Employees — Your Greatest Asset

Inside:

The Art of Customer Service
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Managing Vital Business Information
Protection Through Effective Cleaning
Editor’s Note: This is the second of a two-part series on the importance of how effective cleaning impacts health. Part One appeared in the January 2007 issue of C&R.

With health issues and microbiology-based concerns frequently making the news, it is important that those in the cleaning industry recognize the vital role that they play. From germs and bacteria to fungi and viruses, there are some basic steps that, when taken, can help manage the spread of disease and isolate infectious organisms from the human population.

Direct contact related diseases are best managed by isolation. Skin infections are spread by touching fluid from another person’s infected sores. Effective cleaning takes place in the form of personal hygiene on the part of the infected human so as to contain, destroy, remove or inhibit the life of the biopathogenic organism or its toxic byproducts.

Respiratory-tract infections, frequently manifested by coughs, sneezes and runny noses, are spread through exposure to fluids present in or expelled from another person’s mouth and throat (saliva or mucus). These often occur when an uninfected person touches these discharges with their hands and then touches their mouth, eyes or nose. These organisms tend to be viruses which do not live long without a living host. Personal hygiene, especially frequent hand washing, reduces exposure. Also, rapid response in the form of effective cleaning of surfaces contaminated by virus-active-fluids will break the transmission chain and reduce the transfer opportunities and risks.

Intestinal tract infections, such as diarrhea, are spread through exposure to bacteria in the feces. Bacteria are spread through “fecal-oral” transmission. Pathogenic organisms are excreted from the infected person and enter the body of another person through the mouth. This happens when objects which have become contaminated with undetectable amounts of feces are placed in the mouth. Fecal-oral transmission can occur if food or water is contaminated with undetectable amounts of human or animal feces and then ingested. Improperly prepared foods made from animals (i.e., meat, milk and eggs) are often the source of infection with Campylobacter, E.coli O157 and Salmonella. Well-designed, focused, effective cleaning systems and programs can be very effective in reducing and often eliminating these types of disease.

Infections like Salmonella and Campylobacter are spread through direct exposure to infected animals. Isolation of infected animals, hand washing and the frequent cleaning of animal holding areas reduce risk.

| Common Infectious Diseases Found in Sensitive Environments |

Health Care-Day Care-Schools & Universities

| Transmission Routes |

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Blood-Borne Pathogens

Blood infections are spread when blood (and sometimes other body fluids) from a person with an infection gets into the bloodstream of an uninfected person. This happens when infected blood or body fluid enters the body of an uninfected person through cuts or openings in the skin; adheres to the mucous membrane that lines body cavities, such as the nose and eye; or enters directly into the bloodstream, as with a needle.

The cleaning industry must stay current with public health guidance provided by the Surgeon General related to management of blood-borne pathogens and medical wastes. The AIDS epidemic continues to grow. This means that there is more infected blood, especially in our ever-expanding, mobile, global society. Consequently, every time we come upon an accident or situation where blood must be cleaned up, it is more likely that the HIV and other infectious viruses are present; therefore, we have to be more cautious when working around blood today than in the past because the risk of exposure is greater.

Uninfected blood is not a health threat; we simply wash it away. But we cannot know the status of any blood we encounter, and because of this, whenever we clean up blood, especially fresh blood, we must treat it as if it were infected with the HIV virus.

HIV virus is thought to be short-lived once it is outside its human host, but its exact behavior, as with most viruses, is not fully understood. To prevent viral infection, it is prudent to avoid contact with even dried blood.

We can form barriers to pathogenic viruses. When cleaning, the most effective way to guard against infection is to form a protective barrier between the skin and the virus. Workers should always wear rubber gloves and ensure splash protection. Workers with open sores or fresh cuts should not work on cleanup projects.

We can disinfect blood with a registered disinfect. Despite the growing tendency to avoid chlorinated products, in the
absence of a registered biocide that has been demonstrated to deactivate viruses, bleach is a proven option. Preventing a fatal infection far outweighs any known side effect that might be associated with chlorinated compounds. Household bleach contains 5 percent sodium hypochlorite. When mixed in the ratio 1 part bleach to 10 parts water, it becomes a 0.5 percent water-based solution of sodium hypochlorite. This solution will disinfect blood and kill the HIV virus when blood is saturated with it for at least 30 minutes.

Assume all blood is infected with the HIV virus or some other infecting virus. Protect your skin with protective gloves, and be extremely careful not to puncture the skin or gloves while cleaning. Surround any blood spots with a ring of registered disinfectant or the water-based solution of sodium hypochlorite. Let the blood become saturated with the solution. If glass or other debris is mixed with blood, make sure it is also bathed in the solution. Disinfectants take time to work. Blood spots or blood-infected items should remain saturated for at least 30 full minutes.

Keep the blood from splattering when you apply the disinfecting solution. You may need to cover the blood with a paper towel and pour or spray the solution onto the blood through the paper towel.

**Waste Disposal**

Treat all blood-soaked debris, glass, carpet and used protective gloves as medical waste. Put them in a medical waste container, and dispose of it at a medical waste treatment facility.

Medical or infectious wastes are special kinds of “hazardous wastes” which can cause illness or death. They threaten human health or the environment when improperly treated, stored, transported or disposed. Keep medical and infectious wastes separate from ordinary wastes at the point of origin. Place them in distinctive, clearly marked containers designed for them. The containers should be labeled with the universal biological waste hazards symbol.

Use packaging materials appropriate for the waste being managed. Use puncture-resistant containers for sharp objects. Use packaging material that will maintain its integrity during storage. Keep all containers closed once wastes are placed in them. Containers for infectious liquids must be tightly capped and must not leak. Never compact packaged wastes before having them treated.

Store medical or infectious wastes for the shortest possible time. Do not allow there to be any chance for rodents and vermin to get into them and become carriers of disease. Ensure limited access to areas where medical and infectious wastes are stored and to storage areas marked with the universal biological hazards symbol.

When medical or infectious wastes are transported, load them by hand. Mechanical loading devices can rupture the packaging. Frequently disinfect carts that deliver the wastes to loading areas. Ensure that infectious wastes are transported only in leak-proof trucks or dumpsters.

The treatment of medical or hazardous wastes is any method, technique or process that changes its biological composition. Treatments include steam sterilization, incineration, thermal inactivation, chemical disinfection, discharge to a sanitary sewer, burial and cremation. To treat wastes properly, always follow the documented standing operating procedure for each category of waste. Monitor the treatment process continuously. Use biological measurements to evaluate whether the waste is properly controlled at the site and effectively treated.

Finally, always comply with state and local public health laws for the proper disposal of medical or infectious wastes. Visit http://www.cdc.gov/niosh/topics/bbp/ for additional information about paper disposal.

**Avian Flu**

The possibility of an Avian Flu Pandemic is an emerging and ever growing topic of concern throughout the world. Given the virulence and potential mortality harvest of the H5N1 virus, there are indeed good grounds for emergency preparation but not public hysteria. Health intelligence related to Avian Flu is changing daily. The CDC and the World Health Organization are intently studying the virus and, as appropriate, updating information. At this time, there is no special science-based guidance for effective or professional cleaning beyond that which health care and cleaning professionals follow in flu epidemics. This includes inoculations, isolation of infected persons, protective gloves and frequent hand washing, splash protection, an elevated level of personal hygiene, quick response to body-fluid spills, use of registered disinfectants, the intense management of infectious waste and effective ventilation.

Given that this is literally a life and death issue, it would be fully irresponsible to give additional specialized guidance without complete factual information. Our best guidance to cleaning professionals at this time is to keep an eye on the CDC website: http://www.pandemicflu.gov/. The Surgeon General of the United States, the CDC and the World Health Organization are the experts. For additional information, visit www.ciri-research.org and review the postings on the CIRI website.

Professionals in the cleaning and restoration industry provide invaluable services and expertise in many high-risk situations. Research and science will continue to provide the critical information they need to do their jobs safely and effectively. ■

**Michael Berry, Ph.D., was chairman of the Science Advisory Council for the Cleaning Industry Research Institute (CIRI) in 2006. To learn more about CIRI, visit www.ciri-research.org.**

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