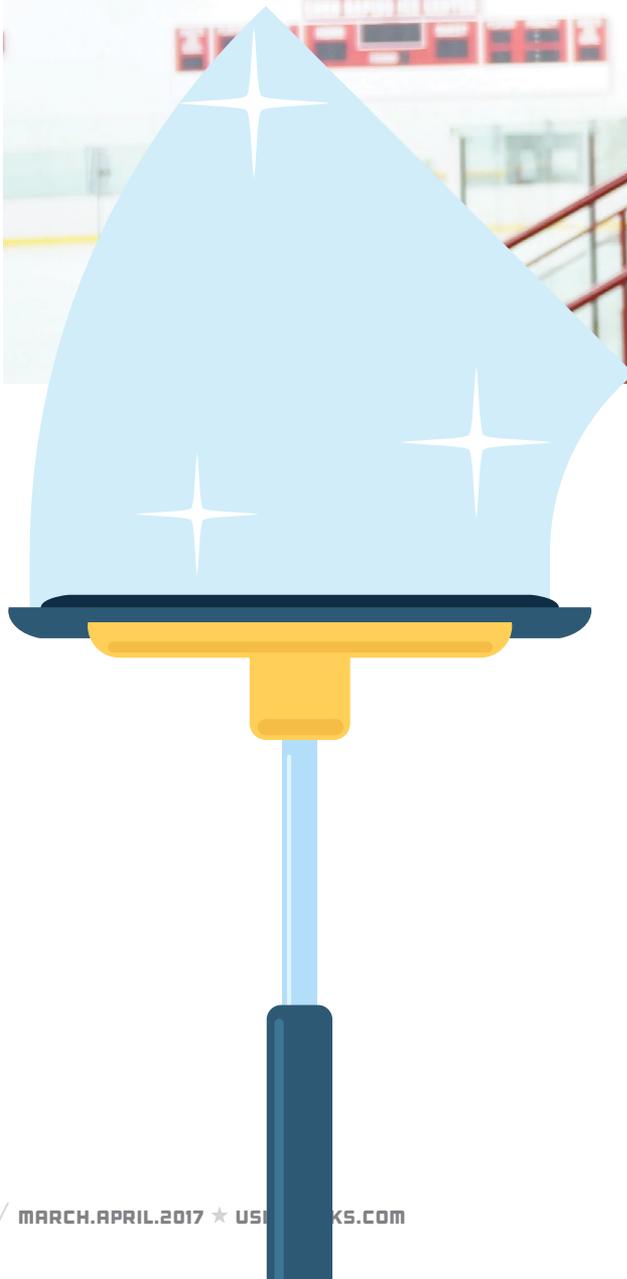


Do More Than **Scratch** the Surface



Take extra precautions to keep your facility clean and your patrons healthy

by RON SEGURA

It's the middle of a cold, nasty winter, and the Centers for Disease Control and Prevention (CDC) has reported a significant upswing in the number of children coming down with colds, the flu and different viruses. The CDC suggests that all facilities—schools, park and recreation centers, etc.—that are used by children take extra precautions and use EPA-registered disinfectants in all restrooms and any common areas used by staff members and children.

This information is conveyed to all park managers who direct their cleaning staff to step up use of disinfectants. However, even with these efforts, children in the park district are still coming down with a variety of illnesses similar to those reported by the CDC. Your job as park manager is to uncover what could be causing this unhealthy situation to escalate, especially when procedures have been put in place that were intended to solve the problem.



Unfortunately, there is not one specific way to determine the cause in the scenario above. Typically, when working with disinfectants, the problem will be one of the following:

- Diluting the disinfectant improperly.
- Using the wrong disinfectant.
- Applying the disinfectant improperly.
- Losing disinfectant effectiveness (now referred to as “quat binding”).

Selecting the Right Disinfectant and Diluting It Properly

An earlier reference was made to an “EPA-registered” disinfectant, or as referred to in the professional cleaning industry, an antimicrobial product. It has been tested and proven to be effective against specific germs and bacteria while also meeting certain environmental standards.

If these criteria are met, the disinfectant is registered by the EPA and it will bear a registration number on the product label.

The key words here are “effective against specific germs and bacteria.” Not all disinfectants are designed to kill all pathogens. Most are effective against specific types of germs. While one disinfectant may prove effective at helping to stop the spread of MRSA, or kill salmonella, E. coli, or other bacteria and viruses found on surfaces, the same product may not be effective when used to kill norovirus, or the germs and viruses that cause influenza, hepatitis A and B, measles, etc.

For this reason, administrators must always check the labels of the selected disinfectants. A janitorial distributor can be helpful in this endeavor. But what happens if there is some question as to

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what pathogens are present? Fortunately, “broad spectrum” disinfectants are designed to kill some of the most common pathogens in a facility.

As to the second issue—proper dilution—a wise and inexpensive investment that park managers should consider is an auto-dilution system. This properly dilutes the cleaning solutions per the manufacturer’s recommendations. Primarily, this helps avoid wasting the product, but it also ensures that the correct amount of disinfectant is used when cleaning. By the way, more is not better when it comes to disinfectants and most cleaning solutions. The use of more chemicals means that more chemical residue will be left on the surface, which can actually attract soils and pathogens.

Applying the Disinfectant Improperly

A common reason disinfectants fail to work effectively is that many cleaning professionals do not realize that working with disinfectants is always a two-step process. First, the surface must be cleaned using an all-purpose cleaner or something similar. This first task removes the source—pathogens, soils and bacteria—that might be present.

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The second step is to clean the same area, now using the disinfectant. This two-step process can be avoided if the product is labeled as a “cleaner disinfectant,” but many are not, so the two-step process is necessary.

Next, read the label and look for the “bacteria kill time.” The words “dwell time” may also be used. With some disinfectants, this may be as little as three minutes. For others, it could be as many as 10 minutes. What the label indicates is how much time it takes for the disinfectant to be effective at eradicating the germs and bacteria on a surface. Also, cleaning professionals should know that the disinfectant must remain wet. If it dries on the surface, it should be reapplied and the process repeated.

Quat Binding

If you have never heard the term “quat binding” before, join the club. It is actually relatively new to the professional cleaning industry. “Quat” refers to quaternary ammonium chloride, an active ingredient found in most EPA-registered disinfectants. The phenomenon of quat binding refers to the absorption of quaternary ammonium chloride into the cleaning cloth being used or, if mopping floors, into the mop head. As this happens, the disinfectant loses its effectiveness.

Looking at this situation more carefully, what is happening is that the quats are positively charged, and many cleaning cloths and mop heads are manufactured with natural textiles such as cotton, which are negatively charged. This causes the quats to be absorbed into the cotton.

In one study, the quat level of a disinfectant on a cleaning cloth was reduced by 50 percent after soaking for 10 minutes. The pathogen-killing benefits of the disinfectant have been severely reduced.

There are different ways to prevent this:

- Apply the disinfectant directly to the surface to be cleaned, and allow it ample time to work effectively.
- Frequently change the cleaning cloth or mop head (and the mop water as well) that is used for cleaning and disinfecting.
- Avoid using standard terry-cloth towels with disinfectants; microfiber is more effective at removing soils from surfaces, and will not be as impacted by quat binding.

Another option is to look into different cleaning systems. While they are not designed specifically to kill germs and bacteria, aqueous ozone cleaning systems and no-touch cleaning systems will not be impacted by quat binding because no textiles are used in the cleaning process. They can also address some of the other disinfecting challenges mentioned earlier.



Finally, managers and cleaning professionals should consider using ATP monitoring systems. These devices are essentially an electronic petri dish. A surface is swabbed, and the swab is then put into the device, which looks like a television remote control. In about 15 seconds, the device indicates if ATP is present on a surface. While it does not indicate specifically what types of pathogens are present, a higher-than-usual ATP reading should always be viewed as a red flag, indicating that cleaning and disinfecting are necessary will thank you for it. 🌟



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