



**U.S. Army Medical Center of Excellence**

**ARMY MEDICINE STARTS HERE**



UNCLASSIFIED

# Ensuring Medical Readiness of our Female Soldiers Prior to Deployment

COL Nicole Powell-Dunford, M.D. F.A.A.F.P.

MAJ Amber Chew, D.O., F.A.C.O.G., S.A.M.F.E.

23 January 2020  
0745-0845

UNCLASSIFIED



**COL Nicole Powell-Dunford, M.D.**

Force Modernization Officer

U.S. Army School of Aviation Medicine (USASAM)

Women's Health Consultant to the Army Surgeon General

Associate Professor Military & Emergency Medicine

Uniformed Services University of the Health Sciences

Ft Rucker, Alabama

**MAJ Amber Chew, D.O., F.A.C.O.G, S.A.M.F.E.**

Staff Obstetrician and Gynecologist (OB/GYN)

Sexual Assault Medical Director

Brian D. Allgood Army Community Hospital

Camp Humphreys, Republic of Korea



- COL Nicole Powell-Dunford is the Office of the Surgeon General (OTSG) Consultant to the Army Surgeon General for Women's Health.
- She has an extensive publication and presentation history regarding Women's Health and Operational Medicine.
- She is currently assigned to the US Army School of Aviation Medicine.



- MAJ Amber Chew is a Board Certified Obstetrician and Gynecologist.
- She received her Bachelors of Science from the University of Georgia in 2000.
- She received her Doctorate of Osteopathic Medicine from the Philadelphia College of Osteopathic Medicine in 2013.
- She completed her residency in OB/GYN in 2017 at the Walter Reed National Military Medical Center in Bethesda, MD. She is an instructor of OB/GYN at the Uniformed Services University of the Health Sciences in Bethesda, MD.
- She was a staff OB/GYN at Ft. Belvoir Community Hospital, Ft. Belvoir, VA, prior to her current assignment in Korea.
- Dr. Chew also serves as the Sexual Assault Medical Director for the 65th Medical Brigade where she oversees the Sexual Assault Medical Forensic Examiner program.



## Disclosures

- COL Nicole Powell-Dunford and MAJ Amber Chew have no relevant financial or non-financial relationships to disclose relating to the content of this activity.
- The views expressed in this presentation are those of the authors and do not necessarily reflect the official policy or position of the Department of Defense, nor the U.S. Government.
- This continuing education activity is managed and accredited by the Defense Health Agency J-7 Continuing Education Program Office (DHA J- 7 CEPO). DHA J-7 CEPO and all accrediting organizations do not support or endorse any product or service mentioned in this activity.
- DHA J-7 CEPO staff, as well as activity planners and reviewers have no relevant financial or non-financial interest to disclose.
- Commercial support was not received for this activity.
- Products featured in this presentation do not constitute endorsement by presenters and/or the Department of Defense.

# Learning Objectives

At the end of the presentation, the learners will be able to:

1. Identify ways in which menstrual suppression can be adversely impacted during deployment.
2. Analyze the benefits of menstrual suppression for deploying Soldiers.
3. Recognize methods of reducing the incidences of genital-urinary tract infections in deployed women.
4. List health maintenance measures that should be undertaken for deploying women.



## Background

- Menstrual Suppression
- Urogenital infection prevention/management
- Sexually Transmitted Infections (STIs)
- Women's Health maintenance
- Sexual Assault



## Polling Question

Are you involved in pre-deployment health screening?

- Yes/No



# Menstrual Suppression

- 17% US Army are women
- Contraceptive therapies can reduce significant medical events by 66-99%
- 86% desire amenorrhea, only 54% aware that oral contraceptive pills (OCPs) can be used to induce it
- Only 63% of Soldiers receive any form of contraception during deployment; 59% do not speak with a military provider about options prior to deployment



Open access: <https://case.edu/affil/skuyhistcontraception/online-2012/pill.html>

(Grindlay et al., 2013) (Maguire et al., 2011) (Powell-Dunford et al., 2003)



# Operation Iraqi Freedom (OIF)

- OIF: Females had higher rates of becoming a disease non-battle injury (DNBI) casualty requiring medical evacuation; 74% of female medical evacuations out of theater were for pregnancy related issues



OPEN ACCESS: [https://www.bing.com/images/search?view=detailV2&id=7BE73782279A1EDAE65C7B3D36A379CBAF46A33F&thid=OIP.CgvZ-VfQbmEt\\_pFXWkRi\\_wAAAA&mediaurl=https%3A%2F%2Fpinimg.com%2Foriginals%2Ffee%2Fcd%2F01%2Fecd01b5e769a085ebbc34950745311e.jpg&exph=510&expw=250&q=operation+iraqi+freedom+medal&selectedindex=3&ajaxhist=0&vt=0&eim=0,1,2,3,4,6,8,10](https://www.bing.com/images/search?view=detailV2&id=7BE73782279A1EDAE65C7B3D36A379CBAF46A33F&thid=OIP.CgvZ-VfQbmEt_pFXWkRi_wAAAA&mediaurl=https%3A%2F%2Fpinimg.com%2Foriginals%2Ffee%2Fcd%2F01%2Fecd01b5e769a085ebbc34950745311e.jpg&exph=510&expw=250&q=operation+iraqi+freedom+medal&selectedindex=3&ajaxhist=0&vt=0&eim=0,1,2,3,4,6,8,10)

(Belmont et al., 2010)

# Menstrual Suppression



OPEN ACCESS:

[www.bing.com/images/search?view=detailV2&id=5779E09FA74D2F8C312B7461538AF73B749E7FB4&thid=OIP.wyPR1ZKt10cdXdh4wFG0QgHaE7&mediaurl=http%3A%2F%2Fmedia-cache-ak0.pinimg.com%2F736x%2Ffc%2F29%2F19%2Ffc2919bc6c699ef78e961064eaf3cd95.jpg&expw=500&q=army+sick+call&selectedindex=13&ajaxhist=0&vt=0](http://www.bing.com/images/search?view=detailV2&id=5779E09FA74D2F8C312B7461538AF73B749E7FB4&thid=OIP.wyPR1ZKt10cdXdh4wFG0QgHaE7&mediaurl=http%3A%2F%2Fmedia-cache-ak0.pinimg.com%2F736x%2Ffc%2F29%2F19%2Ffc2919bc6c699ef78e961064eaf3cd95.jpg&expw=500&q=army+sick+call&selectedindex=13&ajaxhist=0&vt=0)

- Up to 15% of women suffer from absenteeism due to painful menstrual cycles, which can be reduced or eliminated with contraception
- Gulf War data determined that women generated 1,792 sick call visits with over 25% due to conditions that could have been prevented with contraceptives.
- Another study of 397 deployed women reported that 35% had at least one gynecologic problem during their deployment, with irregular menstrual bleeding cited as the most common

(Albright et al., 2007) (Nielsen et al., 2009)  
 Non Contraceptive Health Benefits of Combined Oral Contraception. (2005). Human Reproduction Update, 11(5), 513–525.  
<https://doi.org/10.1093/humupd/dmi019>



## Polling Question

Have you recommended the “Decide + Be Ready” App to a patient?

- Yes/No

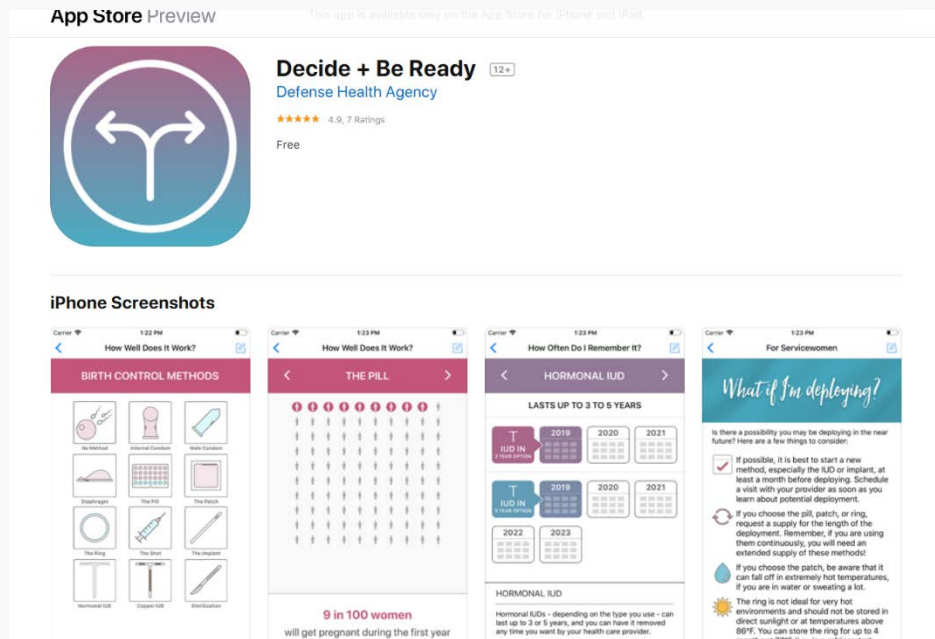
# Menstrual Suppression

Why menstrual suppression:

- Convenience/Logistics
- Anemia prevention
- Health benefits

Pros/cons:

- Continuous OCPs
- Depo-Provera
- Long-Acting Reversible Contraception (LARCs)



OPEN ACCESS: <https://apps.apple.com/us/app/decide-be-ready/id1451879300>

## Reduced risk:

- Endometriosis/dysmenorrhea (painful periods)
- Menorrhagia (heavy bleeding)
- Ovarian cancer
- Ectopic pregnancy/unwanted pregnancy
- Anemia

(Maguire et al., 2011) (Wilson et al., 2011)

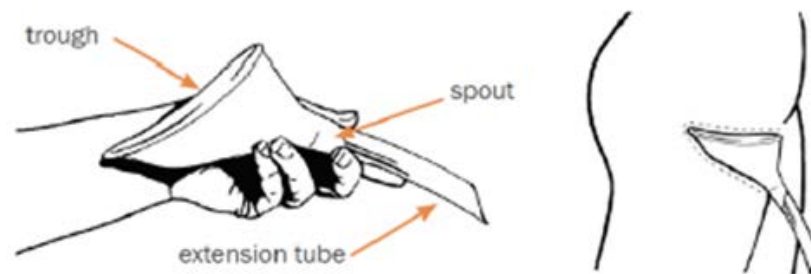
- Note: It may take 3 months in order to stabilize the cycle
- Note: Can be started on any day; skip the blank placebo pills in order to skip periods indefinitely; no risks associated with this practice.



# Infection Prevention

- Field Hygiene – daily perineal cleansing/good hand hygiene
- Female Urinary Diversion Devices
- Deployment with Empiric Prescriptions; medic administered or Soldier self treatment for Soldiers with well established and recurrent symptoms

- Urinate. To avoid a leak, do not tilt the cup forward while using. When finished, use a flick of the wrist to remove remaining droplets, then wipe dry. Slide the tube back into the cup. Rinse, clean and dry when you can. Use the plastic bag to hold the FUDD between uses.
- You may want to practice a few times in the shower to get the hang of it before you need to use the FUDD in the field.



**Save your bladder: hydrate and use a FUDD.**

REF: Army Public Health Nurse, WHSL

# Urinary Diversion Devices



OPEN ACCESS: <https://www.aliexpress.com/i/32818085819.html>

## Female Urinary Diversion Device

To Order the  
 FUDD:  
 NSN 4510  
 014702805

FUDD Posters  
 CP-138-0613

FUDD Cards  
 TA-205-0613

FUDD Video  
<https://www.youtube.com/watch?v=JXRximifjO8>



OPEN ACCESS: <https://peebuddy.in/products/peebuddy-stand-and-pee-reusable-portable-urination-funnel-for-women-1-unit>



OPEN ACCESS: <https://www.amazon.com/Urination-Antimicrobial-Portable-Activities-Silicone/dp/B003BEDUS6>



# Direct Issuance of Medication

- For women with recurrent infections who are able to readily identify their symptoms of urinary tract infection or candidiasis
- Dosing regimen as simple as possible
- Direct issuance to women at Soldier Readiness Processing (SRP)
- Trimethoprim-sulfamethoxazole BID (twice a day) x 3 days for Urinary Tract Infections (UTIs)
- Oral fluconazole 150mg for candidiasis
- Refer for atypical symptoms or failure to respond



OPEN ACCESS:

<https://www.bing.com/images/search?view=detailV2&id=AF06652E8CF301F14393790F9536335D6EC98EA4&thid=OIP.cDXC6R97c1sgT7yC-VefbgAAAA&mediaurl=http%3A%2F%2Fimages.medscape.com%2Fpi%2Ffeatures%2Fdrugdirectory%2Foctupdate%2FMON00531.jpg&exph=216&expw=288&q=septra&selectedindex=2&ajaxhist=0&vt=0&eim=0,1,2,3,4,6,8,10>

OPEN ACCESS:

<https://www.bing.com/images/search?view=detailV2&id=09CFB2B1DB4DE823BD35E3AD3F2CCB7A1F9402C0&thid=OIP.hdg4kmoHXtr3SXazZBINKgHaHa&mediaurl=http%3A%2F%2Fwww.yeastinfection.org%2Fwp-content%2Fuploads%2F2012%2F02%2FDiflucan.jpg&exph=290&expw=290&q=diflucan&selectindex=13&ajaxhist=0&vt=0&eim=0,1,2,3,4,6,8,10>



## Poll

- Would you feel comfortable providing a patient with a history of recurrent UTI or yeast infections with a supply of medications prior to deployment in order to expedite therapy?
- Yes/No



## Sexually Transmitted Infections (STIs)

- Military personnel have a higher rate of STIs compared to civilian population.
- Rates of STIs increase during times of conflict and cannot be ignored in a deployed environment.
- High prevalence of unsafe sexual practices, including sporadic condom use, multiple sexual partners, and binge drinking increases the risk of STIs



# Polling Question

What is the most common STI in the military?

- A. Human Papillomavirus (HPV)
- B. Chlamydia
- C. Herpes Simplex Virus (HSV)
- D. Syphilis



- Human Papillomavirus (HPV)
- Chlamydia
- Herpes Simplex Virus (HSV)
- Trichomonas
- Gonorrhea
- Human Immunodeficiency Virus (HIV)
- Syphilis

- HPV are double-stranded DNA viruses that only infect humans
- 40 types are known to cause infections of the lower genital tract
- Approximately 80% of sexually active women are exposed to HPV at least once in her lifetime
- HPV infection is highest soon after first sexual debut

\*DNA - Deoxyribonucleic acid



# HPV Vaccination

- 9-valent HPV vaccine covers 6, 11, 16, 18, 31, 33, 45, 52, and 58
- 70% of cervical cancers and 90% of anal cancers caused by high-risk HPV genotypes 16 and 18
- 2 or 3 part series depending on what age it is started
- Recommended 11-45 years old (can be administered starting at 9yo)
- Active duty service members have a higher HPV incidence and lower vaccination rates compared to the national average



- <21 DO NOT SCREEN
- 21-29 Cytology (PAP) every 3 years
- 30-65 Co-testing (PAP and HPV) every 5 years



# Chlamydia

- *Chlamydia trachomatis*, a small gram-negative bacterium
- Most common cause of bacterial STI
- Symptoms: vaginal discharge, intermenstrual bleeding, post-coital bleeding
- Test for concomitant infections, may treat empirically

Chlamydia cervicitis



Mucopurulent discharge is visible coming from the os in a patient with Chlamydia cervicitis. The cervix is erythematous and friable.

*Reproduced from the Centers for Disease Control and Prevention.*

# Chlamydia

- Expedited partner therapy is encouraged by the Centers for Disease Control and Prevention (CDC) and the American College of Obstetricians and Gynecologists (ACOG)
- Avoid sexual contact for at least seven days following patient and partner treatment
- Repeat testing in three months for uncomplicated patients



- VA Survey: 15-36% females; 1-2% males report Military Sexual Trauma (MST)
- 4-7% females; 1-2% males have been sexually assaulted
- 22-31% females; 5-7% males have been sexually harassed
- MST leads to long-term health issues for victims, impacts readiness and unit cohesion

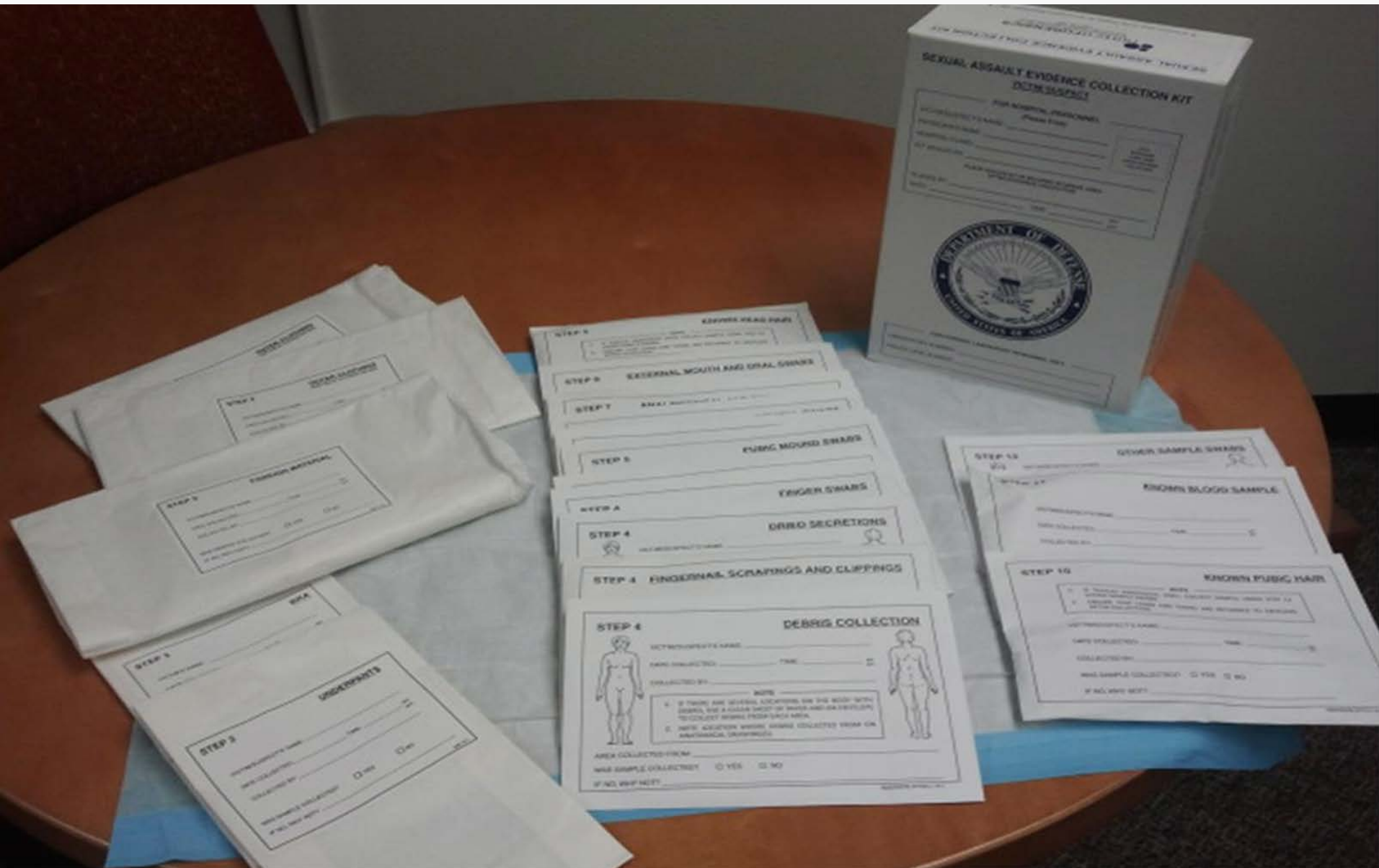


- Recognize signs of sexual assault
- Evaluate and treat patient for any life-threatening injuries
- Contact the appropriate first responder:
  - ✓ If the patient is <18 years old or domestic partner/spouse of the accused, then call Family Advocacy Program Hotline
  - ✓ Otherwise, call the Victim Advocate (VA) or Sexual Assault Response Coordinator (SARC)



<b>Restricted Report</b>	<b>Unrestricted Report</b>
<b>VA/SARC</b>	<b>VA/SARC</b>
<b>Medical treatment</b>	<b>Medical treatment</b>
<b>SAFE-to Provost Marshal</b>	<b>SAFE-to CID</b>
<b>Chaplain</b>	<b>Chaplain</b>
	<b>Command</b>
	<b>Law Enforcement</b>
	<b>Legal</b>

# Sexual Assault Evidence Collection Kit





## Key Takeaways

- Field Hygiene, Female Urinary Diversion Device use, and empiric treatment of genitourinary infection may prevent morbidity/evacuation during deployment.
- Hormonal contraceptive therapies can reduce medical problems, but are under prescribed in the pre-deployment setting.
- Sexually transmitted infections are common among our ranks, especially near deployments. There are steps that can be made to prevent, identify, and treat these infections before they have long term sequelae or lead to troop readiness issues.
- The Uniformed Services take sexual assault seriously. Medical teams should ensure a Sexual Assault Forensic Examiner has been identified and completed the Tri-Service Course prior to deployment in order to provide appropriate care for survivors.



## References

- Albright TS, Gehrich AP, Wright J, Letteri, C., Dunlow, S. Butler, J. (2007). Pregnancy During Operation Iraqi Freedom/Operational Enduring Freedom. *Mil Med.* 2007 May;172(5):511-4.
- Belmont, P. J., Goodman, G. P., Waterman, B., Dezee, K., Burks, R., & Owens, B. D. (2010). Disease and Non Battle Injuries Sustained by a U.S. Army Brigade Combat Team During Operation Iraqi Freedom. *Military Medicine*, 175(7), 469–476. <https://doi.org/10.7205/milmed-d-10-00041>
- Boyer, C. B., Pollack, L. M., Becnel, J., & Shafer, M.-A. (2008). Relationships among Sociodemographic Markers, Behavioral Risk, and Sexually Transmitted Infections in U. S. Female Marine Corps Recruits. *Military Medicine*, 173(11), 1078–1084. <https://doi.org/10.7205/milmed.173.11.1078>
- Clark LL, Stahlman S, Taubman SB. Human Papillomavirus Vaccine Initiation, Coverage, and Completion Rates among United States Active Component Service Members, 2007-2017. *MSMR*. 2018;25(9):9–14.
- Committee Opinion No. 547. (2012). *Obstetrics & Gynecology*, 120(6), 1538–1542. <https://doi.org/10.1097/01.aog.0000423821.70036.5a>
- Conard, P. L., Young, C., Hogan, L., & Armstrong, M. L. (2014). Encountering Women Veterans With Military Sexual Trauma. *Perspectives in Psychiatric Care*, 50(4), 280–286. <https://doi.org/10.1111/ppc.12055>



# References

- Department of Defense Directives (DoDD) 6495.01. (2015). Sexual Assault Prevention and Response Program.
- Department of Defense Instruction (DODI) 6495.02. (2015). Sexual Assault Prevention and Response Program Procedures.
- Goulet, J. L., Martinello, R. A., Bathulapalli, H., Higgins, D., Driscoll, M. A., Brandt, C. A., & Womack, J. A. (2014). Sexually Transmitted Infection (STI) Diagnosis and Human Papillomavirus (HPV) Testing among Operation Enduring Freedom/Operation Iraqi Freedom/Operation New Dawn (OEF/OIF/OND) Veterans. *Medical Care*, 1. <https://doi.org/10.1097/mlr.0000000000000253>
- Goyal, V., Mattocks, K. M., & Sadler, A. G. (2012). High-risk Behavior and Sexually Transmitted Infections among U.S. Active Duty Servicewomen and Veterans. *Journal of women's health (2002)*, 21(11), 1155–1169.
- Grindlay, K., & Grossman, D. (2013). Contraception Access and use among US Servicewomen during Deployment. *Contraception*, 87(2), 162–169. <https://doi.org/10.1016/j.contraception.2012.09.019>

# References

Hakre, S., Oyler, R. J., Ferrell, K. A., Li, F., Michael, N. L., Scott, P. T., & Petruccelli, B. P. (2014). Chlamydia Trachomatis Infection Rates among a Cohort of Mobile Soldiers Stationed at Fort Bragg, North Carolina, 2005–2010. *BMC Public Health*, 14(1). <https://doi.org/10.1186/1471-2458-14-181>

Maguire, K., & Westhoff, C. (2011). The State of Hormonal Contraception Today: Established and Emerging non Contraceptive Health Benefits. *American Journal of Obstetrics and Gynecology*, 205(4).  
<https://doi.org/10.1016/j.ajog.2011.06.056>

MEDCOM Regulation 40-36: Medical Facility Management of Sexual Assault, 21 January 2009 and Supplement 1, 12 November 2015.

Nadeau, C., Fujii, D., Lentscher, J., Haney, A., & Burney, R. (2018). The Gynecologic Health Consequences of Chlamydia Trachomatis Infection in Military Servicewomen. *Seminars in Reproductive Medicine*, 36(06), 340–350. <https://doi.org/10.1055/s-0039-1678752>

Nielsen, P. E., Murphy, C. S., Schulz, J., Deering, S. H., Truong, V., McCartin, T., & Clemons, J. L. (2009). Female Soldiers' Gynecologic Healthcare in Operation Iraqi Freedom: A Survey of Camps With Echelon Three Facilities. *Military Medicine*, 174(11), 1172–1176. <https://doi.org/10.7205/milmed-d-04-2608>



## References

Non Contraceptive Health Benefits of Combined Oral Contraception. (2005). Human Reproduction Update, 11(5), 513–525. <https://doi.org/10.1093/humupd/dmi019>

Powell-Dunford, N. C., Deuster, P. A., Claybaugh, J. R., & Chapin, M. G. (2003). Attitudes and Knowledge about Continuous Oral Contraceptive Pill Use in Military Women. *Military Medicine*, 168(11), 922–928. <https://doi.org/10.1093/milmed/168.11.922>

Rossi, K. R., & Nowak, G. (2019). Assessing the Burden of Chlamydia and Gonorrhea for Deployed and Active Duty Personnel Assigned Outside the USA. *Military Medicine*, 184(Supplement\_1), 21–27. <https://doi.org/10.1093/milmed/usy366>

Sadovszky, V. V., & Ryan-Wenger, N. (2007). Army Women's Sexual Health Information Needs. *Journal of Obstetric, Gynecologic & Neonatal Nursing*, 36(4), 348–357. <https://doi.org/10.1111/j.1552-6909.2007.00153.x>

Sadovszky, V. V., Ryan-Wenger, N., Germann, S., Evans, M., & Fortney, C. (2008). Army Women Reasons for Condom Use and Nonuse. *Women's Health Issues*, 18(3), 174–180. <https://doi.org/10.1016/j.whi.2008.01.004>

## References

US Department of Health and Human Services. (2017). Prevalence of HPV in Adults Aged 18–69: United States, 2011–2014. NCHS Data Brief. No 80.

Wilson C, McClung JP, Karl JP, Brothers MD. (2011). Iron Status of Military Personnel Deployed to Afghanistan. *Military Medicine* 2011; 176: 1421-1425

Wilson, L. C. (2016). The Prevalence of Military Sexual Trauma: A Meta-Analysis. *Trauma, Violence, & Abuse*, 19(5), 584–597. <https://doi.org/10.1177/1524838016683459>



# Questions?



# How to Obtain Continuing Education Credits



To receive CE/CME credit, you must register by 0745 ET on 24 January 2020 to qualify for the receipt of CE/CME credit or certificate of attendance. You must complete the program posttest and evaluation before collecting your certificate. The posttest and evaluation will be available through 6 February 2020 at 2359 ET. Please complete the following steps to obtain CE/CME credit:

1. Go to URL <https://www.dhaj7-cepo.com/content/clinical-communities-speaker-series-23-jan-2020>
2. Click on the REGISTER/TAKE COURSE tab
  - a. If you have previously used the CEPO CMS, click login.
  - b. If you have not previously used the CEPO CMS, click register to create a new account.
3. Click "ENROLL."
4. Follow the onscreen prompts to complete the following for each session you wish to claim CE/CME Credit:
  - a. Read the Accreditation Statement
  - b. Select the CE/CME credit type(s) you are seeking
  - c. Complete the Evaluation
  - d. Take the Posttest
  - e. Download your Certificate(s)
  - f. Complete the Commitment to Change survey (optional)
5. After completing the posttest at 80% or above, your certificate will be available for print or download.
6. You can return to the site at any time in the future to print your certificate and transcripts at <https://www.dhaj7-cepo.com/>
7. If you require further support, please contact us at [dha.ncr.j7.mbx.cepo-cms-support@mail.mil](mailto:dha.ncr.j7.mbx.cepo-cms-support@mail.mil)