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Supplement to Travel Trade

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CRUISE LINES ARE

## PROACTIVELY FIGHTING



*Steve Williams  
Director of Medical Operations  
Carnival Cruise Lines*

## THE Norovirus War

**I**t has been more than 40 years since the first incidence of Norwalk Virus, or norovirus — quite a bit further back than the beginning of modern cruising.

Even though the cruise industry has a far lower incidence of the norovirus than land-based facilities, such as schools and nursing homes, the media and the public still persist in calling the disease “the cruise ship virus.” This is mainly because ships are required to report illness affecting even only 2% of the people on board — something hotels and resorts aren’t required to do — which has brought cruising undeserved notoriety.

Given this visibility, the cruise lines have been on the cutting edge of increasingly refined ways to combat the virus.

A broad range of sanitizing products continues to be developed to clean public spaces and staterooms already exposed to the extremely communicable virus, while elevators, hand rails, fitness equipment and public rooms are often disinfected in the early hours of the morning to prevent the spread of the disease. Passengers may not remember to clean their hands regularly, so hand-sanitizing products are often placed at the doors of most cruise lines’ dining facilities.

David Forney, Atlanta, GA-based public health consultant and former head of the Centers for Disease Control and Preventions Vessel Sanitation Program, said the industry has done “an exceptional job” of cleaning and sanitizing on board and of managing individual cases. With increasingly rapid testing available, the ships’ medical staff can now quickly determine whether a passenger has norovirus or something less communicable.

“Now the cruise lines are phenomenal in leading the way to find appropriate cleaning and sanitizing products,” Forney added. He said several products are being tested that claim to have a residual effect and don’t have to be applied as often, but their claims have to be tested very carefully. He added that, whenever a significant outbreak occurs, literally hundreds of new products are touted as being able to eliminate the virus.

Forney noted that among the considerations when a cruise line chooses a product are whether it can be bought at full strength or requires mixing, how much contact time is necessary in order to kill the viruses, whether it can be used in a fogger, the shelf life, toxicity to humans and price.

He added that the consumer, however, must realize that there are other issues: sun products, for instance, may block the effectiveness of hand sanitizers (the solution is to wash hands first, then use the hand wipes).

Several cruise lines swear by Virox, an accelerated hydrogen peroxide base formulation. Hart Sugarman, Holland America Line corporate executive housekeeper, said the line has been using Virox 5 since 2001.

“When blended with water for use this has zero health hazards, zero flammability and zero reactivity. Also, Virox has a five-minute effective time from the moment it is applied. This product works as a wet application, surface wipes for electrical equipment and does all those things.”

Sugarman added, “We step into action when there’s even one case, because that guestroom has to be treated differently from the others, and we use a wet application, then surface wipes for electrical equipment for obvious reasons. We also use it to fog public rooms and elevators while the guests are sleeping and we spray the carpets with pump sprayers. This product does all those things. We get a lot of companies coming forward with products that they claim will kill the Norwalk effectively and we test them, but so far we are sticking with this.”

Crystal and others use one of the first disinfectants on the market to receive an EPA kill claim against Norovirus, the alcohol-based Virkon, made by Amtec International and approved for use on food contact surfaces without a rinse. The product is fast, non-corrosive, ready when needed, and there are no problems with short efficiency life or dilution mistakes, according to Crystal.

There is no disagreement among experts that prolonged hand washing is far and away the best preventive measure for norovirus. The problem lies in getting passengers to do it long enough, although a new generation of hand washers may well emerge from “Sesame Street’s” training to wash hands while singing two choruses of “Happy Birthday to You.”

Carnival Cruise Lines has taken an unusual stance, maintaining that hand sanitizers generally have a negative effect on controlling the norovirus.

“They lull the passengers into a false sense of security,” said Steve Williams, RN, CEN, CFRN, Carnival’s director of medical operations, said. “The only ship where we tried out the hand sanitizers was the Carnival Liberty and they had the only serious outbreak the line has known.”

When Carnival experienced the Liberty outbreak, it used Ecolab’s Tor-HB, a dual-quaternary ammonium-based cleaner and disinfectant, which was fogged in the staterooms and allowed to settle.

Williams cited a 2006 study by a team of researchers from Emory University and North Carolina State University under Dr. Pengbo Liu in which a known amount of norovirus was placed on the fingers of volunteers and allowed to dry.

The investigators tested one common liquid antibacterial soap and one popular brand of an alcohol-based hand sanitizer to see how effective they were at removing the virus from the fingers, compared to rinsing with water only.

They found that washing the fingers with plain water gave the greatest level of norovirus reduction, with an average of about 96% removal. Washing the fingers with an antibacterial liquid soap gave an average of about 88% removal. The alcohol-based sanitizer was not effective at removing the virus from the volunteers’ fingers and only resulted in an average removal of 46%.

However, Carnival is trying a new hand-sanitizing wipe made by the CleanWell Company in San Francisco. “Basically it is a cellulose product that is saturated with this herbal solution that leaves a nice scent on the hands and is not drying,” said Williams.

“The best thing about it is that the wiping action seems to really help remove viral contamination far more readily and effectively than alcohol hand gels. We are excited about the trial on the Imagination in April and hope the guests will like the product.”

Larry Weiss, MD, a specialist in infectious diseases and disinfectants and who is chief technology officer for the CleanWell Company, said the key problem is human behavior.

“Personal compliance is the issue and we’re tackling that head on,” he stated.

Weiss said the new product gives the same kind of pleasure as the hot hand towels enjoyed in many restaurants.

“They feel good and your skin feels soft afterward — luxurious,” he said. The key ingredient, Ingenium, is based on an essential oil of thyme in a concentration similar to that found in nature.

“No matter how effective a product is, people have to use it,” Weiss added. “We think they will really enjoy this.”

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THE WAY TO FIND APPROPRIATE CLEANING AND  
SANITIZING PRODUCTS.'

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