



EDITORIAL

Medical Cruise Challenges in Antarctica

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With its abundant wildlife, spectacular scenery, and relatively pristine environment, Antarctica is one of the last great wilderness areas on Earth. It is also cold, windy, physically remote, inhospitable, unpredictable, and potentially dangerous even during the austral summer, the tourist season.

Publications on medical challenges in Antarctic travelers are few and most are case reports, which makes the contribution by Holmes, Zak, and Schutz in this issue of *Journal of Travel Medicine* particularly important.¹ The authors present a retrospective study of the medical records of all passengers who were provided care on four small expedition cruise ships doing 26 Antarctica voyages during one austral summer season.

The study is limited to passengers and therefore does not show the full extent of medical challenges aboard the four ships during the study period. Crew illness and injuries can influence ship operations as much as the passengers' ailments and crew evacuations are just as difficult and disruptive.

On ships with less than 120 passengers crossing the Drake Passage ("Drake's Shakes"), it is not surprising that seasickness was a main concern. The fact that 22% of the consultations concerned seasickness prevention may seem like a lot, but in reality represents a mere "tip of an iceberg"; most passengers embarking on polar expedition cruises are well prepared and bring their own prevention. The 150 (out of more than 2,000) passengers requesting it on board are therefore only those who either forgot to bring their own remedies or lost confidence in them—or in their presumed sea legs—after embarkation. In manifest seasickness with gastric retention or vomiting, medicines by mouth will not work.

The slightly higher rate of female visits for motion sickness might mean that women are at increased risk

compared to men or simply reflects a higher male threshold for seeking medical help for a condition considered wimpy or unmanly.

Not an illness and often treated as a joke by the non-affected, seasickness is nevertheless an emergency and should be dealt with promptly. Ineffective seasick prevention (and treatment) has an unwanted side effect: it prevents future cruise bookings by affected passengers and their travel companions. Seasick officers and crew are serious safety hazards and/or provide substandard passenger service.

The study shows that despite pre-sea medical screening of the passengers, careful preparation before going ashore, and close supervision during small craft transfers and on land, excursions off the ships are unpredictable; one cardiac arrest and at least one serious injury happened ashore. Hence, the first-aid bag brought ashore must contain sufficient supplies to handle most emergency situations until the patient is back on the ship and should include an automated external defibrillator (AED). And the medical facilities on board must be equipped to provide necessary follow-up treatment of emergencies from ashore as well as handle the various serious conditions that may occur aboard—until the patients can be safely evacuated to better medical facilities. During this study four passengers had to be evacuated, and with less experienced doctors the number could easily have been higher.

While there are no specific international regulations for medical care aboard small expedition ships, most larger cruise vessels belong to companies that are members of the Cruise Lines International Association (CLIA) and are as such committed to follow the "Health Guidelines on Cruise Ship Medical Facilities" from the Section for Cruise Ship Medicine of the American College of Emergency Physicians (ACEP).^{2,3} Created and updated by consensus among ACEP ship's doctors and emergency physicians, ACEP's guidelines

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present detailed minimum recommendations regarding facilities, staffing, equipment, medication, and procedures. They are, however, not limited to large ships but can be modified according to passenger and crew demographics, ship size, and itinerary. While the ACEP guidelines state that the size of treatment rooms should allow 360-degree access to beds/stretchers, treatment rooms on small ships tend to be small and cramped. This does not make sense; patients on small ships are fewer but not smaller than those on large vessels.

An increasing number of vessels carrying more than 500 passengers are also cruising Antarctica during the austral summer, but they are not allowed to let anybody from the ship ashore. Viewing the scenery and wildlife from the decks is still a unique experience, although those having experienced land tours from smaller ships claim that this is like reading an exciting menu without getting to taste the dishes. Others compare it to enjoying a gourmet meal in civilized luxury without first having to hunt down the prey and prepare the dishes. From a medical point of view, visiting Antarctica on a larger cruise ship has clear advantages. All the potential hazards of small craft transfers and shore excursions are eliminated, the risks of weather-related accidents and seasickness are reduced, the medical facilities are bigger and better equipped, and they have more medical staff.

However, also from large ships, medical emergency evacuations are called for in certain situations and—if at all possible—they may be as difficult as evacuations from the smaller ships. All vessels visiting Antarctica

will be outside helicopter range for much or most of the voyage. Evacuation planning and execution are time-consuming and complicated. An air strip may be days away and even when the ship is in the vicinity, weather conditions often make transfers from the ship too hazardous for both patient and rescuers.

No matter how one travels to Antarctica, it will be the adventure of a life time. But travelers must be prepared for rough seas and be aware of the limits of medical service aboard, as well as the fact that emergency evacuation during most of the cruise may be impossible or take days.

Declaration of Interests

The author states he has no conflicts of interest to declare.

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