American College of Emergency Physicians®
ADVANCING EMERGENCY CARE

Cruise Ship Health Care Guidelines

Policy Resource and Education Paper (PREP)

This policy resource and education paper (PREP) is an explication of the policy statement "Health Care Guidelines for Cruise Ship Medical Facilities"

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CONTEXT

The specific medical needs of a cruise ship are dependent on variables such as ship size, itinerary, anticipated patient mix, anticipated number of patients' visits, vessels remaining in coastal waters, etc. These factors may modify the applicability of these guidelines, especially with regards to staffing, medications, equipment and supplies. It is also recognized that due to the remote itineraries and complex logistics challenges specific to cruise ship medicine, emergency situations can periodically and temporarily disrupt the full provision of staffing, equipment and supplies as described in these guidelines.

Quality medical care on board cruise ships carrying over 100 persons is enhanced by the following guidelines:

GUIDELINE 1: MEDICAL FACILITY

1.1 Contains adequate space for diagnosis and treatment of patients with 360° patient accessibility around at least one bed.

1.2 Has hand wash sinks with hot/cold mixing tap, liquid antibacterial soap, paper towels and waste bin in or adjacent to all clinical exam rooms. For exam rooms without sinks, alcohol hand sanitizers should be available.

1.3 Has adequate space for storage of medical supplies, equipment and drugs.

1.4 Has an examination, treatment and inpatient area adequate for the size of the ship.

1.5 Has at least one examination / stabilization room.

1.6 Has at least one (1) ICU room.

1.7 Has at least one (1) inpatient bed per 1000 passengers and crew.

1.8 Has at least one (1) isolation room or the capability to provide isolation of patients.

1.9 Is accessible by wheelchairs and stretchers.

1.10 Has at least one (1) wheelchair accessible toilet on all new builds delivered after January 1, 1997.

GUIDELINE 2: STAFF

2.1 Qualifications and Experience: Maintains qualified and experienced clinical staff that have undergone a credentialing process to verify that:

2.1.1 All clinical staff hold current full registration and a license to practice.

2.1.2 All clinical staff have at least three years of post-graduate/post-registration experience.

2.1.3 Physicians have at least three years of post-graduate/post-registration experience in general and emergency medicine OR are board certified in emergency medicine or family medicine or internal medicine.

2.2 Certifications

2.2.1 All clinical staff certified in advanced life support such as ACLS, ALS or an equivalent certification or physician specialist training (eg, emergency medicine, anesthesiology or critical care.)

2.2.2 Ships carrying children ≤ 12 years old should have at least one physician certified in PALS, APLS or an equivalent certification or specialist training (eg, emergency medicine or pediatric medicine. (Effective January 1, 2015))

2.2.3 At least one physician certified in advanced trauma life support such as ATLS or an equivalent certification or specialist training (e.g. emergency medicine or trauma. (Effective January 1, 2017))

2.3 Skills:

2.3.1 Physicians with a competent skill level in Emergency Cardiovascular Care.

2.3.2 Physicians with minor surgical, orthopedic and procedural skills including suturing, and fracture/dislocation management.

2.3.3 Physicians with procedural sedation skills.

2.3.4 At least one physician onboard trained in Point of Care Ultrasound (POCUS), which should include, at a minimum, a basic education in ultrasound (US) physics, knobology, vascular access procedural guidance, extended focused assessment with sonography in trauma (EFAST), and deep vein thrombosis (DVT). (Effective January 1, 2026).

2.3.4.1 POCUS refers to a limited ultrasound examination to answer specific clinical questions that may guide clinical assessment and treatment decisions. It is performed at the patient's bedside, by clinicians involved in the patient's care.

2.4 Language: Clinical staff that have sufficient language skills in the official working language of the ship.

GUIDELINE 3: CLINICAL PRACTICE

3.1 Medical facility shall have established medical policy and procedures which have been reviewed by a senior clinician.

3.2 Structured clinical staff orientation to the medical facility.

3.3 Designated rapid medical response team which is trained and exercised at least monthly.

3.4 A dedicated emergency telephone number is advertised for both passengers and crew and is placed on telephones around the ship.

3.5 When the ship is at sea, at least one physician and one additional clinical provider must be readily available to provide emergency medical care twenty-four hours a day.

3.6 When the ship is in port, at least one clinical provider is available onboard.

3.7 Ready access to both telephone and confidential email in order to communicate directly with shipboard and shoreside healthcare providers.

3.8 An audit program of the medical facility that is conducted by healthcare professionals or persons experienced in healthcare audit.

GUIDELINE 4: DOCUMENTATION

4.1 A medical record system that provides:

4.1.1 Well organized, legible and consistent documentation of all medical care.

4.1.2 Patient confidentiality. All patient medical records should be regarded as strictly confidential medical information and should not be accessible to non-medical staff without the express written consent of the patient except as necessary to maintain safety on board or ashore, or to comply with applicable legal requirements to review, report or log the information. Maintenance of patient records should also be in compliance with applicable legal requirements imposed by data protection or medical privacy laws, for example, in jurisdictions such as the United States or Europe.

GUIDELINE 5: EQUIPMENT

5.1 Vital signs equipment: Sphygmomanometers, stethoscopes, thermometers (including core/rectal temperature capabilities) and pulse oximeter (SaO2).

5.2 Airway equipment - bag valve mask, laryngeal mask airway/supraglottic airway, laryngoscopes, endo tracheal tubes, stylet/bougie, lubricant, portable suction equipment, surgical airway capability.

5.3 At least two cardiac monitors.

5.4 At least two defibrillators, one of which should be a portable automated external defibrillator (AED).

5.5 External cardiac pacing capability.

5.6 Electrocardiograph (EKG) capability.

5.7 Electronic infusion capability.

5.8 Nebulizer capability.

5.9 Automatic medical ventilator.

5.10 Oxygen tanks (including portable tanks $\leq$ 5 liters) and at least one oxygen concentrator and a sufficient number of flow regulators.

5.11 Wheelchairs.

5.12 Stair chair and stretcher.

5.13 Refrigerator and freezer for the safe storage of medicines and supplies.

5.14 Long and short back boards with cervical spine immobilization capabilities.

5.15 Trauma supplies.

5.16 Laboratory testing capabilities:

a. Complete Blood Count (CBC)
b. Urinalysis: specific gravity, protein, red blood cells, white blood cells, nitrites, urobilogen, ketones, pH, glucose and albumin

c. Pregnancy: qualitative HCG
d. Blood Glucose
e. Electrolytes with a minimum of Sodium and Potassium
f. Renal Function with a minimum of Creatinine and Urea
g. Cardiac enzymes with a minimum of a CK-MB or Troponin assay
h. Malaria
i. Legionella
j. Influenza A and B
k. HIV

5.17 All medical equipment is maintained in accordance with recognized biomedical quality control recommendations.

GUIDELINE 6: PHARMACY

6.1 Maintain an evidence-based formulary on each ship with sufficient quantities of medications from the drug classes listed below. Optimal par levels will vary by the ship's population size and itinerary.

6.1.1 Gastrointestinal system medications such as antacids, antispasmodics, H2-receptor antagonists, proton pump inhibitors, anti-motility drugs, stimulant laxatives, osmotic laxatives, hemorrhoidal preparations.

6.1.2 Cardiovascular system medications such as cardiac glycosides, diuretics, anti-arrhythmic drugs, beta-adrenoceptor blocking drugs, hypertension and heart failure drugs, lipid regulating drugs, nitrates, calcium-channel blockers and other anti-anginal drugs, inotropic sympathomimetics, vasoconstrictor sympathomimetics, anticoagulants, antiplatelet drugs, anti-fibrinolytic drugs including thrombolytic medications sufficient for at least two patients. Sufficient quantities of advanced cardiac life support medications, in accordance with current international ACLS guidelines, for the management of two complex cardiopulmonary arrests.

6.1.3 Respiratory system medications such as bronchodilators, corticosteroids, antihistamines, oxygen, cough preparations, systemic nasal decongestants.

6.1.4 Central nervous system medications such as hypnotics and anxiolytics, drugs used in psychoses and related disorders, drugs used in nausea and vertigo, analgesics, antiepileptic drugs.

6.1.5 Infectious disease medications such as penicillins including penicillinase-resistant penicillins, cephalosporins and other beta-lactams, tetracyclines, macrolides, trimethoprim/sulphonamides, metronidazole, quinolones, antifungal drugs, antiviral drugs, antimalarial drugs.

6.1.6 Endocrine system medications such as diabetes drugs, thyroid drugs, corticosteroids.

6.1.7 Obstetrics, gynecology and urinary tract disorder medications such as prostaglandins and oxytocics, drugs for vaginal and vulval conditions, contraceptives, drugs for genito- urinary disorders.

6.1.8 Fluids and electrolytes such as oral and parenteral.

6.1.9 Musculoskeletal and joint disease medications such as non-steroidal anti-inflammatory drugs, corticosteroids, drugs for soft-tissue inflammation and topical pain relief.

6.1.10 Eye medications such as antibacterials, antivirals, corticosteroids, anti-inflammatory preparations, mydriatics and cycloplegics, treatments for glaucoma, local anesthetics, ocular lubricants, ocular diagnostic preparations.

6.1.11 Ear, nose and oropharynx medications such as drugs for the treatment of otitis externa, removal of cerumen, oral ulceration, nasal allergy, topical nasal decongestant, oropharyngeal anti-infective drugs, lozenges and sprays.

6.1.12 Skin disease medications such as emollient and barrier preparations, topical local anesthetics and antipruritics, topical corticosteroids, antiviral preparations, antibacterial preparations, antifungal preparations, skin cleansers and antiseptics.

6.1.13 Vaccines such as hepatitis B vaccine, hepatitis B immunoglobulin, seasonal influenza vaccine, tetanus toxoid vaccine.

6.1.14 Anesthesia medications such as intravenous anesthetics, anti-muscarinic drugs, anxiolytics, non-opioid and opioid analgesia, neuromuscular blocking drugs, antagonists for respiratory depression, local anesthesia.

GUIDELINE 7: INFECTION CONTROL

7.1 A TB screening program at least every two (2) years for all clinical staff.

7.2 Hepatitis B Immunity: All clinical staff who have a reasonable expectation of being exposed to blood must provide documented serological proof of Hepatitis B immunity (anti-HBs $\geq$ 10 mIU/mL or have documented proof of Hepatitis B vaccination) prior to any clinical work.

7.3 Clinical staff participation in a seasonal influenza vaccination program.

7.4 Clinical staff with immediate access to personal protective equipment (PPE) including gloves, gowns and N95 masks.

GUIDELINE 8: IMAGING

8.1 X-ray imaging capabilities which includes one x-ray generator and one processing/developing system.

8.2 Radiation protection equipment including shielding for both clinical staff and patients. Signage must be clearly displayed in the radiologically controlled area asking patients to inform clinical staff if they are, or might be, pregnant.

8.3 Clinical staff working in radiologically controlled areas undergo basic radiography training in x-ray techniques and radiation safety prior to taking unsupervised x-rays.

8.4 Ultrasound imaging capabilities which enable Point of Care Ultrasound (POCUS) to be performed.

GUIDELINE 9: MEDICO-LEGAL PRACTICE

9.1 Each ship should carry a minimum of two sexual assault evidence collection kits.

9.2 Each ship should have at least one clinical staff member on board who has completed training that meets the guidelines established by the American College of Emergency Physicians or an equivalency training, relating to the treatment and care of victims of sexual assault including the use of sexual assault evidence collection kits.

9.3 Each ship should carry sufficient stock of emergency post-coital contraception and post exposure prophylaxis (PEP) anti-retroviral and antibacterial medications to minimize the risk of pregnancy and transmission of HIV and other sexually transmitted illnesses.

9.4 The person affected should be provided with free and immediate access to a telephone, internet accessible computer and contact information for law enforcement, National Sexual Assault Hotline or support service, the nearest consulate or embassy, and, if applicable, the US Coast Guard. This information must be maintained within the medical facility or elsewhere on the ship.

9.5 Prior to disembarkation, the person affected must be provided with a report for their own physician detailing the incident, the findings of the sexual assault examination, the treatment provided, psychological assessments and requests for further follow-up, treatment, testing or counseling.

9.6 Pregnancy: Pregnant women who have entered the 24th week or more of estimated fetal gestational age at any time during the cruise or cruise tour should not be eligible to sail with the ship. The pregnancy policy should be made available to passengers during the booking process.

9.7 Pediatric: Ships carrying children under the age of 12 years should carry necessary resuscitation equipment and supplies including pediatric medications, and at least one (1) Broselow / Hinkle Pediatric Emergency System or similar. The physicians on these ships should have the appropriate training, skills and equipment to treat pediatric patients, taking into consideration the itinerary such as remote and transoceanic voyages.

GUIDELINE 10: PATIENT FEEDBACK

10.1 A process whereby passengers are able to provide pertinent information regarding special medical needs prior to embarkation.

10.2 A policy and procedure for receiving, evaluating and responding (if necessary) to patient feedback, including complaints.

GUIDELINE 11: CONTINGENCY MEDICAL PLAN

11.1 Comprehensive written medical contingency plan which is subject to regular review, not to exceed three years. The plan incorporates mass casualty incidents (MCIs) and the procedure to be followed should the primary medical facility become non-operational.

11.2 Mass casualty incident drills which are conducted on a regular basis.

11.3 A contingency medical plan defining one (1) or more alternate care sites which should:

11.3.1 be in a different fire zone and deck from the primary medical facility

11.3.2 be easily accessible to crew and passengers.

11.3.3 have lighting and power supply on the emergency system.

11.4 Portable medical equipment and supplies including:

11.4.1 Mass casualty triage documentation.

11.4.2 Airway equipment, oxygen and supplies.

11.4.3 IV Fluids and supplies.

11.4.4 Immobilization equipment and supplies.

11.4.5 Battery powered and easily portable diagnostic and laboratory supplies (eg. glucometers, thermometers, stethoscopes, sphygmomanometers, etc.).

11.4.6 Dressings.

11.4.7 Treatment – medications and supplies.

11.4.8 Defibrillator and supplies.

11.4.9 Medical waste and personal protective equipment.

11.5 Portable two-way communication equipment available for each member of the clinical staff.

11.6 Designated crew assigned to assist the clinical staff.

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