

COMDTINST 6220.9A
AUG 17, 2006

COMMANDANT INSTRUCTION 6220.9A

Subj: PUBLIC HEALTH AND DISEASE CONCERNS RELATED TO COAST GUARD OPERATIONS

- Ref:
- (a) Immunizations and Chemoprophylaxis COMDTINST M6230.4 (series)
 - (b) Prevention of Bloodborne Pathogen Transmission, COMDTINST 6220.8 (series)
 - (c) Manual of Naval Prevention Medicine, NAVMED P-5010
 - (d) Medical Manual, COMDTINST M6000.1 (series)
 - (e) Technical Guide: Practices for Respiratory Protection, COMDTINST M6260.2 (series)
 - (f) Food Service Sanitation Manual, COMDTINST M6240.4 (series)
 - (g) Water Supply and Wastewater Disposal Manual, COMDTINST 6240.5 (series)
 - (h) Malaria Prevention and Control, COMDTINST 6230.5 (series)
 - (i) Safety and Environmental Health Manual, COMDTINST M5100.47 (series)

1. PURPOSE. This Instruction provides guidance and information on how to prevent and control possible adverse health effects on active duty members related to Coast Guard operational missions involving boardings, inspections and Alien Migrant Interdiction Operations (AMIO). The provisions of this Instruction reflect the requirements of references (a) through (i).
2. ACTION. Area and district commanders, commanders of maintenance and logistics commands (MLC), commanding officers of headquarters units, and Commander, U. S. Coast Guard Activities Europe and Far East shall ensure dissemination of the contents of this Instruction. Internet release is authorized.
3. DIRECTIVES AFFECTED. Public Health and Communicable Disease Concerns Related to Alien Migrant Interdiction Operations, COMDTINST M6220.9 of 26 AUG 1994 is cancelled. Where this Instruction conflicts with references a-i, this Instruction takes precedence. References a-i will be updated to reflect this reissue where applicable.
4. SCOPE. This Instruction provides general guidelines for the prevention and control of public health and communicable disease problems that may be encountered during boardings, inspections and

DISTRIBUTION – SDL No. 145

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NON-STANDARD DISTRIBUTION:

AMIO. The diagnosis and treatment of patients with health problems related to AMIO activities are discussed only briefly and are generally outside the scope of this Instruction. This Instruction may also be pertinent to other Coast Guard missions that either involve direct contact of Coast Guard personnel with persons with communicable diseases (e.g., tuberculosis (TB), severe acute respiratory syndrome (SARS)), or place personnel in situations with sanitation or environmental hazards.

5. BACKGROUND. Coast Guard personnel may participate in activities with public health and communicable disease risks, and may come into direct contact with persons originating from regions with endemic communicable diseases. In addition to communicable disease risk; inspections, boardings and AMIO may involve environmental exposures and occupational hazards that could place personnel at increased risk for injury or illness. Humanitarian operations may also involve large numbers of people temporarily placed under Coast Guard control who require support for nutrition, sanitation, health care, and berthing.
6. PROCEDURE. No paper distribution will be made of this Instruction. Official distribution will be via the Coast Guard Directives System CD-ROM. An electronic version will be located on the Information and Technology (CG-612) websites at <http://cgweb2.comdt.uscg.mil/cgDirectives/> and <http://www.uscg.mil/ccs/cit/cim/directives/welcome.htm>. Single chapters of this Instruction will also be made available via the Commandant (CG-112) Publications and Directives website at <http://www.uscg.mil/hq/g-w/g-wk/wkh/pubs/index.htm>.
7. ENVIRONMENTAL ASPECT AND IMPACT CONSIDERATIONS. Environmental considerations were examined in developing this Instruction and are incorporated herein.
8. FORMS/REPORTS. None.

PAUL J. HIGGINS /s/
Director of Health and Safety

- Encl: (1) [Introduction](#)
Encl: (2) [Prevention and Control of Communicable Diseases](#)
Encl: (3) [Food, Water, and Sanitation](#)
Encl: (4) [Health Issues of Alien Migrants](#)
Encl: (5) [Preparation of Emergency Sources of Potable Water](#)
Encl: (6) [Cleaning and Decontamination Guidance](#)
Encl: (7) [Equipment and Supply Checklists for AMIO & Prevention of Communicable Disease](#)

INTRODUCTION

A. Background.

1. Activities associated with various Coast Guard operations may place personnel at increased risk for illness or injury. Inspections, boardings and AMIO may include direct physical contact with people from regions with endemic communicable diseases. These operations frequently have occupational or environmental conditions and circumstances that expose personnel to potential health hazards. Contact with persons with communicable diseases may increase the likelihood of disease transmission.
2. Health risks associated with any of these operations can be controlled and minimized by a combination of awareness of risk factors and implementation of public and environmental health prevention and control measures.

B. Integrated Approach.

1. Effective control and prevention efforts require the integrated support of field operators, health personnel, Headquarters' support staff, MLC support staffs, and individual Coast Guard personnel. Guidelines and standardized procedures are essential but must be flexible enough to accommodate changing conditions.
2. Maximal health and safety efforts involve a multistage approach. The most important and fundamental actions are those taken by individuals. General awareness and education of safety, environmental health, and communicable disease issues are critical factors in the control of illness and injury. Other important factors include completion of recommended immunizations, observance of safety guidelines, utilization of prescribed personal protective equipment (PPE), (see enclosure (7)) and steadfast practice of personal hygiene.
3. Commanding Officers (COs) / Officers-in-Charge (OICs) shall use the following integrated approach:
 - a) Supervisors and field commanders shall take necessary measures outlined in this Instruction to ensure the safety and well-being of personnel engaged in inspections, boardings and AMIO. Unit COs / OICs are responsible for ensuring the medical readiness of their personnel, to include current immunizations for force health protection.
 - b) Health Services Personnel. The Health Services Technician (HS) will be the first level of response for the health and safety needs of personnel during inspections, boardings and AMIO. If there are no HS's onboard, the responsible Health Services Personnel should be a Coast Guard member with training as an EMT, First Responder or Preventive Medicine Technician (PMT). All Health Services Personnel shall contact the appropriate Designated Medical Officer Advisor for any questions concerning the health related needs.
 - c) Medical Officers at Coast Guard health clinics, designated Flight Surgeons and/or pre-deployed Immigration and Customs Enforcement Medical Officers shall be consulted to solve problems on particular medical issues relating to boardings, inspections and AMIO.
 - d) Detached MLC Safety & Environmental Health Officers (SEHOs), or the supporting MLC (kse) Safety & Environmental Health Branch, should be consulted on issues related to sanitation,

Enclosure (1) to COMDTINST M6220.9A

water quality, chemical exposures, waste management, pest management, and other environmental health issues.

e) Commander, MLC(k), Commandant (CG-113), and Commandant (CG-1121) can also provide advice on boarding, inspection and AMIO health-related issues, ranging from specific medical conditions, communicable diseases, or environmental health issues.

PREVENTION AND CONTROL OF COMMUNICABLE DISEASES

- A. Background. Personnel engaged in boardings, inspections and AMIO can be exposed to persons afflicted with various communicable diseases including tuberculosis (TB), bloodborne pathogens, water and foodborne illnesses, zoonotic and insect and arthropod-related diseases and emerging pathogens. The risk posed by these diseases can be eliminated or reduced to acceptable levels through a combination of education, medical screening, sanitation efforts, immunization or medications and use of PPE. Disease prevention measures include:
1. Awareness of and adherence to Commandant Instructions and other guidance pertinent to public health and communicable disease;
 2. Knowledge and use of Coast Guard health and safety systems and external public health agencies;
 3. Maintenance of secure food, water, and sanitation systems on board Coast Guard vessels or units; and
 4. Limited contact with alien migrants and their possessions.
- B. Immunizations.
1. Overview. Immunizations are among the most efficient and cost-effective ways to control the transmission of communicable diseases. The risk of transmission of a highly communicable illness can be virtually eliminated with proper immunizations. Safe and effective vaccines are available for many communicable diseases. However, universal vaccination (e.g., all members are vaccinated with all available vaccines) is not required since targeted vaccination can be restricted to those persons at highest risk for disease. The circumstances specific to boardings, inspections and AMIO do not present increased risks that warrant immunization of Coast Guard personnel beyond those recommended or required for all Coast Guard personnel. References (a), (h) and (i) provide medical guidance pertaining to Coast Guard personnel making port calls or traveling to areas where communicable diseases are either endemic or the cause of a recent outbreak.
 2. Basic Immunizations. Reference (a) provides a broad overview of Coast Guard immunization requirements and procedures. All active duty Coast Guard personnel, including those engaged in boardings, inspections and AMIO, are required to have received the following vaccinations: Hepatitis A and B, Diphtheria, tetanus, polio, and influenza. They should also have documented protection against measles, mumps, rubella or any other immunization as directed by CG-1121.
 3. Influenza. Influenza is spread in respiratory droplets caused by coughing or sneezing. It usually is spread from person-to-person, though sometimes people become infected by touching something with the influenza virus on it and then touching their mouth, eyes or nose. All Coast Guard active duty and selected reserve personnel are required to be immunized against influenza each year.
 4. Hepatitis A. Hepatitis A is spread from person-to-person by putting something in the mouth that has been contaminated with the stool of a person who is infected with Hepatitis A. Bringing individuals infected with Hepatitis A on board vessels should not have an adverse affect on shipboard food and water. Maintenance of uncontaminated food and water sources and good personal hygiene will

minimize the likelihood of exposure to hepatitis A. All Coast Guard active duty and selected reserve personnel are required to be immunized against Hepatitis A.

5. Hepatitis B. Hepatitis B is spread by direct contact with blood or body fluids of an infected person. Standard precautions (as outlined in the bloodborne pathogen section) should be used for protection against hepatitis B. All Coast Guard active duty and selected reserve personnel are required to be immunized against Hepatitis B.
6. Post-Exposure Vaccinations. Post-exposure vaccinations may be needed for Coast Guard personnel who may not have been adequately immunized, or who have a questionable immunization status and may have been exposed to an infected individual during boardings, inspections or AMIO. These situations warrant a report (documented e-mail or telephone call) to the on-duty Flight Surgeon and/or the Senior Medical Officer of the supporting Coast Guard health clinic to advise on the requirement. Details of the exposure shall be documented by the unit CO/OIC as a mishap.

C. Tuberculosis.

1. Overview. Tuberculosis (TB) is a communicable disease; however it is relatively difficult to become infected because close and prolonged exposure to persons with active disease is necessary. Detailed guidance on TB prevention and control is outlined in reference (d). An effective TB control program includes:
 - a) Administrative Controls;
 - b) Environmental Controls; and
 - c) Respiratory Protection Controls.
2. Administrative Controls. Administrative controls are the first and most important level of TB controls. Administrative controls consist of prevention, screening, and case recognition.
 - a) Prevention. Recommended actions to decrease TB transmissibility include:
 - (1) Minimize close contact with persons suspected of having symptoms of TB (e.g., excessive coughing, coughing up blood);
 - (2) Conduct interviews, medical screening and other activities requiring close contact with alien migrants in an open air environment; and
 - (3) Use respiratory protection in select circumstances (e.g., when close contact is required). Reference (e) has additional guidance on the proper use of respiratory protection.
 - b) Screening. A tuberculin skin test (TST) (formerly known as the Purified Protein Derivative (PPD)) is the primary method used for TB screening. There is no historical increased risk for TB transmission in boardings, inspections or AMIO. Alien migrants who have latent TB infection based on a positive TST, but who do not have symptoms of active TB (e.g., excessive coughing and/or coughing up blood) have a low risk of transmitting TB (even if the alien migrant is from a TB endemic area). Therefore, Coast Guard personnel engaged in boardings, inspections or

AMIO are not historically at increased risk for TB exposure. The following exposure situations may warrant performing a TST on Coast Guard personnel.

- (1) Prolonged face-to-face contact (without the use of a N-95 respirator) with one or more alien migrants known or suspected of having active TB disease (e.g., excessive coughing and/or coughing up blood); and
 - (2) Exposure to one or more alien migrants known or suspected of having active TB disease (e.g., excessive coughing and/or coughing up blood) in a confined environment (e.g., vessel hold) rather than in an open area (e.g., weather deck). Reference (d) provides additional guidance on TB screening.
- c) Case Recognition. In order to prevent further spread of TB disease, it is important to know how to recognize individuals with suspected active TB disease. The circumstances common to most boardings, inspections or AMIO may limit the ability to effectively differentiate individuals with TB disease from individuals with other respiratory disorders. The purpose of identifying individuals with suspected TB disease is to promptly institute measures to minimize the risk of transmission while these individuals are under Coast Guard control, and to ensure access to diagnosis and treatment when possible.
- (1) The primary method of identifying individuals with suspected active TB disease in the field is by taking a good medical history and physical examination. Individuals with the following reported signs and/or symptoms should be suspected of having active TB disease:
 - i. Excessive coughing;
 - ii. Coughing up blood (blood tinged sputum);
 - iii. Apparent weight loss;
 - iv. Fatigue;
 - v. Night sweats; and /or
 - vi. Fever.
 - (2) Once identified as potentially having active TB, migrants should be isolated from non-diseased persons, if possible, and have limited contact with others to minimize the risk of disease transmission.
 - (3) Coast Guard personnel can consider placing surgical masks on individuals suspected of having active TB; however, this is often not tolerated by ill persons, may be difficult to enforce for extended periods and is of unknown efficacy in reducing the probability of disease transmission. Factors that should be considered before issuing surgical masks to patients include surgical mask availability, proper fitting and patient acceptance. Use of surgical masks should be limited to those individuals suspected of having active TB disease (cough, fever, weight loss, etc.). Issuance of surgical masks does not negate preventative measures otherwise outlined.

3. Environmental Controls. The second line of defense in TB control is the use of environmental controls to prevent the spread and reduce the concentration of infectious droplet nuclei in the air. Primary environmental controls include: local exhaust ventilation and general ventilation. Secondary environmental controls include: isolation rooms, high efficiency particulate air (HEPA) filtration, and/or ultraviolet lights. Appropriate environmental controls are difficult to achieve in a maritime environment; however, whenever possible, the aforementioned environmental controls should be utilized.
4. Respiratory Protection Controls. The third level of protection is respiratory protection. The majority of situations involving boardings, inspections or contact with alien migrants do not require respiratory protection (e.g., N-95 respirators). For most Coast Guard personnel, contact with alien migrants is brief and/or occurs in an open-air environment. Factors that should be considered when recommending the use of N-95 respirators include:
 - a) Prolonged face-to-face contact with one or more alien migrants known or suspected of having active TB disease (e.g., excessive coughing and/or coughing up blood); and
 - b) Exposure to one or more alien migrants known or suspected of having active TB disease (e.g., excessive coughing and/or coughing up blood) in a confined environment (e.g., vessel hold) rather than in an open area (e.g., weather decks). Reference (e) provides additional guidance on the use of respiratory protective devices.
5. Sources of Additional Resources. Commander, MLC(k), Commandant (CG-113), and Commandant (CG-1121) can be contacted regarding TB prevention and control.

D. Bloodborne Pathogens.

1. Overview. Blood or other potentially infected material (OPIM) (e.g., semen, vaginal secretions, cerebrospinal fluid, any body fluid contaminated with blood) can be potential sources of bloodborne pathogens (e.g., Hepatitis B virus (HBV), Hepatitis C virus (HCV) and Human Immunodeficiency Virus (HIV)). Bloodborne pathogen exposure can occur through contact of the eye, nose, mouth or non-intact skin with an infected person's blood or OPIM. In particular, personnel engaged in boardings, inspections and AMIO may be involved in circumstances that expose them to blood (e.g., needle sticks, bite wounds, sexual contact). However, most exposures to bloodborne pathogens do not result in infection. Prevention and control of bloodborne pathogens are discussed in detail in reference (b).
2. Risk Factors. Personnel at risk for exposure to bloodborne pathogens are those engaged in activities that involve contact with human blood and OPIM (e.g., health care, emergency service and public-safety workers).
 - a) The probability of disease transmission is related to the pathogen involved, the type of exposure, the amount of blood involved in the exposure and the amount of virus in the infected person's blood / OPIM at the time of the exposure. Individuals are at greater risk of contracting a disease if they do not wear appropriate PPE (e.g., masks, gloves and/or eye shields).
 - b) Coast Guard personnel engaged in boardings, inspections and AMIO who are at greatest risk for exposure to bloodborne pathogens are health services personnel and emergency medical technicians (EMTs). Other personnel (e.g., boarding crews) may be in situations where there is

potential contact with blood / OPIM. However, for the majority of personnel, these situations are infrequent and typically involve exposure to a small amount of blood / OPIM. It is important, when coming in contact with any amount of blood / OPIM, that proper PPE for the situation is worn.

3. Prevention and Control Measures. Essential elements of disease prevention and control for bloodborne pathogens include:
 - a) Training and Education. Coast Guard personnel should know: (1) the types of bloodborne pathogens, (2) activities that place them at risk, and (3) how to prevent disease transmission;
 - b) Personal Protective Measures. Personal protective measures involve use of appropriate immunizations and standard precautions.
 - (1) Immunizations. All Coast Guard active duty personnel are vaccinated against HBV. There are no available vaccines for HCV or HIV.
 - (2) Standard precautions. The CDC expanded the concept of universal precautions (e.g., all blood / OPIM are considered potentially infectious) and created standard precautions. All personnel shall routinely use appropriate barrier precautions (e.g., gloves, mask, gown, goggles, as appropriate) to prevent skin and mucous membrane exposure when anticipating contact with any patient's blood or other body fluids. All persons shall wash their hands after completing activities likely to expose them to blood / OPIM and remove protective clothing before leaving the work area. Standard precautions is the primary strategy used to reduce the risk of transmission of pathogens from moist body substances and applies to all individuals regardless of their diagnosis or presumed infection status. Contact with moist body substances can be avoided by the use of personal protective measures, work practices and environmental controls. Reference (b) provides additional information on standard precautions. Also see enclosure 3.
4. Sources of Additional Resources. Commander, MLC(k), Commandant (CG-113), and Commandant (CG-1121) can be contacted regarding bloodborne pathogen prevention and control.

E. Waterborne or Foodborne Illness.

1. Overview. The most common waterborne or foodborne organisms include: Campylobacter, Salmonella, E.coli O157:H7, Norwalk virus, Shigella, Hepatitis A virus, Giardia lamblia, E. histolytica (amebiasis) and Cryptosporidia. The primary method of transmission is ingestion of the organism in contaminated food, water, bodily fluids or stools of infected individuals. Individuals who contract these diseases usually have symptoms of diarrhea, abdominal cramps, nausea and/or vomiting. Outbreaks of waterborne or foodborne illnesses can severely impact unit operational readiness.
2. Risk Factors.
 - a) Alien migrants who have symptoms of diarrhea, abdominal cramps, nausea and/or vomiting should be categorized as having a potential infectious disease. Alien migrants with overt symptoms should receive adequate hydration and, if possible, should be isolated from non-diseased persons without manifestations of intestinal disease.

- b) Coast Guard personnel caring for ill alien migrants are at higher risk of contacting an infectious disease and should take appropriate precautions as listed below.
3. Prevention and Control Measures. Personnel engaged in AMIO and other CG operations can protect themselves from contracting a waterborne or foodborne illness by knowing how these diseases are transmitted, maintaining uncontaminated food and water sources, paying meticulous attention to personal hygiene and handling human waste in a proper manner. Additionally, Coast Guard vessels have extensive and integrated systems which, if not compromised, will ensure safe food and water. The following actions are part of an effective program to prevent and control waterborne and foodborne disease:
- a) Dispose of any food or water provided by alien migrants;
 - b) Wash hands thoroughly before eating, drinking or handling food;
 - c) Use disposable gloves and thoroughly wash hands with soap and clean water after any contact with persons suspected of having waterborne or foodborne illnesses or with their belongings;
 - d) Always keep hands away from the face and eyes;
 - e) Launder clothing, disinfect surfaces (see enclosure (6)) and clean eating utensils that come in contact with infected persons or are otherwise thought soiled with their oral or fecal secretions. Handling of such items should be minimized and waterproof gloves should be worn. When possible, disposable plates, drinking containers and eating utensils should be used when serving meals to alien migrants;
 - f) Prepare and deliver food in accordance with basic sanitation provisions as outlined in reference (f);
 - g) Secure uncontaminated potable water and maintain effective sanitation systems for human wastes, as outlined in references (c) and (g);
 - h) Exclude individuals with communicable waterborne or foodborne illnesses from the preparation and delivery of food and water;
 - i) Coast Guard personnel caring for ill alien migrants should avoid preparing and/or delivery of food and/or water. These personnel should make certain they properly dispose of human waste, observe a strict hand washing regimen and utilize disposable gloves (if available) when they contact an ill individual; and
 - j) Avoid self-inoculation by not touching the face or eyes after contact with alien migrants.
4. Sources of Additional Resources. Commander, MLC(k), Commandant (CG-113), and Commandant (CG-1121) can be contacted regarding waterborne and foodborne illness prevention and control.

F. Zoonotic and Insect and Arthropod-Related diseases.

1. Overview. A variety of zoonotic diseases may be present in animals brought on board by alien migrants. Zoonotic diseases are diseases caused by infectious agents that can be transmitted between animals and humans. Zoonotic diseases include rabies, hantavirus pulmonary syndrome, and lyme disease. Additionally, alien migrants may have insect and arthropod related diseases.

These diseases include: scabies, lice infestation, arboviral encephalitides, dengue fever, malaria, yellow fever and plague. Zoonotic and insect and arthropod-related diseases are generally not spread from person-to-person. They can be transmitted to humans by certain vectors (e.g., mites, fleas, lice, mosquitoes and ticks). Most Coast Guard personnel involved in boardings, inspections and AMIO are at negligible risk of contracting these diseases.

2. Risk Factors.

- a) Zoonotic diseases. Rabies is a preventable viral disease of mammals most often transmitted through the bite of a rabid animal. Hantavirus pulmonary syndrome is a potentially deadly disease transmitted by infected rodents through urine, droppings or saliva. Humans can contract the disease when they breathe in aerosolized virus. Lyme disease is caused by a bacteria (*Borrelia burgdorferi*) and is transmitted to humans by the bite of infected blacklegged ticks.
- b) Scabies. Scabies is an infestation of the skin by a microscopic mite (*Sarcoptes scabiei*). Scabies spreads rapidly under crowded conditions where there is frequent skin-to-skin contact between people. To contract scabies, contact must be prolonged (a quick handshake or hug will usually not spread infestation). Infestation may also occur by sharing towels, clothing and bedding.
- c) Lice infestation. Lice infestation spreads rapidly under crowded conditions where hygiene is poor and there is frequent contact among people. Lice are found on the body, clothing or bedding of infested individuals. Lice can cause typhus and/or louse-borne relapsing fever.
- d) Arboviral encephalitides. There are several types of arboviral encephalitides (e.g., Eastern equine encephalitides, Japanese encephalitides, La Cross encephalitides, St. Louis encephalitides, West Nile virus and Western equine encephalitides). Most of these encephalitides are caused by infected mosquitoes.
- e) Dengue fever. Dengue fever and dengue hemorrhagic fever (DHF) involve the *Aedes aegypti* mosquito. Dengue fever and DHF are primarily diseases of tropical and sub-tropical regions.
- f) Malaria. Malaria sometimes is a fatal disease caused by a parasite. Four kinds of parasites can infect humans: *Plasmodium falciparum*, *P. vivax*, *P. ovale*, and *P. malariae*. Malaria is typically found in warmer regions around the world. Individuals get malaria by being bitten by an infected *Anopheles* mosquito. Malaria, however, is not passed directly from person-to-person and the circumstances of most boardings, inspections and AMIO situations make the risk of malaria remote. Coast Guard personnel engaged in Coast Guard operations may make port visits or travel to land regions where malaria is endemic. These situations are not specific to boardings, inspections and AMIO and are covered by provisions of reference (h). Additional references on malaria include - http://www.cdc.gov/malaria/diagnosis_treatment/clinicians2.htm.
- g) Yellow fever. Yellow fever is a viral disease transmitted between humans by a mosquito. Yellow fever is endemic to Africa and South America.
- h) Plague. Plague is transmitted by fleas infected with bacteria (*Yersinia pestis*). Fleas transmit the plague bacteria to humans. Individuals can spread plague (plague pneumonia) to other individuals by coughing droplets containing the bacteria.

3. Prevention and Control Measures. The transmission of various zoonotic and insect and arthropod-related diseases to Coast Guard personnel can be prevented. Personal protective measures outlined

in reference (h) are applicable to the prevention of zoonotic and insect and arthropod-related diseases. Additionally, adherence to shipboard preventive medicine programs helps ensure Coast Guard vessels will not harbor disease-bearing insects or animals. Some policies to prevent infection are:

- a) Direct physical contact with alien migrants (or their effects) should be limited and purposeful;
 - b) Vessels used by alien migrants should be viewed as potential carriers of undesirable insects, rodents and other disease bearing vectors. Contact between Coast Guard personnel and alien vessels should be minimized to that essential for operational need;
 - c) Primary protective measures include use of disposable gloves and hand washing. Waterproof footwear, bibs and goggles are generally unnecessary and offer little absolute protection beyond that of disposable gloves and hand washing. Used protective clothing/equipment must be properly decontaminated, discarded or otherwise appropriately handled;
 - d) All clothing, bedding and other objects used by alien migrants should undergo laundering, decontamination or proper disposal;
 - e) Personnel must not exchange physical items (e.g., combs) with alien migrants;
 - f) Migrants should remain restricted to topside areas at all times and only allowed below decks when required by operational circumstances; and
 - g) It is strongly recommended that animals, alive or dead, and their body parts (e.g., hides, fur, horns) not be brought aboard Coast Guard vessels. The decision of whether or not to bring animals on board lies solely with the unit Commanding Officer. If the decision is made to bring an animal into the U.S., the Department of Agriculture must be notified and the animal will be turned over to the American Society for the Prevention of Cruelty to Animals (ASPCA) for a quarantine period or be destroyed. Under no conditions should animals obtained from alien sources be brought into the U.S. without adherence to U.S. importation and quarantine laws.
4. Sources of Additional Resources. Commander, MLC(k), Commandant (CG-113), and Commandant (CG-1121) can be contacted regarding zoonotic and insect and arthropod-related disease prevention and control.

G. Emerging Pathogens.

1. Overview. New diseases, such as Severe Acute Respiratory Syndrome (SARS), and potential diseases, such as pandemic influenza, have emerged or will emerge as global threats despite technological advances. Awareness of these emerging diseases will provide additional protection to Coast Guard personnel.
2. Risk Factors. Risk factors for emerging diseases will depend upon multiple factors. Two diseases of interest include SARS and pandemic influenza.
 - a) Severe Acute Respiratory Syndrome (SARS). SARS is a viral respiratory illness that was recognized as a global threat in March 2003, after first appearing in Southern China in November 2002. SARS is caused by a previously unrecognized corona virus. The primary way SARS is spread is via close person-to-person contact. It is transmitted by respiratory droplets

produced when an infected person coughs or sneezes. The virus also can spread when a person touches a surface or object contaminated with infectious droplets and then touches his or her mouth, nose or eye(s). In addition, it is possible that SARS might be spread more broadly through the air (airborne spread) or by other ways that are not now known.

- b) **Pandemic Influenza.** An influenza pandemic is a global outbreak of disease that occurs when a new influenza A virus appears or “emerges” in the human population, causes serious illness, and then spreads easily from person-to-person worldwide. Since late 2003, influenza A (H5N1) has emerged as a contagious disease in birds (avian influenza). As of 7 January 2006, human cases of avian influenza A (H5N1) infection have been reported in multiple countries. Humans infected with avian influenza A (H5N1) have had direct and prolonged contact with infected birds. Migrants from regions with avian influenza A (H5N1) have an increased risk of transporting infected animals. So far, there has been no confirmed spread of avian influenza A (H5N1) virus from person-to-person. Nonetheless, because all influenza viruses have the ability to change, scientists are concerned that the avian influenza A (H5N1) virus one day could be able to infect humans and spread easily from one person to another. Because these viruses do not commonly infect humans, there is little or no immune protection against them in the human population. If the avian influenza A (H5N1) virus were to gain the capacity to spread easily from person-to-person, an influenza pandemic could occur.

3. Prevention and Control Measures.

- a) Preventive measures for SARs include minimizing close contact with alien migrants, interacting with migrants in an open air environment, using disposable gloves if physical contact is required, and/or using N-95 respirators, as indicated for TB, if close contact is required. Additionally, instituting proper personal hygiene (e.g., handwashing) can reduce disease transmission. Alcohol-based hand cleansers are effective and shall be provided if hand washing facilities are not available.
- b) Preventive measures for avian influenza A (H5N1) include avoiding direct physical contact with birds and any other animal found onboard migrant vessels. If personnel will have direct and prolonged contact with potentially infected animals, use N-95 respirators, as indicated above for TB, and follow proper handwashing or decontamination procedures. If there is a pandemic influenza outbreak, Coast Guard personnel will be given specific preventive measures via an ALCOAST or other appropriate means.
- c) Emerging infectious pathogen information will be updated on the [CG-1121 Website](#).

- 4. Sources of Additional Resources. Commander, MLC(k), Commandant (CG-113), and Commandant (CG-1121) can be contacted regarding emerging pathogens prevention and control.

FOOD, WATER, AND SANITATION

- A. Background. Outbreaks of waterborne and foodborne illness can rapidly degrade the ability of Coast Guard crews to perform their missions. Coast Guard vessels have extensive and integrated systems to prevent illness related to food, water and sanitation. Strict adherence to prescribed food practices, water purification, cleanliness, and waste disposal will minimize the risk of waterborne and foodborne illness to personnel engaged in Coast Guard operations.
- B. Safe Food Practices.
1. Food must be prepared and stored in accordance with reference (f). Foodstuffs from alien migrant sources should not be brought aboard Coast Guard vessels. Foods from alien migrant sources shall not be served to Coast Guard personnel.
 2. Meals should be prepared and served separately for Coast Guard personnel and alien migrants. Attention is required to ensure meals reach the intended persons and that cross-mixing or contamination of foods does not occur. Once food has left controlled areas to be served to alien migrants, it shall not be returned for storage or reuse. Food should be delivered to a neutral area by food service staff or mess attendants away from the holding area; then to the holding area and served by non-food service personnel. Basically, food service personnel and mess attendants should not be in the vicinity of migrants.
 3. Individuals who prepare foods must be healthy and free of communicable diseases. To minimize risk of inadvertent disease transmission, food service personnel should not come into close contact with alien migrants. Alien migrants shall not enter areas where food is prepared, served or stored for Coast Guard personnel.
- C. Potable Water.
1. Coast Guard vessels have extensive and integrated systems that ensure safe potable water. Guidance provided in references (g) and (i) will safeguard the integrity of shipboard water supplies. Water for human consumption should be readily accessible and available in ample supplies. Drinking water requirements are affected by several variables, including climatic factors, presence of injuries or medical conditions, general state of health, gender and age. A rule of thumb is 2.5 to 3 liters of drinking water per person per day. Additional requirements of water are needed for food preparation, personal hygiene, sanitation and laundering. Total water requirements for all purposes are typically 7.5 to 15 liters per person per day.
 2. Water used for human consumption, personal hygiene and food preparation must be potable (maintain a free chlorine residual of 0.2 parts per million (ppm) at all times) and free of contamination. Water used for sanitation (e.g., sewage disposal) need not be potable, providing there are safeguards preventing its use for human consumption.
 3. Water for human consumption should be obtained only from sources for which the safety is certain. If emergency purification of water is required, enclosure (5) outlines several methods to produce potable water for emergency use.

4. Attention must be directed to adequate drainage, cleaning and prevention of safety hazards (e.g., slippery surfaces, etc) for showers installed for alien migrant use. A privacy area for dressing near the showers is recommended, if feasible.

D. Sewage and Infectious Waste Disposal.

1. Sewage Disposal. Coast Guard vessels have integrated sanitation systems that efficiently contain human waste. Large numbers of alien migrants, however, can overwhelm shipboard systems. Use of sanitation facilities and sewage disposal for alien migrants should be separated from that of the vessel. Sanitation facilities established for alien migrants should be located for easy access and physically separated from eating and living areas, in accordance with reference (g). Handwashing facilities shall be provided. Alcohol-based hand cleansers are effective and shall be provided if hand washing facilities are not available.
2. Infectious Waste. NOTE: Disposal of medical and/or biological waste is regulated by various local laws. The unit must be aware of any local law or ordinance in their area of responsibility and must conform to these regulations. There is no scientific evidence to suggest that most medical waste is any more infectious than residential waste. However, the public concern about the risk of medical waste must not be ignored. Identifying waste for which special precautions are indicated is necessary.
 - a) Biohazard warning labels shall be affixed to containers of regulated waste, refrigerators, and freezers containing blood or other potentially infectious material, and other containers used to store, transport or ship blood or OPIM with the following exceptions:
 - (1) Red bags may be substituted for labels on bags or containers of regulated waste; and
 - (2) Individual containers of blood or OPIM may be placed in a labeled container during storage, transport, shipment or disposal. Handling suspected waste shall be done in accordance with 13.K.12 (Infectious Waste) of reference (b) and as directed in reference (i).
 - b) The most practical approach to the management of infectious waste is to identify waste with the potential for causing infection during handling and disposal, and for which special precautions appear prudent.
 - (1) Medical wastes for which special precautions are prudent include sharps, microbiological laboratory waste, pathology waste, and blood specimens or blood products;
 - (2) While any item having contact with blood / OPIM may be infectious, it is not usually practical or necessary to treat all such waste as infectious. Materials containing small amounts of blood, saliva, or other secretions (e.g., tainted gauze pads, sanitary napkins or facial tissues) are not considered infectious waste; and
 - (3) Properly label and store all infectious waste in a secure area until transported to a designated infectious waste deposal site.

3. Decontamination Point. Consistent and conscientious use of personal hygiene is essential for the prevention and control of many communicable diseases. This is particularly important for personnel of vessel boarding teams or those who have physical contact with alien migrants or their belongings. A decontamination point provides a clearly identifiable and centralized station that highlights attention and focuses efforts for personal hygiene. COs / OICs must consider establishing a decontamination point when the following conditions exist:
 - a) Operational circumstances involving contact with a vessel suspected of carrying alien migrants;
 - b) Coast Guard personnel will physically board the suspect vessel, or, alien migrants will be staged on board the Coast Guard vessel; and
 - c) For situations where migrants are staged on board Coast Guard vessels; the number of migrants, duration of migrant presence, or other operational circumstances raise the likelihood that decontamination of personnel will not be consistently met without a decontamination point.
4. Elements of a Decontamination Point. The fundamental purpose of a decontamination point is the control of communicable disease transmission through the effective and consistent use of personal hygiene. Elements of a decontamination point include:
 - a) Hand washing station. Hand washing stations include wash basins with warm soapy water, a sanitizing rinse, and disposable towels. Alcohol-based hand cleansers are effective and shall be provided if hand washing facilities are not available. Alcohol pads are not to be used as a substitute for hand washing;
 - b) Foot-wear cleaning station. A foot-wear cleaning station shall include scrub brushes, warm soapy water, a mild bleach solution (one capful of bleach per gallon of water) and rinse water. Ensure foot-wear are unlaced and that they are fully immersed in the bleach solution for at least one minute before rinsing;
 - c) Shower facility. Showers will require plastic bags for clothing, soap, shampoo, towels, and adequate drainage;
 - d) Clothing exchange point. Ensure all contaminated clothing is bagged, sealed and laundered daily. If clothing is grossly contaminated with blood, body fluids or human waste, treat as infectious waste and delivered to unit Health Services Technician for proper disposal; and
 - e) Other equipment. Periodically scrub (with mild detergent), rinse and air dry web gear, jackets, and other articles which are exposed but not launderable. This shall be done monthly; however, if articles are known to be contaminated, the cleaning shall be performed daily.

HEALTH ISSUES OF ALIEN MIGRANTS

- A. Background. Persons displaced by war, natural disaster, famine and other factors are frequently dependent on others for their basic human needs. Large numbers of migrants can rapidly overwhelm the resources of those providing assistance, unless there has been careful planning and adequate preparations. A systematic and organized response will greatly assist in making structure out of apparent chaos. Issues associated with AMIO cover a spectrum of concerns ranging from international law, security, and humanitarian needs. Planning will help ensure that AMIO will be conducted in an appropriately safe and efficient manner. The content of this chapter focuses on the public health and humanitarian needs of displaced populations (e.g., those related to AMIO).
- B. Planning. Public health and communicable disease issues of alien migrants are primarily focused on disease control, suitable berthing, adequate water and nutrition, sanitation, and medical care of sick or injured. Planning for probable contingencies involves awareness of the factors and circumstances pertinent to AMIO, such as:
1. The country of migrant origin;
 2. Estimated numbers of persons;
 3. Population characteristics of alien migrants (race, gender and age distributions);
 4. Presenting symptoms of health and mental status;
 5. General environmental conditions;
 6. Length of stay; and
 7. Unique issues (e.g., security concerns, etc).
- C. Specific Issues.
1. Assessment of Health Status. Upon arrival, the migrants health status shall be rapidly assessed. This shall be done by an HS; or if none are available, this role should be filled by the next most medically-qualified person (e.g.; EMT, First Responder). Standard triage techniques will differentiate those who require immediate, urgent or delayed medical attention. Persons who have life or limb threatening conditions should receive immediate care and be referred for more definitive care, if needed. Health care problems of a less threatening nature should be addressed secondarily, dependent on available resources and health care expertise. Resources should not be diverted for chronic conditions which are generally best remedied in more stable circumstances. If possible:
 - a) Record information on the Chronological Record of Medical Care (SF-600) for health care assessment and interventions for individual persons. A sample form has been provided in enclosure (3) and also on the CG-1121 website.
 - b) Summarize health information on the Chronological Record of Medical Care (SF-600) for the entire population treated. Summary information should include total number of persons treated, distribution of patients by gender and age, number and types of diseases encountered

and so forth. [Disease Non-Battle Injury \(DNBI\)](#) forms may be used as a summarized information sheet. This form is located in reference (d).

2. Nutrition. Health status assessment provides an initial idea of the nutritional state of alien migrants. Persons who appear emaciated or gaunt or who have a distended abdomen or swollen ankles may be in severe nutritional deficiency and require rapid and specialized intervention. Separate these people from the other migrants and contact a Flight Surgeon for further guidance. Food best suited for migrants are those which are part of their normal diet. Caution must be taken to prevent issuing food to alien migrants when there is a known physical intolerance. Meals served twice a day, in generous quantities, are usually sufficient to meet the nutritional needs of most persons. Individuals who are ill, suffer chronic nutritional deficiencies, are under 6 years of age or are pregnant, have nutritional needs that require more frequent and specialized meals. Additional basic principles of alien migrant nutrition include:
 - a) Rule-of-thumb on daily caloric need is a minimum 1,900 calories per person per day. At least 10 percent of the calories should be from fats and 12 percent from proteins;
 - b) Food distribution should be controlled to ensure that all personnel are fed;
 - c) Avoid use of dried milk or other milk products unless these foods are normally consumed;
 - d) Generally safest are simple foods (e.g., rice, beans and cooked vegetables); and
 - e) Encourage breast feeding infants when such situations exist.
3. Space. Operational and environmental circumstances are important determinants in space needs. Space requirements for alien migrants include those needed for sleeping, eating, personal hygiene and medical care. Additional factors are the numbers of persons involved and anticipated length of stay. Large numbers of migrants can quickly crowd available holding areas. What may be acceptable for short term stays may be unacceptable for long term stays.
4. Communicable Disease Control. Crowding, over-tasked resources, nutritional deficiencies, poor sanitation and apparent chaos are common circumstances affecting displaced populations. Acute communicable diseases frequently accompany alien migrants, the most common of which are diarrhea and respiratory infection. Prevention and control measures should be implemented among migrants to minimize communicable disease occurrence. Some measures and safeguards are:
 - a) Attain and maintain safe food and potable water sources (if available Meals Ready to Eat (MREs) may be provided);
 - b) Install and ensure the availability of sanitary disposal systems for human wastes;
 - c) Eradicate or control insects and animal vectors;
 - d) Decontaminate or otherwise effectively process eating utensils, clothing, bedding and personal effects which serve as sources of disease transmission;
 - e) Appropriately handle alien migrants identified with communicable diseases to control transmission, as discussed in this instruction; and

- f) Minimize contact between alien migrants and Coast Guard crew personnel.
5. Miscellaneous Factors. Alien migrant situations involve psychological, physical, social, physiologic and other stressors. Capabilities to address these concerns are frequently limited in the typical migrant environment, but can have an important payoff in terms of effective and humanitarian management. Factors that should receive consideration include:
- a) Establish lines of communication with migrants;
 - b) Allow family units to cluster and associate;
 - c) Create the impression that the caretakers are clearly in control of the situation yet interested in migrant concerns;
 - d) Be aware of important religious, cultural and ethnic customs and practices;
 - e) Encourage self-help;
 - f) Treat alien migrants with understanding and compassion while following the recommendations of this instruction; and
 - g) Minimize actions which convey the perception that fears of communicable disease are of higher concern than assisting human beings.
6. The following is an example of a SF-600 which should be used to document problems with a migrant:

HEALTH RECORD	CHRONOLOGICAL RECORD OF MEDICAL CARE
DATE	SYMPTOMS, DIAGNOSIS, TREATMENT, TREATING ORGANIZATION <i>(Sign each entry)</i>
Females:	AMIO SCREENING OVERPRINT
<input type="checkbox"/> not pregnant	SUBJECTIVE: _____ year old male / female (circle) with a _____ day history of:
<input type="checkbox"/> pregnant	<input type="checkbox"/> nausea <input type="checkbox"/> vomiting <input type="checkbox"/> diarrhea <input type="checkbox"/> blood in stools <input type="checkbox"/> abdominal pain
<input type="checkbox"/> unknown	<input type="checkbox"/> fever <input type="checkbox"/> cough <input type="checkbox"/> rash <input type="checkbox"/> open sores / cuts <input type="checkbox"/> dizziness / fainting spells
	<input type="checkbox"/> other symptoms _____ <input type="checkbox"/> no symptoms
	Other family members ill:
	Recent travel:
	Current medications:
	OBJECTIVE:
	General: <input type="checkbox"/> well nourished, well hydrated <input type="checkbox"/> moderately ill appearing, mildly dehydrated
	<input type="checkbox"/> non-combative <input type="checkbox"/> combative
	<input type="checkbox"/> alert & oriented <input type="checkbox"/> not alert / not oriented
	Other observations:
	ASSESSMENT / PLAN:
	<input type="checkbox"/> Individual is stable, no medical intervention needed
	<input type="checkbox"/> Individual is not stable, medical attention required. Contact medical personnel for assistance.
	Additional precautions:

	SIGNATURE

PATIENT'S IDENTIFICATION <i>(Use this space for Mechanical Imprint)</i>	RECORDS MAINTAINED AT:			
	PATIENT'S NAME (Last, First, Middle initial)			SEX
	RELATIONSHIP TO SPONSOR:		STATUS	RANK/GRADE
	SPONSOR'S NAME			ORGANIZATION
	DEPART./SERVICE	SSN/IDENTIFICATION NO.		DATE OF BIRTH

PREPARATION OF EMERGENCY SOURCES OF POTABLE WATER

- A. **Overview.** All water must be treated before using it for drinking, food preparation, cleaning or personal hygiene unless its safety is absolutely certain. These measures will kill most microbes, but will not remove other contaminants such as heavy metals, salts, and most chemicals. Before treating water, allow suspended particles to settle to the bottom or strain them through a clean cloth.
1. **Boiling.** Boiling is the safest method of treating water, but is best used for relatively small quantities of water. Boil water for at least 10 minutes. Some water will evaporate during this process. Ensure water is cool prior to using.
 2. **Chlorination using household bleach.** Use only regular bleach that contains 5.25% sodium hypochlorite. Do not use scented, color safe or bleaches with added cleaners. Add 8 drops of bleach per gallon of water. If the water is cloudy, add 16 drops per gallon. Allow the water to stand for 30 minutes. A slight, but distinct chlorine smell should be detected after 30 minutes. If not, repeat the dosage and allow the water to stand for another 30 minutes.
 3. **Chlorination by Calcium Hypochlorite.** Powdered calcium hypochlorite can be used to purify large quantities of water. Detailed instructions on using calcium hypochlorite can be found in Chapter 1 of reference (g).

CLEANING AND DECONTAMINATION GUIDANCE

A. Recommended Surface Disinfectants.

1. Phenolic Compounds. In high concentrations, phenolics are protoplasmic poisons. In low concentrations, they inactivate essential enzyme systems. As disinfectants, phenolics are usually combined with a detergent. They do not damage treated surfaces. Disinfection can be achieved after 10 - 20 minutes of contact.
2. Sodium Hypochlorite. Sodium hypochlorite is thought to oxidize microbial enzymes and cell wall components. A 1:10 dilution of 5.25 percent sodium hypochlorite in water yields a solution which can provide an intermediate level of disinfection in 10 minutes. Since sodium hypochlorite solution tends to be unstable, a fresh solution must be prepared daily. It possesses a strong odor and can be harmful to eyes, skin, clothing, upholstery and metals (especially aluminum).

B. Chemical Disinfectants Not Recommended.

1. Alcohol. Alcohol is bactericidal against vegetative forms of bacteria through the denaturation of cellular proteins. A 70 - 90 percent solution (diluted with water) is more effective than a more concentrated solution. The disadvantages of alcohol use are (a) rapid evaporation, (b) lack of sporicidal or viricidal activity, and (c) rapid inactivation by organic material. Alcohol alone shall not be used for disinfection.
2. Quaternary Ammonium Compounds. In the past, benzalkonium chlorides and other "quats" have been used as disinfectants because they were thought to be safe, inexpensive and to have low surface tension. Their biocidal activity results in a breakdown of the bacterial cell membrane producing an altered cellular permeability. As a group, these compounds have several serious deficiencies. Being positively charged, they are attracted not only to bacteria but also to glass, cotton, and proteins. This decreases their biocidal activity. The negatively charged ions of common cleaners, soaps, and other compounds will also neutralize "quats." Some "quats" have been shown to support the growth of gram-negative organisms. They are ineffective against most spore formers, the Hepatitis B virus and the Tubercle Bacillus.

EQUIPMENT AND SUPPLY CHECKLIST FOR AMIO & PREVENTION OF COMMUNICABLE DISEASE

A. Introduction. Many of these supplies and equipment should already be available onboard a vessel for use in berthing and galley sanitation, and as part of the unit's Bloodborne Pathogen Instruction. It is recommended that units set aside these supplies and equipment for use in boardings, inspections and AMIO. The allowances below are based on encountering 50 migrants in a 10-day period.

1. Checklist:

- a) 1 gallon Household Bleach
- b) 1 Box Large Size Nitrile Gloves
- c) 1 Box Medium Size Nitrile Gloves
- d) 1 Box Small Size Nitrile Gloves
- e) 1 Box Large Disposable or 3 Large Half-Face Respirators with N-95, P-95, R-95 cartridges
- f) 1 Box Medium Disposable or 3 Large Half-Face Respirators with N-95, P-95, R-95 cartridges
- g) 1 Box Small Disposable or 3 Large Half-Face Respirators with N-95, P-95, R-95 cartridges
- h) 2 Pairs Chemical Goggles (for HS/EMT personnel medically treating migrants)
- i) 3 5-gallon buckets for Decontamination of boots and equipment.
- j) 3 Scrub Brushes, Hand-held

2. Handwashing Station consisting of:

- a) Liquid Soap
- b) Potable Water
- c) Disposable Hand Towels