

Cruise Ships, Crew, and Coronavirus: A Primer on How to Make Cruise Ship Travel Safer

Dr. Jonathan Phillips*

Chief Molecular and Cellular Pathologist, Independent Consultant, Fort Washington, Maryland, United States of America

***Corresponding Author:** Dr. Jonathan Phillips, Chief Molecular and Cellular Pathologist, Independent Consultant, Fort Washington, Maryland, United States of America.

Received: March 20, 2020; **Published:** April 04, 2020

As a Molecular and Cellular Pathologist formally trained in chemical and biological contamination control and mitigation, who happens to be an avid cruiser with 62 cruises spread across 11 different cruise lines, I feel it is my responsibility to bring to light observations of cruise line operations that may have contributed to COVID-19 dissemination and the habits that will virtually ensure continued outbreaks of this virus, not to mention outbreaks of Norovirus and perhaps other viruses on cruise ships.

There are lessons to be learned from Norovirus outbreaks on cruise ships that are applicable to the inevitable increase in outbreaks of coronaviruses on cruise ships. Norovirus outbreaks on cruise ships are a fairly common occurrence and it is not at all unusual for a given cruise ship to maintain these outbreaks over several consecutive cruises. Outbreaks on ships are sustained over multiple voyages by transmission among crew members who live onboard and/or by persistent foodborne and waterborne environmental contamination. Why is this the case, you may ask?

It is a "dirty little secret" that the vast majority of cruise lines do not provide paid sick leave to their crew. The bulk of crew members are from impoverished countries and send most of their earnings back home in order to support their family. It is as if the crew are compelled to choose between their health and safety, and their economic livelihood. I know this to be true from the countless crew members I have conversed with over the past 26 years of cruising.

Sources of virus exposure are manifold. It starts with embarkation where ship security personnel insist on physically taking hold of your ship cruise card, which serves as your ID as well as a shipboard credit card, and scanning it prior to boarding the ship. If you try to scan the card yourself, it is almost always taken from your hand by the ship security officer and then scanned to ensure you are a 'valid' cruiser, i.e. your picture shows up on the security screen along with your sail date and other ancillary information.

If one pays close attention it becomes quite apparent that the crew may be inadequately trained in proper sanitation and contamination avoidance. For instance, when proceeding through buffet lines you may witness workers with torn gloves, workers touching their faces and hair, then handling serving utensils that the passengers then touch as they gather food on their plates. You may also see tables and seating areas being poorly cleaned; dirty water and rags, not cleaning chairs which should include all surfaces patrons touch, e.g. chair backs and chair rails. The dining flatware, salt and pepper shakers, and drinking cups and mugs have all been handled by crew, again possibly with torn gloves (or no gloves) that are rarely changed out for 'fresh' gloves.

During the development of the COVID-19 pandemic, there has been scarce attention in the media to the cruise ship environment. What little that has been mentioned virtually disregards the role of the crew in disease transmission. The media talks about the passengers and states unequivocally that the passengers are infecting each other. Sometimes there is the occasional mention that the ship's air handling system may be the offending culprit infecting passengers. Though the air handling system may be a contributor to virus

Citation: Dr. Jonathan Phillips. "Cruise Ships, Crew, and Coronavirus: A Primer on How to Make Cruise Ship Travel Safer". EC Microbiology SI.02 (2020): 07-08.

dissemination and as more and more people succumb to COVID-19, air supplies would be expected to become more and more important. However, I dispute both of these assertions because my suspicion is that the virus is more efficiently spread through contact. Thus, it is my expert opinion that the primary source of virus infecting passengers is the crew. The crew is “literally” delivering the virus to the staterooms of the passengers that have been quarantined to their cabins after coronavirus infection is suspected. The crew are delivering trays of food that include plates, drinking vessels, knives, forks, spoons, all of which have been handled by inadequately trained and under supervised crew, some of which are infected and are actively shedding virus.

Again, the important point is that the crew work when they are sick because the cruise lines do not typically have paid sick leave, so they have little choice but to work while sick. Additionally, data on COVID-19 strongly suggests that ‘silent transmission’ of the virus is likely to be occurring. Couple this with a lack of testing for the virus and you now have a recipe for disaster regarding disease spread on cruise ships. Of course much of what has been discussed in this editorial is applicable to land based dining venues, as most service workers, especially in the United States, do not get paid if they do not show up for work. So, they show up sick.

Unless they are officers or with sufficient seniority, the crew members will typically have between one and three roommates. They engage in recreation in close quarters, dine together in space limited mess halls, share bathroom facilities, and enter guests’ rooms. In my opinion, the single largest contributor to disease transmission and spread is that the overwhelming number of crew do not have sick leave. If they don’t show up for work, they do not get paid. Understandably, because of their family situations, they choose to show up for work sick. Exasperating the situation, the crew are incapable of effective individual self quarantine or even a modicum of legitimate group quarantine.

You may be asking yourself why I continue to go on cruises, or why I put myself and my family through such a potentially perilous situation. Well, I simply love cruising. I employ several risk mitigation strategies that has, so far, proven effective. I have to date, never become ill on a cruise ship, even when my cabin mate had contracted norovirus. I focus mainly on my hands and surfaces my hands may come in contact with. I liberally apply hand sanitizer and use wipes to disinfect surfaces I touch, starting with the cruise card (boarding pass) after it is handled. I sanitize my card after each time it is handled by anyone other than myself. I wipe down door handles, telephones, bathroom fixtures, remote controls, chair rails (particularly the rails that you touch when sliding the chair up to the table) and chair backs (that are grabbed when pulling the chair out prior to seating); wiping down salt and pepper shakers, wiping down flatware and drinking cups and gloves. Finally, I wash my hands frequently and use hand sanitizer as the final step prior to consuming my meal and/or my beverage.

From my years of observation, mitigation recommendations I would make to cruise lines encompass, at a minimum, introducing procedures and protocols for contamination control to include regularly scheduled training, closer supervision, a strategy for effectively quarantining ill crew members, efficient and effective decontamination employing methods other than so called “line of sight” or topical disinfection (i.e. employ vaporous or gaseous decontamination methods as called for), and finally removal of the strong pressures for crew to work sick, by providing sick leave pay. An added useful method, not just for COVID-19, but for other pathogens and allergens would be the installation of HEPA filters in the air handling systems. This should be a relatively trivial remedy, assuming the political will of cruise line companies to implement this strategy. Cruise ships are refurbished on a regular basis and installation of HEPA filtration and other contamination avoidance protocols and technology (e.g. decontamination systems such as vaporous, gaseous, and/or UV light) could readily be implemented at this time, thus, avoiding any lost operational time for the cruise ship and cruise line.

I enjoy the thrill of cruising and relish the idea of waking up in a new and exciting place each day. One of my favorite parts of cruising is it is such an economical way to visit UNESCO World Heritage Sites. Meeting people from a multitude of cultures is such an enriching life experience to me. Cruising is such a joy and I would recommend it for both its fiscal value as well as cultural enlightenment value. Passengers do not need to become obsessed with cleaning; they just need to be vigilant, especially before they dine. And while it might look odd to wipe down surfaces in common areas, it’s a small price to pay for such a wonderful experience.

© All rights reserved by Dr. Jonathan Phillips.