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- Health and Wellness in Senior Living Facilities -

Providing a HEALTHIER, CLEANER and SAFER Environment for Residents, Staff and Visitors

According to a recent census, seniors now make up the fastest growing age group in the country. With a 27 percent increase since 2001, there are currently 5 million people aged 65 and over in Canada, marking a trend that will continue to rise. Statistics Canada projects the number of seniors will double over the next 25 years to more than 10 million by 2036¹, outnumbering children for the first time in history.

With an aging population, older adults are looking for long-term care, assisted living facilities and home care services more than any generation before them. Overall, Canadians are living longer, healthier lives. But as the population grows, so does the number of people at risk of experiencing common outbreaks of infectious diseases. Infections are very common in long-term care facilities and represent a major cause of illness and mortality among institutionalized elderly individuals.

The most widespread infections are respiratory, urinary, skin and soft tissue, foodborne and viral gastrointestinal. Nursing home residents are at risk for colonization and infection with drug-resistant microorganisms, including Methicillin-Resistant Staphylococcus Aureus (MRSA), Vancomycin-Resistant Enterococci (VRE), *Clostridium difficile* spores, *Acinetobacter* species, and Norovirus. These organisms can spread very quickly onto surfaces in their immediate environment. These pathogens can survive for days or weeks (even months for *C difficile* spores) on various environmental surfaces. Healthcare workers can contaminate their hands or gloves by touching contaminated surfaces in patient rooms, and it is likely that this could result in transmission to other patients, volunteers, staff and visitors. Influenza also poses a major concern for illness and mortality. Older adults are at particular risk, given that 90% of influenza deaths occur in those aged 65 years and older. Nursing homes, which generally have older and frail residents, can experience attack rates up to 60% and case fatality rates as high as 55%.² Persons with underlying chronic diseases have higher rates of hospitalization and death during influenza epidemics, as compared with healthy people. Residents of nursing homes are at higher risk of being exposed to influenza because the virus is more likely to be introduced and spread in an institutional setting. In addition to being in close contact with other residents, nursing home residents are also exposed to many other people, such as staff members, volunteers, and visitors. The high illness and mortality associated with influenza underscores the importance of annual immunization programs. Equally important, a proper disinfection and cleaning program can contribute to reducing these infectious diseases.

A Clean Environment

About one in 10 patients admitted to a healthcare facility in Canada contract hospital-acquired infections, and between 8,000 and 12,000 die from them each year. A World Health Organization report that compared Canada's infection data with that of 12 other wealthy countries, found that Canada had the second-

¹ <http://www.oecd.org/els/health-systems/47884543.pdf> see Figure 2.2

² <http://geriatrics.uthscsa.edu/reading%20resources/Infections%20in%20the%20NH.pdf> (page 764)

highest prevalence (11.6 per cent) of hospital-acquired infections after New Zealand — much higher than that of Germany (3.6 per cent) or France (4.4 per cent). The direct costs of healthcare acquired infections in Canada are estimated to be \$1 billion annually.³

Much of the suffering and death caused by healthcare associated infections (HAI) is needless. The Canadian Committee on Antibiotic Resistance estimates that at least 30 percent of healthcare associated infections can be prevented.⁴

A regular and daily scheduled cleaning program in critical touch point areas is vital to control the spread of infectious diseases. However, extended healthcare facilities have very specific cleaning needs and they can be very difficult to clean and maintain. Unlike offices or schools, which typically allow cleaning professionals to do their jobs while occupants are away, extended healthcare facilities have people living and working in them 24 hours a day, seven days a week. For building service contractors (BSC) and nursing home administrators, the best way to handle the cleaning challenges in nursing homes is to have a system—a process that addresses these different cleaning requirements, and the persistent hygiene, sanitation, and environmental issues specific to these locations.

Cleaning, laundry, and other support services are essential elements of infection prevention and control strategies. Consequently, BSCs play a critical role in meeting best practices for disinfection. One of the first steps is educating custodians on the potential risk of infection and providing training on the appropriate disinfection techniques for patient-care areas.

For healthcare BSCs, the prime focus should be eliminating the sources of disease. This can be done by adequate surface cleaning, prevention of transmission by using proper barrier substance protection and reducing susceptibility to infection via continued good hygiene and the maintenance of a clean environment. Evidence-based practices for cleaning show that by reducing the number of infectious microorganisms on critical touch point surfaces, outbreaks of C-diff, MRSA and VRE can be decreased. The highest concentration of microorganisms that will be encountered by the custodians are found in the following areas: patient's bathroom, bedpan, call bell, light switches, telephones, bed rails, wheel chairs, privacy curtains, IV pumps, ECG Carts, computer on wheels, transport items and table surfaces. Diligent and proper training with the use of the appropriate disinfecting chemicals are imperative to help infection control efforts.

Hand Washing

The single and most effective line of defense against the spread of disease is still through regular hand washing. While waterless hand cleaners and antimicrobial soaps are a viable alternatives, extended and overuse of these cleaners may actually decrease the effectiveness of eliminating bacteria. Hands should be washed often and well, paying particular attention to around and under fingernails and between the fingers. Hands should be washed whenever they are soiled with body substances, before food preparation, before eating, after using the toilet, before performing invasive procedures and when each resident's care is completed.

Proper hand washing technique includes these steps:

1. Use a sink with warm running water, soap, and paper towels.
2. Push sleeves up above wrists (it is recommended to remove jewelry and wristwatch).

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³ <http://cupe.ca/health-care/health-care-associated-infections>

⁴ <http://cupe.ca/updir/healthcare-associated-infections-cupe-backgroundunder.pdf>

3. Apply soap to the hands and wash vigorously, using plenty of lather and friction for 20 to 30 seconds; interlace fingers and rub palms and the back of the hands in a circular motion; clean between fingers and vigorously clean the fingertips and nail beds.
4. Rinse hands and wrists thoroughly, keeping hands down and elbows up.
5. Dry hands thoroughly from the fingers down to the forearms and wrists with a paper towel; if available, use clean paper towel to turn off the water and even to open washroom doors.

The use of antiseptic hand washing soaps are recommended during outbreaks, serious contaminations, prior to performing invasive procedures and prior to caring for high risk individuals. (i.e. immunocompromised). Waterless antiseptic hand sanitizer may be used if hands cannot be washed right after soiling, but soap and water must be used whenever possible.

The use of barrier substance protection such as latex gloves, the use of gowns if soiling of clothing is expected, and the changing of gloves between patient rooms are the safest and most effective practices that can be used in preventing the spread of diseases.

Healthcare facilities can use ATP-based sanitation monitoring system to detect and measure ATP on surface as a method of ensuring the effectiveness of the facilities' sanitation efforts.

Measuring Cleanliness - ATP Testing

Adenosine triphosphate (ATP) is a molecule found in and around living cells and, as such, it gives a direct measure of biological concentration and health. The **ATP Test** is a rapid test quantified by measuring the light produced through its reaction with the naturally occurring firefly enzyme, luciferase, using a luminometer. The amount of light produced is directly proportional to the amount of living organisms present in the sample. It can measure the exact level of contamination on surgical instruments, case carts, hand hygiene and any other surfaces and areas in about 15 seconds.

Healthcare facilities can use ATP-based sanitation monitoring systems to detect and measure ATP on surfaces as a method of ensuring the effectiveness of the facilities' sanitation efforts. The amount of ATP detected and where this ATP was detected, indicate problem areas and items in the healthcare setting that may need to be re-cleaned, and the possible need for improvement in a healthcare facility's protocols. ATP testing can be used as a viable solution to bring about awareness throughout a healthcare facility as a way to verify whether areas, items or surfaces are cleaned properly and to promote routine cleaning.

Sustainable Cleaning

The air inside a building typically contains a higher concentration of pollutants than outdoor air—as much as two to five times more. Yet people spend on average 90 percent of their time indoors, seniors even more so.

The chemicals and procedures used to clean indoor spaces can cause mild to severe allergic reactions and asthmatic responses. Adopting a program that would consider the environmental effects of cleaning and, more importantly, the human health in an institutional setting, can impact the lives of seniors, staff and visitors alike.

Green practices can be as simple and low-cost as using cleaning supplies with low volatile organic compounds (VOCs). With conventional cleaning products, the long-term effects of what such chemicals could do to a person's health is an incentive to switch to eco-friendly supplies, especially considering the pulmonary and lung conditions of seniors, staff and visitors.

Adopting a sustainable cleaning program can help increase energy-efficiency and high appearance levels while helping maintain odour control. It also

decreases laborious scrubbing and reduces SKUs. Sustainable cleaning provides quantifiable impacts on gas, water and energy use by accurately monitoring water and chemical waste, and reliably measuring cost reduction successes. In contrast, conventional cleaning does not allow facilities to easily calculate the amount of utilities and labor expended during cleaning.

Reach out to professionals such as sustainable building experts, manufacturers and vendors that offer low-toxicity cleaning products and environmentally friendly packaging. With Leadership in Engineering and Environmental Design (LEED) certifications and the Canadian Green Building Council (CAGBC) Green Building Rating System defining sustainability standards, all industries, including healthcare and education, are providing resources regarding greening existing buildings and cleaning techniques that minimize water consumption and chemical dependency. The Senior Living Sustainability Guide, which covers all aspects of green design in senior living communities, is also available to download for free (<http://www.withseniorsinmind.org/>).

Senior living providers that implemented elements of sustainability into their communities saved more than \$4.1 million collectively, while also preventing 12,700 metric tons of greenhouse gas emissions, according to results from the EPA's ENERGY STAR program (tracked through EPA's Portfolio Manager).⁵ More importantly, sustainability is all about long-term thinking. Taking practical steps like these, one step at a time, can make a world of difference.

Regulation Compliance & Budgets

The demand for medical services is a result of changing demographics. Healthcare systems and facilities are on a rise. As extended healthcare facilities are preparing to handle more patients, they are also streamlining costs. Outsourcing cleaning services to Building Service Contractors (BSC) can help healthcare providers and organizations remain profitable, as it cuts down on labor costs associated with running an in-house custodial department.

Thus, specializing in healthcare and medical facility cleaning is seen as beneficial by more and more BSCs. Institutional health and medical accounts, such as hospitals and healthcare providers, doctor's offices, ambulatory surgical centers (ASC), medical clinics and private practice facilities, view outsourcing of some or all cleaning and periodic maintenance as a budget-friendly way to trim costs.

BSCs have an opportunity to offer a medical cleaning program specific to these healthcare institutions. Cleaning medical facilities is much more specialized than other commercial cleaning, beginning with a more-encompassing training. Besides training, one has to consider the different types of preventative inoculation and medical tests that are necessary for each employee to have before they can even step foot in a surgical or operating room/area. What's more, cleaning a facility such as ambulatory surgical centers (ASCs) can elevate the level of cleaning the BSC can provide. Not only should custodial staff be inspecting their own work, but they should be prepared for an audit by the city and/or health department. City and/or health departments have specific requirements and regulations for ASCs and healthcare providers, thus raising the bar for cleaning. They may conduct random audits of these facilities and, at times, they can show up at night while BSCs are cleaning. They may be asked to explain how cleaning chemicals are diluted, what process and procedures are used, and whether cleaning instructions are being properly followed. Also, since many hospitals, clinics and healthcare facilities are affiliated or network with other medical facilities in a region — or, in some cases, nationwide — earning a good reputation with one account can yield more work in other locations. Cleaning in

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⁵ <http://www.alfa.org/News/3327/Going-Green-in-Senior-Living-Proves-Worthy-for-Residents-and-Bottom-Line>
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healthcare facilities requires investment in education and training; for instance, knowledge of and adherence to Occupational Safety Health Administration's (OSHA) blood borne pathogen standard. Specific chemicals, tools and machines need to be used, and each custodian must have proper personal protective equipment. It also requires a level of quality control that regular cleaning facilities don't have — as patients' health depend on it. Partnering with a BSC can save customers money while providing a high level of service.

Overall, when cleaning in a healthcare environment, it is important to identify the challenges and take into consideration all the influences and factors involved that ultimately affect the cleaning products and practices. Only with this broader understanding will effective cleaning strategies be continuously achieved.

About Avmor Ltd.: Headquartered in Laval, Quebec, Avmor is Canada's leading manufacturer of professional cleaning solutions aimed at the Facility Maintenance and Foodservice markets. Avmor offers cGMP (Current Good Manufacturing Practices), which is a prerequisite to be able to manufacture hand soaps that include disinfection claims and a DIN (Drug Identification number) provided by Health Canada. Avmor offers a full range of hand care products. Avmor's complete line of cleaning products include Cleaners/Degreasers, Floor Care, Washroom Care, Food Service Care, Hand Care, BioMaxx, Disinfectants and others. Some of Avmor's signature brands are **Av-mixx Dilution Control System, Biomor Biological Cleaning Solutions, Quick Stuff Food Service Cleaning System, Synergy Floor Care, EcoPure & Nanomor**, its new environmentally responsible sanitation program which features over 50 certified UL Ecologo products. For over 65 years, Avmor has remained at the industry forefront, defining product performance standards and striving for the safest and most cost-effective cleaning systems for professional use. Avmor Ltd. is a privately held company.

