Force Health Protection (FHP) Brief for Sub-Saharan Africa

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Force Health Protection
References-Africa

• DODI 6490.03, Deployment Health, 11 AUG 2006, certified current as of 30 SEP 2011
• Joint Instruction, AR 40-562/AFI 48-110/BUMEDINST 6230.15B/CG COMDTINST M6230.4G, 7 OCT 2013
• TAB B TO APPENDIX 6 TO ANNEX Q TO CDR USAFRICOM THEATER CAMPAIGN PLAN 7000-12, FORCE HEALTH PROTECTION REQUIREMENTS AND PROCEDURES DURING DEPLOYMENT AND TRAVEL, 29 JUN 2012
• FHP Guidance for Africa COMUSNAVEUR/COMNAVAF 111448z APR 12
• Malaria Prevention & Control NEHC-TM PM 6250.1 2007
CJTF-HOA Surgeons Cell

Located in Building 100, aboard Camp Lemonnier, Djibouti

Members (as of Dec 2013):

  - Force Surgeon – USN Medical Corps
  - Medical logistician – USA Medical Service Corps
  - Medical planner – USA/USAF Medical Service Corps
  - Environmental Health Officer – USAF Biomedical Science Corps
  - Preventive Medicine Technician – USAF
  - Aeromedical Evacuation Liaison Officer - USAF Nurse Corps

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Requests for medical waivers to CJTF-HOA Surgeon: use updated NAVAF form
Lots of health risks!
• Poverty (can’t afford bednets)
• Rural
• Lack of public health infrastructure
Force Health Protection Guidance

• Requirements set by USAFRICOM Theater Campaign Plan 7000-12 Annex Q; Appendix 6 29JUN2012

• NAVEUR-NAVAF-C6F HEALTH PROTECTION GUIDANCE FOR DEPLOYMENTS TO AFRICA, 111448zAPR12:

• FHP is a Commander's responsibility and shall be aggressively supported by your Medical Departments.

• Deployment to Africa presents some unique challenges for reservists, specifically obtaining chemoprophylactic medications, immunizations, bed nets, and permethrin treating of uniforms and 2 sets of liberty clothes (at least 50% cotton).
US Military Malaria Cases in Africa

• Death of a Sea Bee in December 2009 (Stars and Stripes article)
• JTF Shared Accord 2009 (Benin) 14 cases of p. falciparum malaria out of 394 Marines & Sailors imported to CONUS
• JTF Liberia 2003: 80 cases of p. falciparum malaria in 290 Marines deployed ashore
• Malaria in Djibouti is seasonal and episodic; all cases in recent years have been p. falciparum
• Mosquito season in DJ is Nov-May
Causes of Malaria Cases

- Non-compliance of members with chemoprophyaxis (Liberia 2003 and 2009, Benin 2009)
- DEET issued but not used (Liberia 2003)
- Uniforms not treated with permethrin (Liberia 2003 and 2009 and Benin)
- No bed-nets or issued bed-nets used (Liberia, Benin, Cameroon 2011)
- Construction work on hotel allowing mosquitoes access to hotel rooms (Cameroon 2011); no bed-nets issued
- Civilian clothes worn in evenings not treated with permethrin (Cameroon 2011)
FFC and C6F FHP Requirements

• NAVY E-LEARNING, NMCPHC-MPC 2.0 "MALARIA PREVENTION AND CONTROL"
• Receive a Force Health Protection Brief
• Issued: DEET [NSN 6840-041-284-3982], one tube/week
  Recommend at least two tubes
• Permethrin-treated bed-nets [NSN 3740-01-516-4415]
• Permethrin [IDA kits NSN 6840-014-345-0237] treating of two sets of uniforms and two sets of civilian clothes (> 50 % cotton, long sleeve shirts and long pants)
• Check of medical record to ensure issuance of chemoprophylaxis (malarone for high-risk areas, doxy for medium & low-risk areas) and six required immunizations are up to date
Requirements

- PHA, HIV, PPD within 12 months; in MRRS and medical record
- Dental class 1 or 2
- *All required immunizations [yellow fever, tetanus/diptheria/pertussis (Tdap), typhoid, hepatitis A & B, seasonal influenza, meningococcal vaccine]*
- Permethrin treatment of 2 uniforms + 2 sets of civilian clothes
- DEET 30% or greater on exposed skin
- Malaria Chemoprophylaxis
  - Prescription for chemoprophylaxis (do not use chloroquine for travel to Africa)
  - SF-600 for malaria chemoprophylaxis
  - Post-deployment tracking of meds (7 days for malarone; 28 days for doxy or mefloquine)
Health Risks during Deployment to Africa

- Water and food-borne illnesses (Traveler’s Diarrhea)
- Vector (insect)-borne diseases
- Heat illnesses
- Rabies and other animal diseases
- Motor vehicle crashes
Diseases Spread by Food & Water
Diseases of Operational Significance

• Food & Waterborne Diseases
  – Prevention
    • Cook all foods thoroughly
    • Avoid raw foods unless you peel them yourself—NO ice, lettuce, salads, or raw seafood
    • Wash hands frequently
    • Only drink treated water from approved sources or bottled water or beer.
    • Cook it well, peel it or don’t eat it!
Prevention of Diseases Spread by Food & Water

**HAND WASHING**

- After bathroom, before meals

- Hand sanitizer does NOT substitute hand-washing
Insect Vectors
Diseases of Operational Significance

- Vector-borne diseases widespread in Sub-Saharan Africa
- Transmitted by mosquitoes, sandflies, ticks, lice, flies and fleas.
- Risk to US forces is moderate to high (10-50% per month):
  - MALARIA, yellow fever, dengue, plague, tick-borne encephalitis, typhus, lassa fever, Crimean-Congo hemorrhagic fever, sandfly and West Nile fevers, relapsing fever, filariasis, tungiasis, leishmaniasis, loiasis, trypanosomiasis, and onchocerciasis.
- These diseases can significantly impact force health unless preventive measures are enforced.
- Prevention of insect/arthropod bites 24 hrs/day is key, especially as some vector-borne diseases have no specific treatment available. Use permethrin treated uniforms & civilian clothes and bed-nets. Use DEET on exposed skin.
MALARIA

• Falciparum malaria can be rapidly fatal, take all available measures to prevent the disease. Preventive medication is required but not sufficient. The most important preventive measure is to avoid getting bit.

• Malaria prevention is required for deployments to all African countries except Algeria, Egypt, Lesotho, Libya, Mauritius, Morocco, Seychelles, and Tunisia.
  – North Africa has no risk; Swaziland, Cape Verde Islands, and South Africa have limited areas of risk.
• *Plasmodium falciparum, vivax, ovale, & malariae* strains all present in Africa
• *p. falciparum* most widespread, serious, & most commonly fatal species of malaria parasite.
AFRICOM: Malaria Risk to U.S. Forces
August 2011

Map of Africa showing malaria risk levels.

- Red: Potential attack rate 11-50% per month
- Orange: Potential attack rate 1-10% per month
- Yellow: A small number of cases (<1% per month) could occur
- Purple: Sporadic cases could occur. Under some conditions, limited focal outbreaks could develop among the local population. In areas where local outbreaks are occurring, attack rates could approach 1 percent per month among U.S. personnel exposed to mosquito bites.
- Green: Rare cases (<0.1% per month) could occur
- Gray: No risk

NOTE: This map is based on analyst judgment, using epidemiologic data, remote sensed environmental data, and NCMC risk assessment methodology. Boundaries of risk areas are approximate, and should not be interpreted as strict demarcations.

Malaria may be intermittently transmitted in oases in Algeria and Libya following importation. Please see individual country IDRAs for details.
MALARIA

• Clinical Aspects
  – Usually presents as mild febrile illness with nonspecific symptoms
    • Fever, headache, chills, muscle aches, sweats, cough, diarrhea, vomiting, general feeling unwell.
    • Always possibility in sick person with potential exposure — *any fever in tropics is malaria until proven otherwise*
MALARIA PREVENTION

– Prevention of vector borne diseases, including malaria:
  • personal protective measures,
  • vector control,
  • chemoprophylaxis [at best 95% effective!!]
– “Chemoprophylaxis should be viewed as the last arm of a comprehensive anti-malarial program - a final barrier to illness after barriers of DEET, permethrin-treated uniforms and bed-nets have been employed. Like conduct ashore, this is a leadership issue.”
– Shipboard personnel in port and outside the skin of the ship are equally at risk as those ashore.
DOD Insect Repellent System

Permethrin on Uniform + Deet on exposed skin + Properly worn uniform = Maximum Protection
Avoid getting bit

Permethrin IDA kit, 6 per individual; NSN # 6840-014-345-0237 (12 kits per box)
DEET: NSN 6840-041-284-3982

DEET > 30%
Pop-up mosquito netting (treated with permethrin)
NSN 3740-01-516-4415
MALARIA CHEMOPROPHYLAXIS

• Medications
  – For Angola, Benin, Burkina Faso, Cameroon, Comoros, Congo, Cote d’Ivoire, DRC, Gabon, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Sao Tome and Principe, Senegal, Sierra Leone, the Gambia, and Togo, malarone as primary preventive drug, with doxycycline or mefloquine as options.
    • Malarone (250/100) 1x daily, start 2 days before entry, continue 7 days after departing Africa
    • Doxycycline (100 mg) 1x daily start 2 days before entry
    • Mefloquine (250 mg) 1x weekly, start 2 weeks prior to entry in country [attention to contra-indications]
  – After leaving country: continue mefloquine or doxy for 4 weeks (28 d). If in country > 3 weeks, add primaquine phosphate (30 mg base) daily for 14 days if G-6-PD NORMAL.
Other Diseases
Spread by Insects
Other Diseases of Operational Significance

• Fresh-water Contact Diseases
  – Leptospirosis
    • Freshwater contaminated by animal urine
    • Without treatment, Leptospirosis can lead to kidney damage, meningitis (inflammation of the membrane around the brain and spinal cord), liver failure, respiratory distress, and even death
  – Schistosomiasis
    • Freshwater contaminated by urine/feces of infected person
  – Prevention
    • Avoid swimming in fresh water: lakes & streams
    • Rinse and vigorous toweling after unavoidable exposure
Other Diseases of Operational Significance

• Sexually Transmitted Illnesses (STIs)
  – HIV
  – Hepatitis B & C
  – All others—gonorrhea, syphilis, etc.
  – STIs very common particularly among commercial sex workers (up to 80% infected)
Force Health Protection Guidance

- **Topography and Climate**
  - Heat illness can be greatest overall threat when deployed to warm climates
    - Acclimatization takes 10-14 days.
    - Proper work-rest cycles, adequate hydration, command emphasis on heat illness prevention.
  - Awareness that illness, sunburn, drinking alcohol, older age, poor physical condition, certain drugs increase vulnerability to heat illness.
Force Health Protection Guidance

• Animal Avoidance.
  – Poisonous snakes are found throughout Africa
    • common in rural/field settings
    • most snakes will flee from humans
    • educate personnel on snakebite prevention.
  – Antivenoms
    • Due to specificity, poor shelf life, and general lack of availability, not practical to deploy with antivenom onboard ships.
    • US Embassy has local information regarding suitability and availability of antivenom.
  – Feral dogs carry rabies, leishmaniasis, herpes B virus, and tickborne encephalitis.
    • Avoid contact with any animals, immediately seek medical treatment for any bites or scratches.
Ebola Viral Disease (EVD)

EVD is primarily transmitted through direct contact with the blood or bodily fluids of an infected person or through exposure to objects (such as needles) that have been contaminated with infected secretions.
EVD Transmission

EVD is not a respiratory disease like the flu, and therefore it is not transmitted through the air. Those most at risk are family members and health care workers in close contact, or treating, an infected person.
EVD Symptoms

EVD symptoms may include fever, rash, headache, joint and muscle aches, weakness, diarrhea, vomiting, stomach pain, lack of appetite, and abnormal bleeding.

Symptoms may appear anywhere from 2 to 21 days after exposure to EVD, though 8-10 days is most common.
EVD Control Measures 1:2

No vaccine currently available.

• Avoid contact with those who appear ill.
• Wash hands frequently.
• Ensure all foods are properly cooked.
• Do not handle any wildlife.
• Seek medical attention at onset of any EVD-like symptoms, or those with them, involving travel to high threat areas.
EVD Additional Info

Additional real-time information at:

HTTP://TRAVEL.STATE.GOV.CONTENT/PASSPORTS/ENGLISH/ALERTWARNINGS. HTML and at HTTP://WWW.CDC.GOV.
Post-Deployment Activities

• After departing Africa, complete your chemoprophylaxis: 7 days of malarone; 28 days of either doxycycline or mefloquine. If exposed to p. vivax or p. ovale, 14 days of primaquine phosphate [30 mg base] daily. Discuss with your medical officer prior to departure from Africa.

• G-6-PD deficient individuals should not take primaquine.

• See a doctor immediately for any unexplained or persistent symptoms (fever, chills, head-ache, muscle aches, vomiting, diarrhea, cough, rash, or generally feeling unwell, etc.).

• If you seek medical care, tell the doctor your travel history. Most civilian doctors are not trained in tropical diseases and might not think of malaria.
Medical Contacts in HOA AO

• Expeditionary Medical Facility (EMF) Djibouti (Seth Michaud Medical/Dental Clinic) Camp Lemonnier: DSN: 311-824-4906
• Camp Lemonnier EMS: 1-911
• Camp Lemonnier Quarter Deck: 311-824-4995/2245
• CJTF-HOA Joint Operations Center (JOC): 311-824-2201/2
• Theater Patient Movement Requirements Center (TPMRC) Europe: STU-III Capable DSN 314-480-8041/42 or COM 011-49-63-7147-2264/8042
• TRICARE International SOS (ISOS): 011-44-20-8762-8133 e-mail: tricarelon@internationalsos.com
• US Army Regional Medical Center Landstuhl, Germany: COM: 011-49-6371-86-8106
• USNH Rota, Spain: COM or 011-34-956-82-3305
• USNH Sigonella, Italy: COM: 011-39-095-56-3842
• C6F Battle Watch Officer: COM 011-39-081-568-4551/4552
Naval Environmental and Preventive Medicine Units

• NEPMU-2
   Norfolk, VA 23511
   Com: 757-444-7671 DSN: 564-7671;
     pmu2/Pages/default.aspx
   – NEPMU2NorfolkThreatAssessment@med.navy.mil

• NEPMU-7 coming to Rota in FY-14
For Further Information

For country-specific guidance and travel medicine recommendations visit:

www.cdc.gov/travel and www.cdc.gov/malaria

– Local MTF Deployment Health Clinic
– CNE-CNA-C6F Preventive Medicine Officer
  [alicea.mingo@eu.navy.mil]
– EHO [rohini.suraj@eu.navy.mil]
  • DSN 314-626-4690/6204
– EMF Djibouti (Camp Lemonnier) EHO/Preventive Medicine Officer DSN: 311-824-4037
– CJTF-HOA EHO: www.africom.lemonnier.hoasurgeon.mbx.environmental-health-officer@mail.mil