

# Norovirus: Coming Soon to a Venue Near You

*Matt Jaqua*

Over the last two years the public health system in the United States has increasingly focused attention on potential or theoretical threats from bioterrorism agents such as botulism, plague, and smallpox. Meanwhile the lowly norovirus is with us on a daily basis, generating few headlines but causing more illness and death than bioterrorism probably ever will.

Most of our society is intimately familiar with the effects of this single-strand RNA virus, characterized by the rapid onset of vomiting or diarrhea, with a 24- to 48-hour duration. It is easy to transmit via the fecal-oral route (or by airborne transmission when someone vomits) and is often referred to as “stomach flu” or “the 24-hour bug.” Although the illness is self-limiting, and most cases resolve without intervention, its ease of transmission makes it a major health concern.

The Centers for Disease Control and Prevention in 1999 identified norovirus as a major food safety concern, causing two-thirds of all foodborne illnesses, as well as one-third of all hospitalizations and seven percent of all deaths attributed to foodborne causes. What norovirus may lack in lethality, it makes up for in sheer volume of victims, an estimated 23 million cases annually.

Outbreaks on numerous cruise ships in 2002 first brought this virus widespread attention, but public health practitioners have routinely identified it as the cause of foodborne illness outbreaks since the late 1990s.

Ten years ago, norovirus was considered a minor player in the communicable disease world. The lack of a practical laboratory test prior to 1997 severely limited the ability to assess its true effect. But now, as a result of technological advances and greater awareness in the communicable disease community, we’re discovering that the more we look, the more we find. Many outbreaks that in the past would have been categorized as of “unknown etiology” are now being confirmed as norovirus.

Oregon’s Communicable Disease Summary for 2002 lists 93 disease outbreaks, with almost half (38 confirmed, 5 suspected) attributed to norovirus. Preliminary data for 2003 lists more than 130 disease outbreaks in Oregon, 69 of which were caused by norovirus. Most of the 2003 outbreaks involved foodborne transmission of the virus, but at least a third occurred in care facilities where person-to-person transmission is most common.

Current communicable disease rules dictate that food workers diagnosed with certain diseases be excluded from work, but norovirus is rarely diagnosed in a clinical setting. Even if infective individuals do not work when they are ill, they are back on the job as soon as symptoms resolve, even though they will continue to shed virus for as many as 3-10 days.

Residential care facilities face the same concerns around contagious food workers, but with an additional twist. The people who serve the meals in these facilities are also the people who perform general assistance tasks and clean up after ill residents, so they may transmit norovirus from one resident to another even if they are not infectious themselves. This type of employee-facilitated, person-to-person outbreak is increasingly common across the whole spectrum of senior care facilities. It takes a diligent staff to contain an outbreak in a residential facility, and the facility is extremely fortunate if no residents experience severe complications. The risk of serious or fatal complications increase in skilled nursing facilities, where residents are more medically fragile and require more intense staff attention.

The hard reality is that most food service and care center employees don’t get paid if they don’t show up. Even conscientious employees feel pressure to hide their illness from their employers and work while still infectious. Dealing with these realities involves addressing wages, benefits, and job responsibilities—areas beyond the current scope of public health practice. This is why policies on ill employees returning to work must be reevaluated.

The emergence of norovirus highlights the need for both new policies and a return to one of the most basic public health concepts: the critical importance of personal hygiene.

Oregon’s current “Cover Your Cough” campaign sends the message that basic precautions can help prevent transmission of respiratory diseases that have no vaccine or cure. We also need a similar public information campaign targeting gastrointestinal illnesses.

Young children need to be taught the how and when of handwashing, with an emphasis on the simple message that people who wash their hands when they should don’t get sick as often as people who don’t wash them. We need to emphasize that scrubbing the bad stuff from your hands is what does the trick, that sanitizer gels and antibacterial soap don’t really help.

Public health must educate medical practitioners so they can identify cases and outbreaks of norovirus. We must educate the food-service and senior-care industries on the risks associated with norovirus, particularly the fact that even thorough handwashing is not going to make it safe for an ill employee to work with food or medically fragile people.

Finally, research into this pervasive organism must continue so we know how long people remain infectious, how to destroy the virus on surfaces, and how much it truly affects all of us. 🐼



WPA poster, 1939.

## Author

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