



Working as Ship's Doctor on an Antarctic Icebreaker



By John Loofbourow, MD

A SHIP PHYSICIAN USUALLY FACES FEW major challenges; but when trouble comes it can be serious. Then we are in danger of being revealed as puny and inconsequential individuals feigning the ability to stand up to the hugeness of nature.

Quintessential expedition E.D. doc Dave Graber encouraged me to fill that role on an Antarctic icebreaker. I had always wanted to make the journey, had learned to love and respect the sea during two shipboard years in the US Navy, and had worked as ship's physician along the West coast of South America.

For the Antarctic Ocean the application process was straightforward, but experience and emergency medicine qualifications were required. Although my checked baggage had been detoured to London, it arrived in Ushuaia Argentina, during a summer snowstorm, a day after my flight. At 7 a.m. on January 27, after emigration and screening, I found myself dragging my gear down a long, cold, rain-lashed dock to find my ship and relieve the returning docs.¹

The Sarpik is a 90-passenger shallow draft, heavy hulled vessel, rather than a modern icebreaker,² completely refurbished in Gdansk, Poland, in 1992. Quark Expeditions specializes in polar cruises, and leased the ship from a Danish owner; all signs were in English and/or Danish.

The captain was a Finn whose English was afflicted by his very non Indo-European native tongue. The expedition staff consisted of eight naturalists of various stripes, two expedition leaders, a historian, a computer geek, and a physician.

We were so culturally diverse that no two staff people spoke the same native language. Various accented and mis-accented English was our common language. The crew were 5 able bodied seamen, a purser/manager, about 20 kitchen/cleaning staff, and the various engineers and senior officers. The ship has large fore and aft audiovisual observation rooms, and a library; all cabins are exterior, scattered over three decks.

With a shallow draft and no stabilizer, she rolls in heavy seas. However, the advantages of this arrangement, and of side and down-looking sonar permitting close approach to land in shallow waters, and to icebergs, would later become very apparent. She carries two strange life boats like big orange watermelons, each holding about 70 people. They are self-propelled, entirely enclosed, and provide an ecologically shameful toilet that empties into the sea, food, water, communication equipment, and fuel.

For the next four hours I did inventory, checked records and tried out equipment. Realizing the arrogance of assuming medical responsibility for people at sea, it's best to try everything possible to prevent embarrassment or disillusion. Moreover, a small ship doc is usually the only person aboard without a physician, and is also the one person expected to respond if a doc is needed.

So there are four things I attend to when first going aboard. First, what medical gear is

there and where is it? Second, who can I identify to help in the case of need? Third, who has what health problem? And fourth, what on board hazards are sailing with us?

I started with the doctor's office, or "sick bay." It was ample and well equipped, with toilet, shower over tub, desk with PC printer and CD drives, reference books, refrigerator, and a daunting cache of supplies and equipment. Some unfamiliar medications were from northern European countries. The Svornab defibrillator was straightforward enough, but the Gufengrod (OK, that's fictional. But that's the feeling I had.) repeat-action pump that shot sterile needles like a machine gun baffled me. Adjacent were two unadorned rooms, each with two beds, one of which I would use. All the portholes were still dogged tight after the infamous "Drake Crossing."

The passengers were not due to arrive until about 4 p.m., an hour before we weighed anchor. Accordingly, I spent the early afternoon going over staff, crew and passenger medical records. If a record indicates a significant medical risk, it is best to speak with the passenger before leaving port. On a previous trip this year, a man with a complicated set of medical problems left his medication behind. The ship had to return to port. Gratefully, I noted that among the passengers was an interpreter for each of two large ethnic/language groups: Japanese, and French. In an astonishing coincidence,³ an ED nurse was expected aboard who works in the same ED as my daughter in Monterey County!

Last, I looked over the kitchen, refrigeration, water system, bathrooms, supply of alcohol hand gel, the ladders, hatches and physical layout of the ship. I met the captain, first officer, and senior crew and expedition staff. I was instructed to attend all staff meetings, carry a two-way radio at all times, be in every first landing boat ashore and on the last boat to return to the ship, with gear for cardiopulmonary resuscitation and for treating injuries; some shore activities are strenuous. As we headed into the Straits of Magellan on day zero, I took my turn with the rest of the staff to introduce myself, welcome the passengers, and speak of hygiene, norovirus, safety, and the coming 1½ days when even the French might expect some non lethal mal de mer that can be minimized by rest, sleep, and possibly, medication. I had previously prepared a number of packets of four 25 mg tablets of phenergan and cloned the instructions on the printer. Many passengers had their own scopolamine patches as well.

The Antarctic Circumpolar Current, the Arctic Convergence, and the Drake Passage are three physical features of the area that are so unearthly as to seem living mythic beings. The world's 4th largest continent⁴ sits at the south axis of the rotating earth. The earth spins Antarctica around itself, promoting wind from the West as well as inertial forces resulting in an ocean current 13,000 miles long that continuously circles Antarctica from East to West.

It carries 34 billion gallons of water per second - 150 times the flow of all the Earth's rivers. The current is thousands of feet deep and wide, narrowest and strongest at the Drake Passage between Cape Horn and the Antarctic Archipelago/Peninsula. Fresh water at near freezing converges with warmer seawater.

The net result is Weather. Satellite photos reveal that at any time there are several hurricanes circling Antarctica. As we left the Straits of Magellan the captain announced that we would be privileged to make the crossing at the lead edge of one.

He altered the planned course so that we could find shelter in a shallow bay on the east side the Shetland Islands. This year tens of thousands "did Antarctica" on mega cruise ships, attracted by comparatively reasonable pricing. However, because of size and draft, big ships cannot closely approach shore or icebergs. For 2,000 people to go ashore in small boats is a tedious, wearing experience, and carries the risk of sudden weather change. Better to pay the price or see more for less by going to Disneyland.

Nearby, a large cruise ship carrying 1800 passengers had tried to escape the weather but went aground; another rode out the weather, sustaining much structural damage and 40 injuries, so it returned to Ushuaia: Advantage number one to smaller heavy hulled ships

and state of the art sonar.

Every day there were at least three lectures by staff naturalists directed at the day's landings: topics included glaciology, geography, archeology, sea birds, geology, fossils, history, oceanography, whales, seals, penguins, and the teeming Antarctic ocean life. Global warming was not neglected. Al Gore's movie was shown twice. His plodding pedantic style was easy for non-English speakers to understand. It seemed curious, however, that we were weeping and ranting over global warming while our expedition burned more fossil fuel in two weeks than some small countries!

Appropriate nature films preceded lectures. Antarctica is the highest, driest, coldest, windiest continent. It is technically a desert, with less than 7 cm precipitation yearly, but it does rain on the Antarctic Peninsula and island archipelago where most of the life is found. During our visit it snowed twice, though it was never terribly cold.

Landings were made in Zodiacs, 20-passenger motorized inflatable reinforced rubber rafts. They were offloaded by a crane next to a portside ramp when it was safe to do so. Usually we spent a few hours ashore with optional excursions; we occasionally made close approaches to whale pods and individuals, or explored shallow water where unusual ice formations or wildlife were to be found.

Penguins were almost always present, waddling about on land with fin-like wings wide to keep cool, standing stoically on icebergs, or porpoising over the sea surface. They are unafraid of people⁵ and immature penguins are irrepressibly curious. Rookeries sometimes were quite high on a ridge, requiring laborious trips by the parents with food from the sea. Seals were common as were the sound and flight of varied birds.

We visited Argentine and Chilean "research" stations⁶. A passport can be stamped at the stations which, frankly, are not devoted only to research but to keeping alive cherished claims to sovereignty. Passport stamps of the two stations are metaphoric for the idiosyncrasies of these two wonderful but very different cultures: The Chilean stamp is one color, austere, and precisely confined to the rectangle provided. The Argentine stamp is four-color, elaborate, and fills the entire page.

A particularly welcome aspect of the trip was that the captain, confident in his reinforced hull and hi tech sonar, often took us into shallow water, and always tried to slide by within a few feet of huge floating icebergs that dwarfed the ship.

As for physician duties, I was fortunate. There were no serious injuries; I confined one lady and her companion to their cabin for nearly two days, with vomiting and diarrhea, until I felt sure she did not have norovirus; it was probably a futile effort if she had, but the best choice. As usual, once the passengers and crew feel comfortable with the doctor they present litanies of aches and pains and curious or dubious requests; but that goes with the territory.

The return crossing of the Drake was actually worse than the first, but by then we were all somewhat adapted and reasonably wise in the ways of seasickness. There are few more existential experiences than the feel and sound and fear of 40-foot seas.

As a member of every landing, and a solo doc who was unable to resist the numerous lectures and activities, I was tired by the end of the trip. I wondered if it might have been better to have gone as a passenger. But I'm now over it. To offer a service as a physician in unusual circumstances, as I see it, is to be granted privileged access to humankind.

I have always preferred work/travel to tourism because otherwise I tend to be reserved and solitary. So maybe, just maybe, I'll apply next year for a position on a larger icebreaker, one with helicopters and three way ice grinders. With one caveat: I'll try to take a colleague. It is an experience simply too rewarding to pass up; or to keep all to myself!

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1. Two docs, or an ED doc-nurse team, is desirable; I replaced two E.D, physicians from Washington State. and was replaced by husband/wife physicians from Australia.
2. Newer icebreakers can chew through heavy ice, like that found at the North Pole.
3. Or is it coincidence? Such things seem to happen very often. I stayed in Argentina afterward to organize a tour for a travel agent friend. Alone at a tango gala in Buenos Aires, I sat next to a man who was also alone - an ED doc from Los Angeles, planning to move to Sacramento.
4. Most consider it the 5th largest continent. But who made Europe a continent when it is only a western appendage to Asia? I find it satisfying to contradict that grandiose claim; by that measure, India should be a continent also. Besides, my way all continents begin with A!
5. Some said that penguins are unafraid of humans because they had never had met a tort lawyer or politician.
6. Uruguayan joke about Argentineans: "How does an Argentino commit suicide?" Answer: "By leaping from the height of his own self importance."

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