) of Active-Duty Service Members*, by Sarah O. Meadows, Rebecca L. Collins, Megan S. Schuler, Robin L. Beckman, and Matthew Cefalu, RR-A1031-1, 2022 (available at www.rand.org/t/RRA1031-1). To view this brief online, visit www.rand.org/t/RBA1031-1. The RAND Corporation is a research organization that develops solutions to public policy challenges to help make communities throughout the world safer and more secure, healthier and more prosperous. RAND is nonprofit, nonpartisan, and committed to the public interest. RAND's publications do not necessarily reflect the opinions of its research clients and sponsors. **RAND**® is a registered trademark.

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