ARMY MEDICINE
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The Concerns of Women Currently Serving in the Afghanistan Theater of Operations

White Paper

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I. Executive Summary

Nearly 275,000 women have deployed in support of Operation Iraqi Freedom, Operation New Dawn, and Operation Enduring Freedom. During our assessment, it was clear that female Service Members are participating, contributing, and excelling at all levels in the Afghanistan Theater of Operations (ATO). Women are serving on female engagement and reconstruction teams, in transportation, logistics, police, and engineering units as well as all of the health service support roles to name just a few. In order for women to be fully integrated and effective members of the team, we must ensure their unique health needs are being considered and met.

Education and Training on Women's Health

Education and awareness of women's health issues is necessary for individual Service members, their leaders, and all levels in the military healthcare system. Major issues identified by the participants in the Afghanistan Theater of Operations Assessment were the lack of education on birth control, menstrual cycle control, and feminine hygiene during deployment. Women's health issues are compounded by the findings that many women hesitate to seek medical care when they have a female health concern.

Key Recommendations

- Standardized educational training in women's hygiene, contraception management and menstrual cycle control for female Soldier readiness
- Incorporate women's health issues into leaders' pre-deployment medical briefs to increase awareness and sensitivity to female Soldier health
- Create a series of Clinical Practice Guidelines (CPGs) to standardize provider care and implement in garrison and deployed environments
- Develop Women in the Military Self Diagnosis (WMSD) kits for UTI/Vaginitis
- Provide training and tools for female Soldiers to promote self-diagnosis and care of common gender specific infections
- Ensure that there are multiple mechanisms for distribution of Female Urinary Diversion Devices (FUDD) at any time in the deployment cycle

I. Executive Summary

Army Uniform and Protective Gear for Females

Many women in ATO expressed concern about poor fit and functionality of the APFT uniform and body armor. Program Executive Office (PEO) Soldier is testing different sizes for Improved Outer Tactical Vest (IOTV) for small framed Soldiers, currently being trialed through the Soldier System Center.

Key Recommendations

- Emphasize research and development on the fit, form, and functionality of uniform and protective gear for female body proportions
- Appoint representative from Program Executive Office (PEO) Soldier to participate in Women's Health Task Force

Psychosocial Effects of Deployment on Women

Women Service Members are concerned about preparing themselves and their Families for deployment and reintegration, the challenges of being mothers in the military, and the length of dwell time and post partum deferment periods being too short to allow adequate time with their Families and new infants.

Key Recommendations

- Develop deployment and redeployment preparedness programs, policies and behavioral healthcare that are tailored to meet the needs of all women
- Explore feasibility of extending the post-partum deferment policy to 12 months
- Support establishment of women support groups in Theater as well as in garrison
- Support further DoD, VA, and academic research efforts on the psychosocial effects of combat on female Service Members

I. Executive Summary

Effects of Deployment on Children and Families

Women in the CJOA-A are concerned over the effects of deployments on their children and Families. There is abundant research showing that deployments affect Family psychosocial functioning and place children at increased risk for abuse and behavioral health complaints. These increases in adverse emotional and behavioral outcomes have been shown in all phases of deployment and reintegration.

Key Recommendations

- Systematic review of all Army health promotion, resiliency and prevention programs for Families
- Support continued training of civilian and military primary care physicians on the prevention, early detection, and treatment of common behavioral health disorders among military children and Families.
- Embed child and Family behavioral healthcare programs far forward into the community (school, Family centers)
- Commit to community based Soldier and Family resiliency programs that have been shown to positively influence parent-child interactions and decrease negative emotional and behavioral responses of children
- Further research on gender specific effects of deployment on Family members

I. Executive Summary

Sexual Harassment/ Assault Response and Prevention (SHARP)

Sexual assault is not a gender specific issue, but a commander's responsibility with extensive organizational impacts. It affects ALL of our Service Members, degrades mission readiness and unit cohesion, and negatively impacts mission success. Findings in the CJOA-A suggested a lack of confidence by women in the reporting, examination, and legal processing to include mistrust in leadership that their privacy would be protected. The Army's newly revised Sexual Harassment/Assault Response and Prevention (SHARP) program has just been fully implemented and has been received very positively by Service Members and leaders across the ATO.

Key Recommendations

- Improve physical security measures on lodging and bathroom facilities and create female only spaces (where feasible)
- Review Theater policy regarding distribution of SAFE providers
- Convene a team of experts from the Tri-Services to fully investigate the integration of Service policies on sexual assault prevention and response programs in Theater
- Professionalize the roles of the Victim Advocate by providing national certification and continuing education
- Leverage the Comprehensive Soldier Fitness program to develop interpersonal skills and the core values that will enhance a culture of trust
- Ensure 100% implementation of the SHARP program

II. Introduction

Women have participated in America's military efforts since the Revolutionary War. Their roles have evolved from supportive in nature to those with direct assignment in the war zone since WWII. More recently, with the legislative changes during the first Gulf War, over 90% of roles are open to women.[1] Today, almost 275,000 women from all Services have deployed in support of contingency operations in the Middle East that encompass the full dimensions of the battle space.[2] Female Service Members are assigned to units and positions that may necessitate combat actions, like those assigned to our female engagement teams. They are fully prepared to respond, and to succeed, as they have in both Iraq and Afghanistan. The Services must ensure all of our Service Members are healthy, protected warriors regardless of gender. Deployment in support of military operations imposes unique conditions of daily living on military women that have an impact on health and wellness. This report reviews the major themes derived from the voices of female Service Members currently serving in the Afghanistan Theater of Operations and leverages existing data to set forth recommendations to ensure that the health of all Service Members is optimized for maximal combat power.

During the Health Service Support (HSS) Assessment of the Afghanistan Theater of Operations, women's concerns were heard at Town Hall meetings held at 10 locations across the Theater. The HSS Team traveled to Role 1, Role 2 and Role 3 facilities throughout the CJOA-A. The team members assessing Women's Health areas consisted of Nurse Corps Officers, an OB/GYN Physician, a Pediatrician, and a Medical Service Corps officer. In total, there were over 150 female Service Member participants. Open discussion was encouraged without limitation on the issues. All of the discussions were non-attributional, which allowed females of all ranks and services across Afghanistan to have a free and open voice. Surveys that had questions on women's health issues surrounding deployment were also distributed to females after the Town Hall meeting and were returned directly to the HSS team electronically, maintaining confidentiality of the participants.

III. Women's Health Education

An overarching theme of the HSS Assessment findings is that there is a lack of consistent and timely education for women's health issues and how they are impacted by deployment. Major topics identified by the participants in the Town Hall Meetings included the lack of education on birth control, menstrual cycle control, and feminine hygiene during deployment. This lack of education and counseling is evidenced by utilization practices in Theater. A Force Health Protection Assessment reported a 3% higher utilization rate for female genitourinary encounters during Operation Iraqi Freedom (OIF)/Operation Enduring Freedom (OEF) than in garrison from January 2005 to July 2007.[3] It is not surprising that deployment conditions impact the prevalence of common women's health conditions. Correlations have been found between field conditions, feminine hygiene practices, and reported urinary tract infections (UTI) and vaginitis symptoms. UTI, vaginitis, and menstrual symptoms are the most common gynecologic health problems for the women serving in current conflicts. [4-6] Risk factors for UTI in the deployed environment include impaired voiding and impaired feminine hygiene, which are fostered by poor sanitation conditions, lack of latrines, lack of privacy, and the inconvenience of undressing in full battle gear. [4, 7-10] The risk is compounded by women intentionally drinking less fluid to avoid the need to urinate and postponing/delaying urination. [7,8,10,11]

Feminine Urinary Diversion Device (Freshette ©)

Many women were unaware of the existence of Feminine Urinary Diversion Devices (FUDDs) or their availability in the supply system, emphasizing the need for training in awareness, benefits and use of this tool. These devices can be used for urinating in a standing position without undressing.

While more often than not, female Soldiers continue to drive on with their mission, there is evidence that the symptoms of menstrual disorders and infections can impact mission readiness. Forty-eight percent of the women in one anonymous study of nearly 850 women reported that symptoms of vaginitis and UTIs compromised their duties during deployments, and 27% reported lost duty time due to their symptoms.[12] Similarly, military women perceive that menstrual symptoms affect performance of duties in the field setting[13] and contributed to lost duty days during deployments to OIF/OEF.[14] Appropriate counseling on menstrual cycle control, contraception, and urogenital hygiene could reduce the utilization of healthcare and disruption in mission readiness.

III. Women's Health Education

Participants agreed that more education would be helpful and favored education being provided as routine training throughout the Soldier life cycle, starting with basic training and continuing over time, with further opportunities for discussion and counseling on the topics during the Periodic Health Assessment (PHA). There was limited support for including women's health education in pre-deployment training, where it would compete with other time-consuming training demands. Women also noted the importance of educating their male peers and leaders but believed learning would be best facilitated in single-sex groups. Recommendations for education are given priority in this report, since education early in the Soldier life cycle will provide the foundation of self-care required to decrease the risks of menstrual disorders, urogenital infections, and unwanted pregnancy, ultimately enhancing mission readiness.

Recommendations:

Education on Women's Health Preventive Practices and Self-Care

Incorporate the prevention and self-diagnosis of vaginitis and urinary tract infections, as well as education on menstrual disorders, contraception, urogenital hygiene, and menstrual cycle control into the Program of Instruction (POI) for Initial Entry Training (IET) , Advanced Training (AIT) and Officer and NCO development courses. While personal hygiene for all Soldiers is already included in the POI for IET, there is a limited amount of gender-specific issues; the majority of female-specific training is focused on the prevention of sexually transmitted infections. We therefore recommend that more gender-specific hygiene and self-care education for females be added to the POIs. Training should also include instruction on specific self-care practices that women can use to moderate the effects of deployment on their genitourinary health, including the use and benefits of the FUDD. Educational modules and printed materials should be packaged for Soldiers and leaders, as well as for export and utilization by our sister Services. The additional education in the POI should be delivered to both male and female Soldiers, although we recommend that it is offered in single-sex settings to encourage discussion and increased comprehension of the topics. Including the material in education sessions for males will improve their comprehension of women's health issues and foster respect among members of a unit. This training will increase awareness of women's health issues, improve sensitivity to gender specific issues and foster an expectation of respect. Additionally this knowledge will prepare males for leadership positions in which they will be responsible for ensuring the well-being of all members of their unit, including those with female health issues. Our assessment revealed that leaders desire the knowledge about the issues that affect their female Soldiers, particularly in relationship to an impending deployment. Therefore, we recommend leaders also receive specific deployment-related information on women's health issues during pre-deployment health briefings, which has been well-received at the Division level [unpublished data].

III. Women's Health Education

Recommendations:

Education on Women's Health Preventive Practices and Self-Care

Continuing education should be offered to female Soldiers during the PHA for the following topics: contraception, menstrual cycle control, urinary tract infections, vaginitis and women's self-diagnosis kits. A positive response to any of these topics on the web-based Soldier Self-Report (Part I of the PHA) would generate a patient education print-out and prompt counseling to be provided during the provider visit (Part II of the PHA). The Public Health Command (PHC) will develop the women's health patient education materials to be linked with the PHA.

PHA PERIODIC HEALTH ASSESSMENT MEDPROS FORCE HEALTH PROTECTION

In order to further standardize the education provided to female Soldiers and their leaders, PHC will revamp the *TG 281 A Guide to Female Soldier Readiness*[18] to promote evidence-based preventive practices and a culture of wellness for female Soldiers. To ensure that Soldiers and leaders receive the information, PHC will develop a dissemination strategy that includes downloadable media and support for mobile applications. Target distribution points will be at IET, AIT, Basic Officer Leader Course, Warrant Officer Leader Course, Captain's Career Course, Intermediate Level Education (ILE), as well as all pre-command and NCO and Officer Leadership courses. Collaboration with the Veteran's Administration (VA) will ensure continuum of care as Soldiers transition to the VA.

IV. Barriers to Seeking Care

Women's health issues are compounded by the findings that many women hesitate to seek medical care when they have a female health concern. The reasons cited at the Town Hall meetings included having to be seen by a male provider, who may be either in her chain of command or someone she works with on a daily basis. Well designed studies have supported these findings on a much larger scale and across Services. One study of 841 service women found that nearly 50% of the women (n=411) were hesitant to utilize sick call during deployment and 25% stated that they would not even go.[12] When specifically asked about seeking care for genitourinary symptoms, 69% of women reported that their provider was a medic or corpsman and their concerns were lack of confidence, as well as cleanliness and privacy of healthcare facilities.[12] This suggests that many female Service Members do not have a good understanding of how to access a licensed provider in our healthcare system. This finding also supports the need for more education as well as the need to empower women to take an educated role in the mitigation, prevention, and self-diagnosis for these conditions, where appropriate.

Top Four Barriers to Seeking Care for genitourinary symptoms during Deployment [12]

- **Lack of confidence in provider**
- **Embarrassment**
- **Lack of confidentiality**
- **Prefer female provider**

In response to the barriers to seeking care, researchers investigated the use of self-tests to diagnose and treat both vaginitis and urinary tract infection, thereby avoiding the need for a healthcare visit for a gynecologic exam. When women at the Town Hall meetings were presented with the idea of doing their own self-test and diagnosis for vaginitis and urinary tract infections, there was overwhelming support. Experts who have conducted a ten-year program of research have developed a self-test kit that has been validated against diagnostic gold standards in a series of investigations, including with a military population.[15,16,16a,17] The kit that was tested included point-of-care testing devices for determining bacterial vaginosis or a yeast infection and /or a UTI, a thermometer, and the Women in the Military Self-Diagnosis (WMSD ©) decision-making algorithm. Education included use of the kit, a video, and scenario-based use of the decision-making guide.[17]

IV. Barriers to Seeking Care

In preliminary analysis of data (unpublished) from the most recent of the series, the diagnostic accuracy of the testing devices with the decision-making guide for bacterial vaginosis and yeast infections approaches that of clinical diagnoses by a provider.[15] Furthermore, it appears to lead to accurate self treatment with oral medications, as well (unpublished data). This team also found when military women reported the classic triad of symptoms for a UTI, diagnosis both by the self-testing device and by a clinical provider were not as accurate as diagnosis by the gold standard culture;[16a] yet it is important to note that it is common practice to diagnose UTI and prescribe treatment over the telephone, based on reported *symptoms* only, without a culture. Therefore, the use of the self-test kit in combination with the presence of UTI symptoms is seen as a feasible alternative to a clinic visit, with similar outcomes.

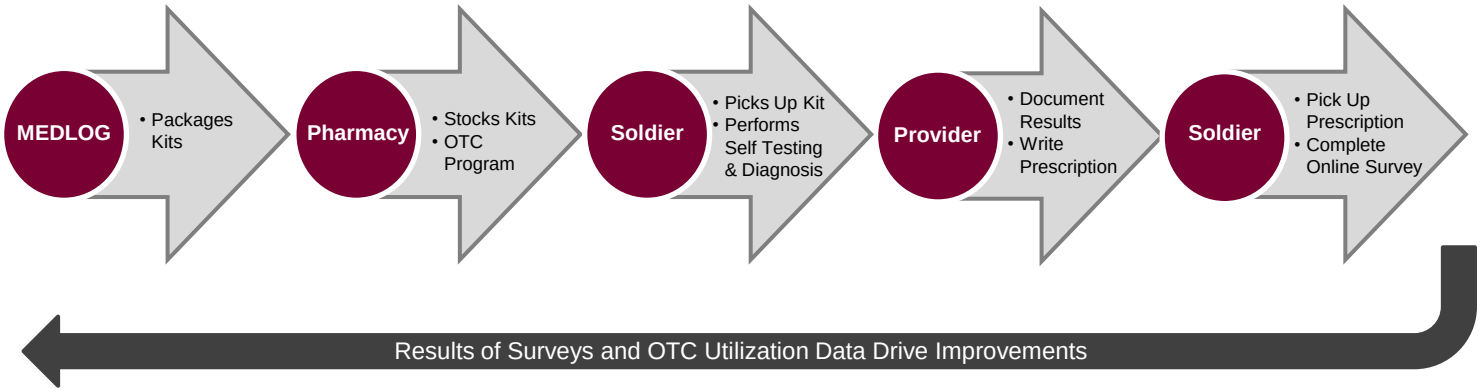
It is the opinion of the subject matter experts conducting this program of research that the kit provides a feasible method for women to provide self-care and thus seek appropriate treatment without the unnecessary step of a clinician visit. Self-testing and diagnosis of UTIs and vaginitis could reduce the time women spend seeking healthcare and increase mission readiness. Not seeking healthcare, nor performing self-care testing for these conditions, could result in no treatment or inappropriate self-treatment and development of more serious complications, such as kidney or pelvic infections. In these cases, the burden on the healthcare system is increased and mission readiness is severely compromised. Given the low risk associated with the testing and low potential for misdiagnoses, in combination with the potential benefits of decreased burden on the healthcare system, it is our recommendation to pursue the development of a women's self-diagnosis kit.

IV. Barriers to Seeking Care

Recommendations

Develop a Self-Diagnosis Kit for Common Conditions and make available to Women

Continue to research and develop a self-diagnosis kit for vaginitis and UTI's. Package the self-diagnosis kit for use in garrison and in Theater. In keeping with the "Train as you Fight" premise, we recommend that this kit is available in both CONUS/OCONUS medical treatment facilities and in the Theater of Operations, providing continuity in the process of how women seek healthcare for the most common gynecologic problems they encounter. In CONUS/OCONUS facilities, add this kit to the pharmacy's Over-the-counter (OTC) program. In the Theater of Operations, it should be available at the Soldiers' point of entry to care, whether it is a Role 1, 2 or 3 facility. The self-diagnosis kit will benefit the Soldier, their Unit, and the military healthcare system. By providing an easily accessible method for self-diagnosis, we will increase the ability for women to practice self-care and improve their autonomy and self-respect. This self-care initiative will decrease the reliance on appointments with healthcare providers for common issues and reduce time away from the unit, ultimately contributing to cost-savings and mission accomplishment. The kit will include point-of-care testing devices to detect vaginal pH and the presence of nitrites and leukocytes in the urine, swabs, a urine collection cup, and a thermometer. The kit will also include a decision-making algorithm to determine type of vaginitis (bacterial vaginosis or yeast) and/or UTI, a patient education handout, instructions on the use of the kit, and a field-ready form of documentation of results. Following the self-test, the Soldier can then take the test results documentation form to her healthcare provider (PA/MD/NP) for documentation in medical record and to have the appropriate prescription written. Routine quality control processes in the pharmacy will monitor and flag when an abnormal/inappropriate utilization trend is seen (i.e. infection refractory to treatment or recurrent infections).



IV. Barriers to Seeking Care

Create a series of Clinical Practice Guidelines to standardize women's healthcare for menstrual cycle control, UTI and Vaginitis self-diagnosis kits, and well woman screening (cervical and breast cancer, and Chlamydia) for providers from garrison to Theater

Establish Clinical Practice Guidelines (CPGs) that ensures the provision of standardized care for common conditions irrespective of location (garrison or deployed) or level of provider. Topics include evidenced-based preventative screening, contraception and menstrual cycle control, vaginitis and dysfunctional bleeding.

V. Uniform / Personal Protective Gear Fit

Women Service Members discussed the general lack of fit of the APFT uniform and Improved Outer Tactical Vest (IOTV). In particular, the IOTV rubs on women's hips, resulting in chafing, bruising, abrasions, and limited mobility. Poor fit was also an issue with the Interceptor body armor (IBA), which generated a number of ongoing research and developmental efforts by the Product Manager-Soldier Protective Equipment (PM-SPE). They found that the current IOTV size chart does not meet the sizing requirements of female Soldiers at or below the 95% percentile size, forcing small statured female Soldiers to achieve a "best fit" in one or two sizes above what the sizing chart predicts. The problem with fit is primarily because the IOTV is too long and too big in the upper body for these Soldiers, creating standoff (gapping/opening) on both the anterior chest/shoulder and posterior shoulder. [19] Subsequent sizing studies led to the development of three different sizes for IOTV for small framed Soldiers, currently being trialed through the Soldier System Center. While studies are being conducted looking at the physical effects of body armor on Soldiers, women are underrepresented in those studies and correctness of fit was not independently considered.[20, 21, 22]

Program Executive Office (PEO) Soldier is currently working initiatives to improve the Army Combat Uniform (ACU), the Maternity Army Combat Uniform, the Flame Resistant Environmental Ensemble (FREE) for Aviators and Armor Crewmen, and the Improved Outer Tactical Vest (IOTV). There are no current initiatives to change the Modular Lightweight Load-carrying Equipment (MOLLE).

Recommendations

Research and Development on improved fit / function

Support ongoing efforts to improve the fit and functionality of the protective equipment, and ensure female Soldiers are proportionally represented in studies.

PEO Soldier representation on Women's Task Force

Appoint representative from PEO Soldier to sit on the Army Women's Health Taskforce to enhance communication between the R&D program managers and those responsible for ensuring the health of our female Soldiers. With the lens of their multidisciplinary approach to the health and wellness of female Soldiers, the Task Force will monitor the R & D efforts of PEO Soldier to improve fit and functionality of female uniforms.

VI. Psychosocial Effects of Deployment

During the HSS Assessment Team's Town Hall meetings, female Service Members consistently voiced that they felt that their experience of deployment was inherently different from those of their male peers. Their perceptions of stressors both in Theater and at home, in all stages of the deployment cycle, as well as how to prevent and cope with these stressors is influenced by being a mother, a spouse, and a Service Member.

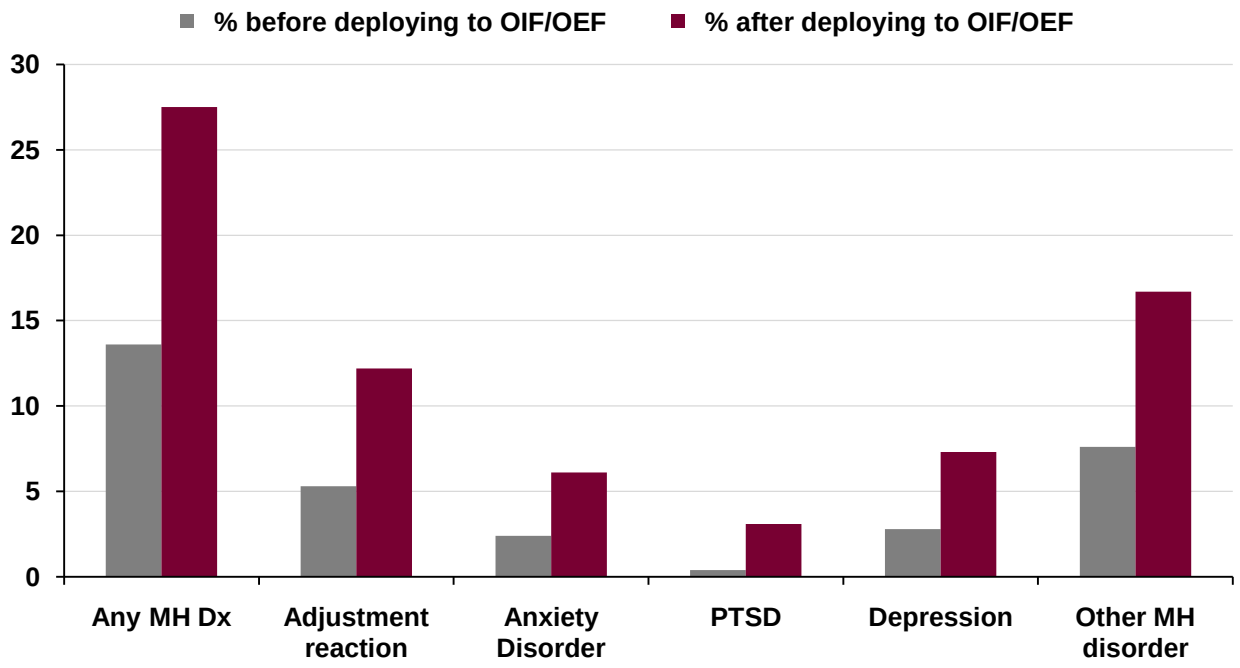
The concerns of the women in the ATO related to preparing themselves and their Families for deployment, being a mother while being a deployed warrior, reintegrating with their Families, and taking care of their own mental health needs during and after deployment. In particular, women perceived that deployment may result in different mental health outcomes from their male peers, and that as women, they require different pre-deployment preparation and reintegration strategies to ensure positive mental health and Family outcomes throughout the deployment cycle. While deployed, the women in the Town Hall meetings discussed how communication with other women during deployment is helpful because males "work through their issues differently" from the women; there is a perception of the general lack of sensitivity to women's issues by their leadership and male peers. Regardless of research findings, female Service Members requested that Leaders and senior enlisted receive training for the purpose of better communication skills to facilitate coping with psychosocial issues during the deployment.

Limited research exists to draw valid conclusions on whether there is a gender specific response to deployment; however there is data in the general population to suggest that women utilize more behavioral health services than men. In November 2010 the AFHSC published a report that included a comparison of crude incidence rates of mental disorder diagnoses in all active duty males and females from January 2000- December 2009. Rates of all mental disorder diagnoses were generally higher among females than males. Crude incidence rates of adjustment, anxiety, depressive, and personality disorders were more than twice as high among female Service Members as males.[23] However, according to the National Institute of Mental Health (NIMH) this data approximates anxiety and depression prevalence data in the U.S. adult population, where the national prevalence for anxiety and depression is 60% and 70% higher, respectively, in females.[24]

VI. Psychosocial Effects of Deployment

In relation to deployment to OIF/OEF, AFHSC conducted two analyses that revealed mental health encounter trends in female Service Members. In February 2009 AFHSC published gender-specific healthcare utilization data of all U.S. Armed Forces in non-deployed medical treatment facilities establishing a relationship between pre-deployment and post deployment mental health encounters.[25] A higher percentage of females have mental health encounters following their first deployment to OIF/OEF than prior to deployment, however, it is pertinent to this assessment to note that a gender-comparison analysis of post deployment mental health utilization was not included in this report.

Figure 1: Percentage of female Service Members with mental health diagnoses prior to and after the start of each individual's first deployment to OIF/OEF in U.S. Armed Forces Females JAN 2002 – DEC 2008.

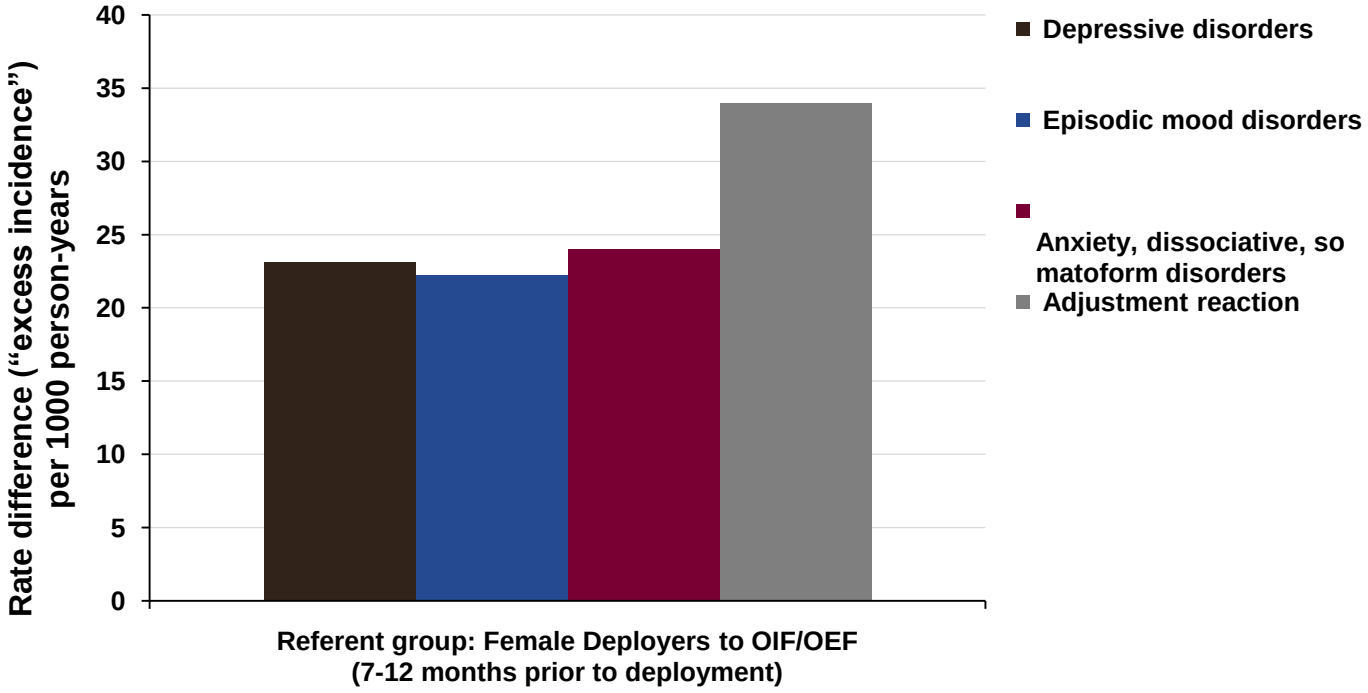


Source: Based on data from Armed Forces Health Surveillance Center (AFHSC) Relationships between the Nature and Timing of Mental Disorders Before and After Deploying to Iraq/Afghanistan, Active Component, U.S. Armed Forces, 2002-2008. *Medical Surveillance Monthly Report, (MSMR). 2009 FEB* **16(**2): 2-6.

VI. Psychosocial Effects of Deployment

In order to determine if there is a difference in female and male healthcare encounters following deployment to OIF/OEF, a targeted gender-specific analysis was conducted by AFHSC. Female OIF/OEF deployers' medical encounters at 19-24 months following deployment were compared to their own pre-deployment encounters and to the encounters of a referent group of deployed males at 19-24 months following deployment. The categories of mental illnesses that showed excessive incidence among females when compared to their pre-deployment diagnoses were depressive disorders, episodic mood disorders, adjustment reaction, and a group of anxiety, dissociative, and somatoform disorders.[26] This supports the previous report that women experience an increase in mental health diagnoses following deployment.

Figure 2: Conditions with largest rate differences ("excess incidence") among female OIF/OEF deployers, 19-24 months after returning from deployment, in comparison to adjusted referent rates for females prior to deployment.

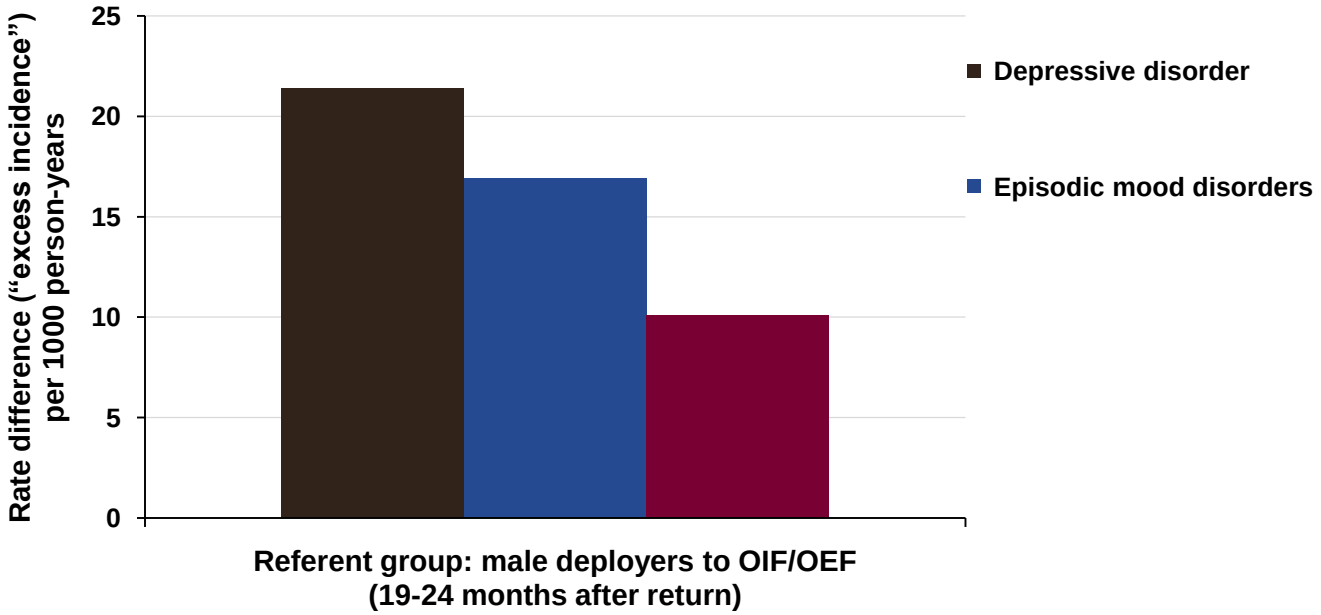


Source: Based on data from Armed Forces Health Surveillance Center (AFHSC) Health of Women after Deployment in Support of Operation Enduring Freedom/Operation Iraqi Freedom, Active Component, U.S. Armed Forces. *Medical Surveillance Monthly Report, (MSMR). 2009 OCT* **16(**10): 2-9.

VI. Psychosocial Effects of Deployment

When compared to the male referent group, the rate difference for mental health diagnoses for depression, anxiety, and mood disorder were 21, 17, and 10 per 1000 person-years, respectively.[26] This data presents a rare analysis that reveals gender-specific differences in mental health *encounters* in the U.S. Armed Forces healthcare system in relation to deployment to OIF/OEF. However it remains unclear if this represents a true increased incidence of mental health disorder or just a difference in utilization of the Military Healthcare System.

Figure 3: Conditions with largest rate differences ("excess incidence") among female OIF/OEF deployers, 19-24 months after returning from deployment, in comparison to adjusted referent rates for male deployers.



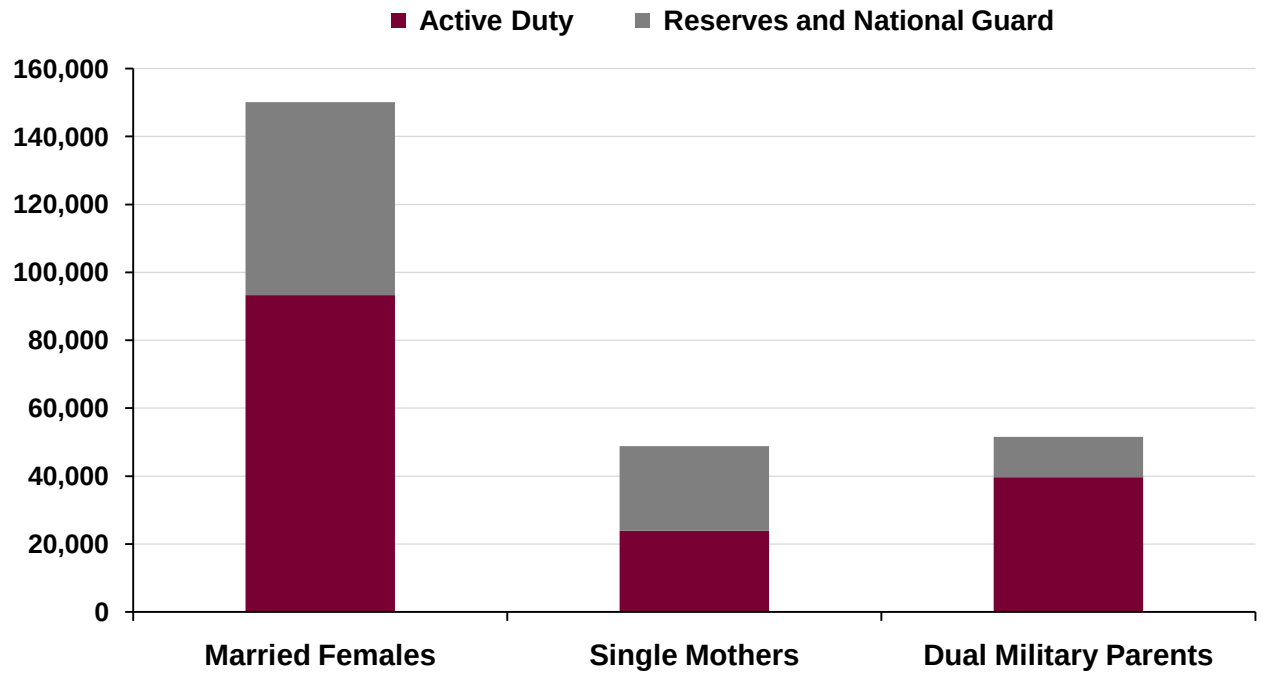
Source: Based on data from Armed Forces Health Surveillance Center (AFHSC) Health of Women after Deployment in Support of Operation Enduring Freedom/Operation Iraqi Freedom, Active Component, U.S. Armed Forces. *Medical Surveillance Monthly Report, (MSMR). 2009 OCT* **16(**10): 2-9.

Multiple studies on combat veterans that have attempted to establish a gender difference in psychological responses to combat have had mixed results, depending on how they measured levels of combat exposure and what was considered normal responses to combat. [27-30] The validity of applying the findings to predict a gender difference in behavioral outcomes is further questionable given the basic underlying assumptions of what is a "normal" reaction to combat stressors, for both men and women. In a 2009 review of the existing literature on gender-relevant issues with post traumatic stress symptomatology in OIF/OEF veterans, it was concluded that models used in studies to explore the psychological impact of deployment to a combat zone were built on men's experiences in war and therefore cannot predict women's outcomes. [29] Yet, a recent examination of 16 combat-related stressors and post deployment mental health *failed* to predict a gender-difference in negative outcomes, suggesting that *female OIF/OEF veterans possess resiliency to combat-related stress similar to their male peers*.[31]

VI. Psychosocial Effects of Deployment

Participants at the Town Hall meetings also discussed the challenges of being mothers in the military, as well as the unique challenges with being single mothers. In 2009, there were nearly 49,000 single mothers in the DoD with the potential to deploy and over 51,000 dual military parents in the DoD, where both parents could deploy at the same time.[32] As Soldiers, mothers, and wives; women are in roles that are divergent and often conflicting. They discussed the contrasts between their deployed and garrison roles and issues with reintegration. Similarly, the women expressed that more time was needed in the post-partum period to bond with their new infants and to return to post-partum weight and activities before being deployed. Currently the Army, Air Force and Marine policies specify a 6-month deferment for deployment following the birth or adoption of a child, while the Navy has a 12-month post partum or post-adoption deployment deferment policy.[33-36]

Figure 4: Marital and Parental Status of female Service Members in the DoD (Army, Navy, Air Force, Marines) 2009.



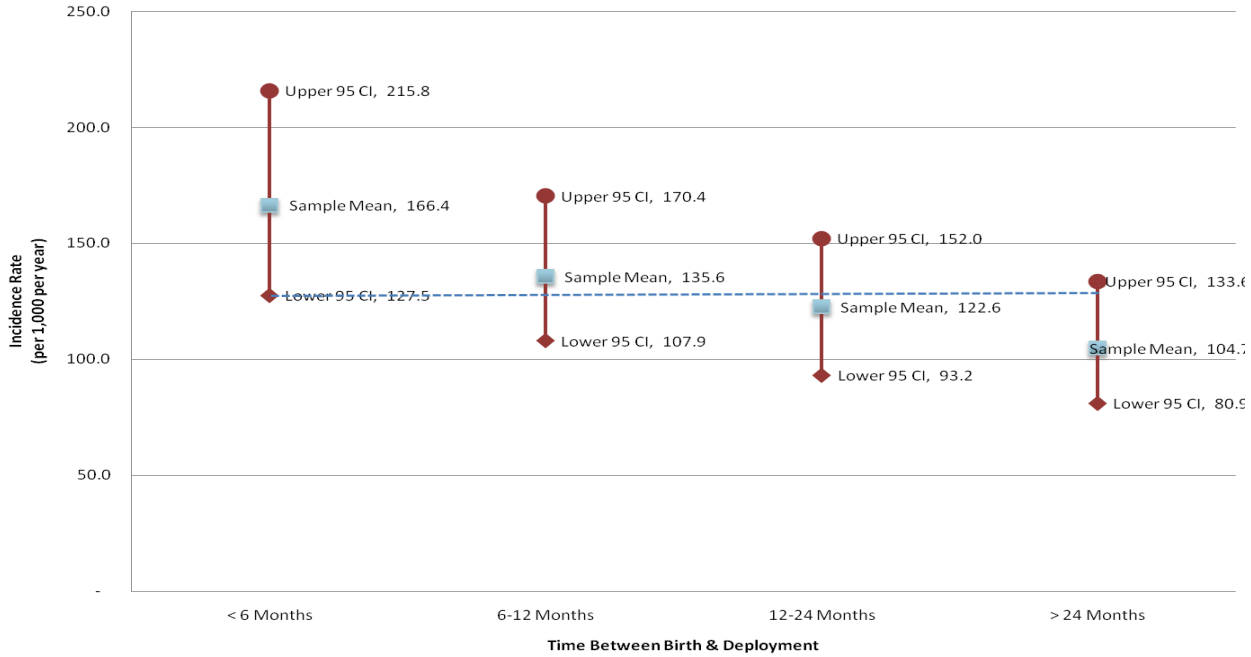
Data Source: Department of Defense Demographics 2009: Profile of the Military Community

VI. Psychosocial Effects of Deployment

The literature on the effects of early separation of mothers from infants looks at both the effects on the female Service Member as well as the effects on the infant. First, looking at the effects on the mother, a review of literature that included deployed Navy mothers concluded that separation from their children induced feelings of grief, guilt, anxiety, sadness, and depression in mothers.[37] Furthermore, conditions that maintain the attachment bond between mother and child, such as contact between mother and child, the mother's control over the circumstances of the separation, support for her role as a mother, knowledge that her child is in good hands, and finding a greater meaning in the separation may mitigate the impact of separation.[37] While not gender-specific, the literature suggests that new parents may experience grief from the loss of the first months or year of their child's life during deployment.[38]

The most recent data that supports a post-partum deferment policy more similar to the Navy's, looks at the incidence of behavioral health diagnoses in women within 6 months of returning from deployment. The study stratified by time of deployment after birth of a child and found a 37% higher incidence of post-deployment behavioral health encounters among mothers who deployed to OIF/OEF within six months of birth when compared to those who had longer than 6 months between birth and deployment. Rates of MH diagnoses continued to decline with increased length of time between birth and deployment. The lowest rate of behavioral health visits was found among those who deployed greater than 24 months following birth.[39]

Figure 5: Incidence rates with behavioral health diagnosis after return from postpartum deployment by exposure group (Jan 2002 – June 2010).



Source: Based on data from Armed Forces Health Surveillance Center (AFHSC) Childbirth, deployment, and diagnoses of mental disorders among active component women January 2002- June 2009. *Medical Surveillance Monthly Report, (MSMR). 2010 NOV* **17(**11): 17-21.

VI. Psychosocial Effects of Deployment

The most extensive body of literature supporting a one year post-partum deferment is on breastfeeding. The advantages of breastfeeding include health, nutritional, immunologic, developmental, psychological, social, economic, and environmental benefits not only for the mothers, but for the infants, Families and society.[40-43] The physical health advantages for mothers related to breastfeeding include less post-partum complications, an easier time returning to pre-pregnancy weight, decreased risk of breast and ovarian cancer, and possibly a decreased risk of hip fractures and osteoporosis in the post menopausal period, with the long term effect of decreasing the burden on the healthcare system. [42]

However the most compelling argument for a one year post-partum deployment deferment is the benefits of breast feeding for the infant. Studies have shown a 21% reduction in post-neonatal infant mortality in breastfed infants[44] as well as a decrease in the incidence of a wide range of infectious diseases.[42] Studies have also shown decreased rates of sudden infant death syndrome, and many other childhood diseases, as well as the extent and duration of breastfeeding have been found to be inversely associated with risk of obesity in later childhood.[42]

A one-year deferment is consistent with the American Academy of Pediatrics (AAP) policy statement,[42] The Surgeon General's Call to Action, [41] the goals and objectives of Healthy People 2020 , [40] and the HHS Blueprint for Action on Breastfeeding.[43]

VI. Psychosocial Effects of Deployment

Recommendations:

Ensure that Programs Designed to Prepare our Soldiers for Deployment and Reintegration Consider Gender Specific Needs

Further research into the psychological effects of combat on women is required in order to inform the development of intervention programs to help women prepare for, prevent, and cope with the psychological impacts throughout the deployment cycle.

Consider feasibility of One Year Post-Partum Deferment for all Services

Services should explore feasibility of extending the length of post-partum deferment for deployment to one year. The analysis should consider the cost on operational readiness as well as the cost savings to MHS in maternal and child healthcare, and factors to account for the socio-economic impacts of a successful breast feeding initiative. Goal should be to maintain a balance between protecting the health and welfare of the mother and newborn while considering the overarching goal to sustain a healthy, fit, and deployment ready Force.

Community-based Support Groups for Women

Support the establishment of community-based female Service Member support groups that facilitate discussion among women about their experiences of deployment and the psychosocial issues surrounding deployment. One such program is the Women Soldiers' Group, an 8-week structured support group that addresses issues with marriage, deployment, changing roles, childcare, and living as a dual military Family, which was initiated by the behavioral health clinic at Fort Drum. Continue partnering with VHA and community based agencies for increased accessibility to Women support services already in place. Increase awareness of community resources through Patient Centered Medical Home coordination and connection.

Further Research on the Effects of Combat on Women

Recommend partnering with the Veteran's Affairs (VA) Women's Health Research and Development Program to study women Service Members through the continuum of active duty to transition to the VA.

Key research questions may include:

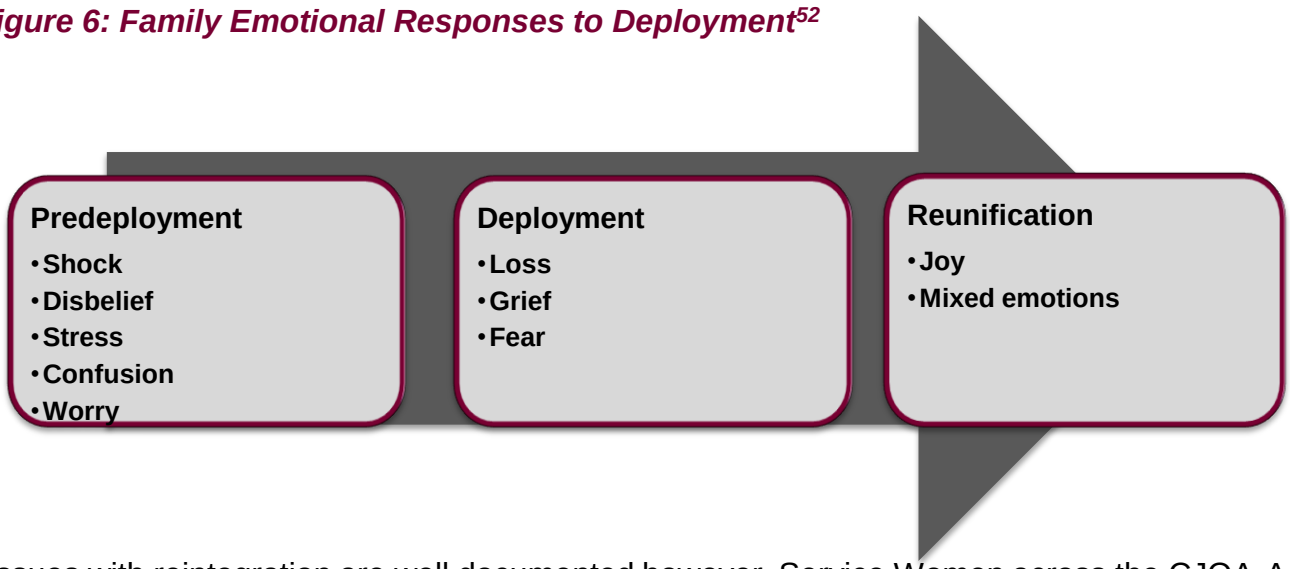
- Does gender moderate the relationship between combat exposure and behavioral health outcomes?
- How do women experience combat and the stressors in a combat environment?
- How does gender difference influence healthcare utilization and provider diagnosis?

VII. Effects of Deployments on Children and Families

"The *Army Family* is the *Deployable Unit*"

Speaking to Service Members across the CJOA-A, concern about their Family members at home is a common theme. This is no surprise as the effects of deployments extend beyond the Service Member. The current operational tempo has created high intensity, repeated deployments for Service Members resulting in nearly 2.2 million children affected by parents who have been exposed to relatively high rates of war-related stressors during deployment. While there is little gender specific research on Families, there is abundant research showing that deployments affect Family psychosocial functioning and increase the rates of child abuse and neglect, [46,47] and behavioral health complaints.[48-51] The relationship between war-stressors of deployed Service Members and the increases in adverse emotional and behavioral outcomes in children has been seen in all phases of deployment and reintegration. [49, 52, 53, 55] Families experience a range of emotions in response to deployment, varying across the deployment cycle. [52,54] The amount of parental distress and the cumulative months deployed to a combat zone have both been associated with child distress and negative behavioral problems.[49, 52]

Figure 6: Family Emotional Responses to Deployment[52]

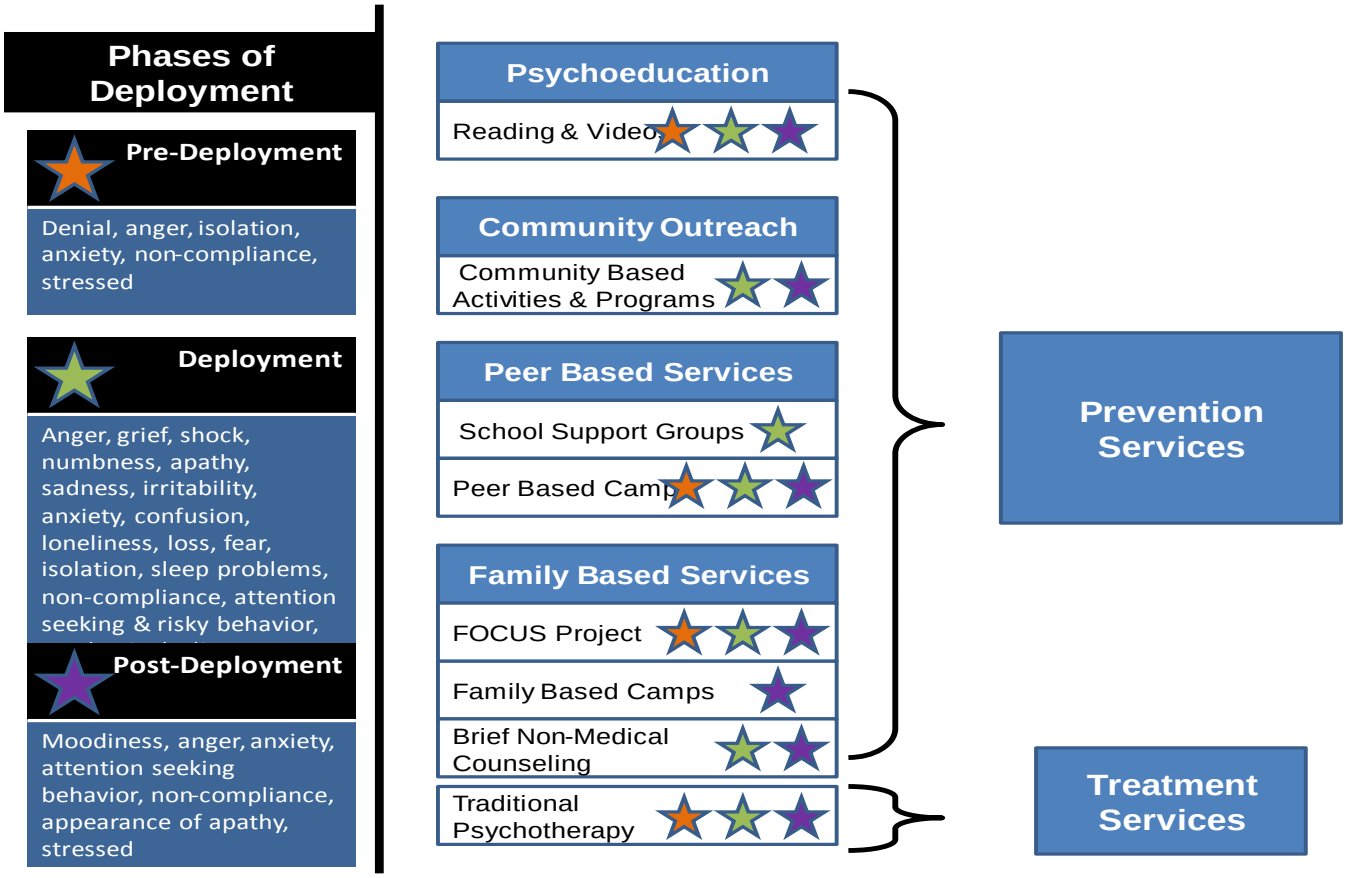


Issues with reintegration are well documented however, Service Women across the CJOA-A expressed concerns about the lack of preparation and support in this area. Previously in this paper we discussed the needs of the deploying Service Member, but the preparation of Family members is equally important. MEDCOM is developing Child and Family programs that recognize the Army Family is the deployable unit and that Family Readiness supports Soldier Readiness.

VII. Effects of Deployments on Children and Families

Positive outcomes in the overall behavioral health of Army Children and Families can be realized when programs that are focused on prevention, early detection, wellness, and resilience building are coordinated and integrated with dedicated healthcare services that are located in areas that are easily accessed and convenient to children and Families. A recent review of all 3-8 year olds enrolled in DEERS demonstrated that 60% of all medical visits occurred in non-military facilities[51] and we know that the majority of behavioral healthcare occurs within primary care settings. Therefore, behavioral health education efforts and marketing of programs needs to be targeted towards both uniformed and civilian primary care providers.

Many valuable programs such as psychoeducational videos, school-based programs, camps, and the Families Overcoming Under Stress (FOCUS) project[54] have been developed using evidenced based skill building techniques and are targeted at prevention. The different types of services are linked with the emotional and behavioral responses of children at certain phases of the deployment cycle (see diagram below).[52]



Adapted from: Esposito-Smythers C, Lemmon KM, Wolff J, Bodzy M, Swenson RR, Spirito A. Military youth and the deployment cycle: Emotional health consequences and recommendations for intervention. Journal of Family Psychology. 2011; 25(4):497-07.

VII. Effects of Deployments on Children and Families

Treatment services are also well connected to where the Family lives. Behavioral health needs of Families and children are delivered in community centers and schools which improves access and capacity for care as well as allows for an educational component designed to promote wellness.

Over 2 million children have already experienced one or more parental combat deployments. When Warriors are assured that their Family is being cared for by the community they are fighting to protect, they are able to more clearly focus on the critical combat and sustainment operations they are performing far from home. It is also likely that children who grow up in a well functioning and emotionally connected military Family are more likely to consider military service as a viable career choice. Programs that address the effects of war-stressors on all Family members will ultimately mitigate negative outcomes such as mental and behavioral health disorders and child maltreatment.

Recommendations:

Systematic Review of Programs

Conduct systematic review of health promotion, risk reduction, resiliency and support programs addressing child, adolescent and Family well being. Ensure programs understand that fiscal support over the long term will be dependent on reliable and valid outcomes measures.

Training of Military and Civilian Primary Care Providers

MEDCOM to allocate resources to support the training of primary care physicians in the prevention, early detection, and treatment of common behavioral health disorders among military children. Continue to facilitate collaborative efforts with the Uniformed Services Section of the American Academy of Pediatrics (representing all uniformed pediatricians) and the American Academy of Family Practice so that both military and civilian primary care providers are provided the training and tools needed to optimize care for Families.

Embed Behavioral Health “Far Forward”

Continue to work to embed behavioral healthcare within primary care and maintain holistic approach to the entire Family as the “deployable unit.” Behavioral Health care for Family Members should be “far forward” and embedded in the community, with an emphasis on prevention, early interventions and the expectation of recovery. Just as we have stressed the “warm battle handoff” for Service Members, when Families move to another duty station there must be a care coordination plan in place.

VII. Effects of Deployments on Children and Families

Recommendations:

Evidence Based Focus on Prevention

Identify and consolidate the existing resources to build Family resiliency to ensure that all parents are offered education that prepares them for the challenges of deployment and reintegration. Provide an ongoing commitment to community based Soldier and Family resiliency programs that have been shown to positively influence parent-child interactions and decrease negative emotional and behavioral responses of children.

Research on Effects of Deployment Cycle on Families

Research on deployment and Family reintegration must include evaluation of the effects on all Family members.

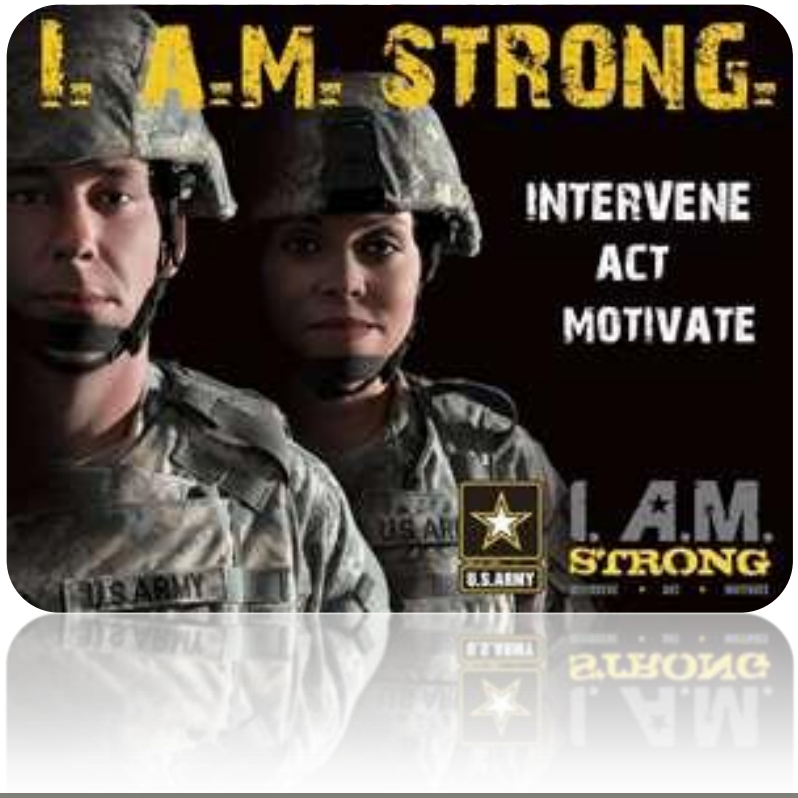
VIII. Sexual Harassment/ Assault Response and Prevention (SHARP)

Sexual assault is clearly not a gender specific issue as it affects male and female victims and its impact extends much broader to affect unit cohesion and degrade mission readiness. Prevention and intervention efforts also cannot be gender focused as the solutions are team based. According to the DoDD 6495.01, sexual assault in the military is defined as "intentional sexual contact, characterized by use of force, threats, intimidation, abuse of authority, or when the victim does not or cannot consent."[56] The prevalence of sexual assault in the military services has been estimated at 9.5% to 33%, however true prevalence is hampered by the phenomenon of underreporting (estimated to be <10% of true occurrence),[57] various definitions of sexual assault, and the lack of consistent reporting systems in the military. FY10 reported rates of sexual assault Army-wide were 2.5 reported cases per 1000 active duty Soldiers, and 1.7/1000 in CENTCOM.[58] The majority of victims who reported sexual assault were younger (<24yo) females from the junior enlisted ranks (E1-E4). The majority (97%) of perpetrators were male, junior enlisted ranks (E1-E-4) (59%) and most (47%) were 24 years old or younger.[58]

The literature is clear that Service Members who experience sexual assault exhibit deleterious psychological and physical health effects including higher rates of depression and post traumatic stress symptoms, poor emotional functioning, and substance abuse.[57,59] Our DoD population has several risk factors for experiencing higher than average rates of sexual assault than the general population. Risk factors in the DoD include a younger population with a smaller proportion of women to men, and a higher rate of Service Members with prior sexual victimizations and prior perpetrations as compared to the civilian population.[57] Environmental factors in garrison and while deployed that increase the risk for sexual assault include solitary duty (especially at night), poor barracks security, and insufficient environmental lighting.

VIII. Sexual Harassment/ Assault Response and Prevention (SHARP)

The U.S. Army has realigned its sexual harassment and sexual assault prevention training programs into the Sexual Harassment/Assault Response and Prevention (SHARP) Program,[60] which supersedes the Sexual Assault Response and Prevention (SARP) and the Prevention of Sexual Harassment (POSH) training programs. Women in the ATO Town Hall Meetings were very positive about the value of the new SHARP Program and they were knowledgeable of the roles of the Sexual Assault Response Coordinator (SARC) and the Unit Victim Advocates (UVA). Several UVAs were present at our meetings (Army and Marine) and they expressed that they felt they were well trained. Many discussed ongoing educational forums where all the UVAs met monthly to discuss cases and share experience and knowledge, however even with our small sample size, we noted variations in how this was accomplished. According to DoDI 6495.02 June 2006, all DoD SARCs and VAs must receive the same baseline training, but periodic training is determined by each Service.[61] Health care is provided to women in Theater by specially trained providers. MEDCOM Sexual Assault Medical Forensic Examiner training meets the Department of Justice National Training Standards for Sexual Assault Medical Forensic Examiners training requirements.[62]



VIII. Sexual Harassment/ Assault Response and Prevention (SHARP)

During our assessment, barriers to reporting sexual assault were also clearly vocalized. Concerns included a lack of trust in the fidelity of the reporting system and the confidentiality processes in place. Women conveyed fears of becoming "the talk of the unit," that the report would be turned around to reflect negatively on them, and that reporting would cause additional suffering without likelihood that the perpetrator would be punished. This echoes the findings of larger studies which show that barriers to reporting include shame/embarrassment, the stigma and social consequences associated with sexual assault, fear of reprisal, mistrust of the process, and characteristics of the perpetrator, in particular if the perpetrator is a Family member, friend, coworker, or higher rank than the victim.[63]

Lastly, a common theme that was heard from women across the CJOA-A was that while they generally felt safe, they noted a lack of simple physical security measures such as locks and lighting. For example, female sleeping tents commonly have locking doors on one end and just a zipper on the other end. The lack of security measures was reconfirmed during the recent (May 2011) SHARP ATO Assessment Team visit, which led them to recommend "immediate application of locks to living quarters, showers, and latrines; noting that cipher lock codes should be changed every 90 days." [64] The team recommended that "with consideration to blackout conditions, commanders should consider improved outdoor lighting on every FOB." [64] The SHARP assessment team also recommended that the battle buddy system should be highly encouraged. [64] Many women we interviewed expressed that their male counterparts are protective of the USFOR-A females and actively ensure that women are not in vulnerable situations. Some groups from larger installations discussed feeling harassed by local nationals or Third Country Nationals - this included "cat-calling," staring at, or ignoring women.

VIII. Sexual Harassment/ Assault Response and Prevention (SHARP)

The Military is steeped in tradition and is built on a foundation of unshakable values. The Army Values of Loyalty, Duty, Respect, Selfless Service, Honor, Integrity and Personal Courage combined with a Warrior Ethos to never leave a comrade will be the keys to combating sexual assault within our ranks. Pursuant to the HSS Assessment Team's observations and analysis of field notes, the following recommendations are made in an effort to capitalize on the participants suggestions and dovetail with DoD recommendations and strategy.

Recommendations:

Require Installations Assess Physical Safety Measures

Improve physical security and monitoring on lodging and bathroom facilities. Improve lighting where tactically acceptable on Forward Operating Bases.

Review Theater policy regarding distribution of SAFE providers

Enhance competence, effectiveness, and consider the use of a regional strategy.

Convene a team of experts from the Tri-Services

Fully investigate the integration of Service policies on sexual assault prevention and response programs in Theater, including the training of SAFE providers, Sexual Assault Response Coordinators, and Victim Advocates.

Professionalize the VA Roles

Provide national certification and continuing education for Victim Advocates.

Leverage and synergize with Comprehensive Soldier Fitness

Target interpersonal skills, self esteem, assertiveness and the core values which will enhance a culture of trust, respect and unity of members.

Ensure 100% implementation of the SHARP program

Collaborate with HQDA G-1 to track objective SHARP implementation and outcome measures of effectiveness.

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