

# Social Distancing and backcountry ethics

By Tom Welch, M.D.

**THE QUIRKS OF** the *Adirondac* publication schedule are such that my last column, on handwashing, was written before we became overwhelmed by COVID-19. The advice seems even more relevant now. This issue's comments, although published in the heat of the epidemic, were also in the planning stage for months before.

Although "social distancing" has been in epidemiologists' lexicon for decades, it is a new concept for most folks. Current events make this an opportune moment to review the potential role of our outdoor pursuits on the spread of illness.

Spending a few days living in the backcountry with a few other folks is a great way to spread infection within the group. Infectious organisms are most often spread between people either by the hand-to-mouth route or by infectious respiratory secretions. I have dwelt on the importance of hand-to-mouth spread, and its prevention by handwashing, many times over the years.

Many organisms, mostly viruses, are spread through respiratory secretions. These are the germs that cause everything from minor colds through infectious mononucleosis ("mono"), up to influenza and, of course, COVID-19. When one of these organisms infects, it invades the cells lining the respiratory system (such as the mucous membranes of the nose), reproduces itself, and then "sheds" away from the surface. As soon as one coughs, sneezes, or otherwise expels these viruses, they become airborne in tiny droplets. If another person is within range, they can produce infection by contacting that person's respiratory tract.

It is important to recognize that the nose is not the only route by which these organisms can gain entrance—the mucous membranes around the eye are also susceptible. I was reminded of this a few years ago when I con-

tracted a nasty parainfluenza infection from a young patient who coughed in my face. My mask didn't make up for the fact that I did not have eye covering!

If handwashing is the intervention to prevent hand-to-mouth spread, what about respiratory spread of infections? That is where "social distancing" comes in. Although the data supporting this are a bit "soft," it is generally accepted that few infectious organisms of any type can accomplish airborne travel of over six feet. Thus, maintaining an appropriate distance from one's neighbors significantly reduces the chances of coming into contact with an infectious organism.

In backcountry travel, this brings up the issue of tenting. The tight quarters and poor ventilation of most modern backpacking tents virtually ensure transmission of respiratory organisms between tent mates.

The mathematics of spread of infection (the "modeling" we hear so much about) mean that the chances of infection are much higher in a large group than a small one. Although these data are also soft, ten is a commonly cited number for a group size above which infection is much more likely.

So...small groups, stay apart, wash your hands, consider one-person tents. Pretty simple. The thoughtful reader at this point may realize that personal safety from the standpoint of infectious disease may intersect with environmental safety from the leave-no-trace (LNT) perspective. Small group size and good personal hygiene, of course, are central to both. Social

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distancing is a bit tougher. Leave-no-trace principles dictate concentrating use within a group.

Scattering four folks in four personal tents rather than sharing one is not ideal. Spreading a group around during a rest stop off trail is more appropriate from an infection control standpoint, but constitutes a greater environmental impact. What is the answer? Like many ethical questions, it is not really clear. Decisions need to be made considering the best available evidence for the precise circumstances. For decades, we have been taught to integrate LNT principles into all of our backcountry decision making. Now, we may also need to factor personal and group health into these decisions. ▲

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