Frequently Asked Questions

Heating, Ventilation, and Air Conditioning Assessment Webinars for Long-Term Care Homes Hosted by Ministry of Long-Term Care in Partnership with Infrastructure Ontario
(January 20, 26, 27, 2021 and February 1, 2, 2021)

Questions for Ministry of Long-Term Care

1. **Q:** Are there any funding or grants available for Heating, Ventilation, and Air Conditioning (HVAC) upgrades or to get the roof top unit /air handling unit back to their operating standard?

   A: To help cover costs associated with HVAC improvements and other minor capital improvements, the Ministry of Long-Term Care provided two funds to support long-term care homes in 2020-21 fiscal year. The Infection Prevention and Control (IPAC) Minor Capital fund of $61.4M provides support to homes to complete rapid, targeted improvements directly linked to improved infection prevention and control practices. The Ministry also provided $22.8M through the Long-Term Care Minor Capital Program to support homes in maintaining their homes in an optimal state of repair while ensuring safety of their residents. This program replaced the Structural Compliance Premium, 1999. The program is targeted to former SCP-1999 recipients and other long-term care homes with beds not already receiving other forms of capital funding (e.g. the Construction Funding Subsidy (CFS) paid under a development agreement between the operator and the ministry, or the Structural Compliance Premium, 2009 (SCP-2009), paid under the Structural Compliance Premiums for Self-Funded Renewal Projects, 2009.

2. **Q:** These high-efficiency filters may be more expensive to purchase, and require more frequent changes. Will the Ministry be increasing funding on an ongoing basis to account for the increased operating costs?

   A: Under the IPAC Minor Capital fund, homes can use their allocation towards capital improvements that support IPAC efforts such as high-efficiency filters. Homes that also receive funding through the Long-Term Care Minor Capital Program are able to use that allocation towards IPAC-Minor Capital expenses, offering increased flexibility for those homes to address their IPAC needs. If homes require clarification on whether expenditures are within the scope of either

programs, they may be considered at ministry discretion through requests submitted to ltc.info@ontario.ca

3. **Q:** Have there been any HVAC related changes to the Regulation in the *Long-Term Care Homes Act, 2007*?

   A: The Ministry of Long-Term Care (Ministry) is considering regulatory amendments that would enhance temperature requirements in long-term care (LTC) homes, to improve the safety and comfort of LTC residents. Proposed amendments include a requirement for air conditioning in designated cooling areas, and a refined regulatory approach that clarifies requirements for licensees to better protect residents from hot weather-related concerns.

   The proposed amendments would improve the safety and comfort of LTC residents by ensuring that licensees implement specific procedures to protect residents from unacceptably high temperatures.

Questions for Infrastructure Ontario

4. **Q:** Is there a risk of depleting the air flow with the installation of MERV 13 filters?

   A: Research shows that in general, heating, ventilation and air conditioning (HVAC) systems with higher rated MERV filters have an increased pressure drop across the filter compared to lower rated MERV filters. Based on the lessons learned in reviews conducted across the IO managed portfolio of buildings, some fan systems have the ability to increase air flow to overcome the additional pressure drop while other fan systems may need to be upgraded.

   IO recommends that LTC homes engage a HVAC professional to determine the specific needs for each system.

5. **Q:** Do MERV 13A filters go under strict testing protocols and are the filter configurations similar to MERV 13?

   A: MERV 13A filters are recognized by CSA and ASHRAE, are available in the same sizes and configurations and follow the same testing protocol as MERV 13 filters.

6. **Q:** Is IO using MERV 13A filters in buildings with 100% fresh air or recirculating ventilation systems?

A: An initiative is currently underway to upgrade all systems which are capable to MERV 13 filtration in buildings. IO recommends that LTC homes consult with a HVAC professional to determine the appropriate filtration requirements.

7. **Q:** Has IO implemented UV lighting and/or other technologies in its strategy to combat bacteria/viruses?

   A: Infrastructure Ontario (IO) continues to be dedicated and responsive to new and evolving recommendations from public health authorities while maintaining operations. The implementation of operational measures and the adoption of COVID-19 best practices are being driven by emerging recommendations and research within the HVAC industry and public health authorities. IO continues to investigate and consider new technologies for opportunities to enhance current efforts based on advice or recommendations from public health authorities.

8. **Q:** IO's presentation focuses heavily on the frequent maintenance of outdoor air dampers. What is IO's position on zone dampers within the buildings?

   A: Based on experience within the IO managed portfolio, outdoor air dampers require higher levels of maintenance compared to indoor zone dampers due to their continuous exposure to the elements. Therefore, it is recommended to inspect the outdoor air dampers on more frequent intervals. For the IO portfolio, zone dampers are checked and maintained annually, while outdoor air dampers are checked and maintained every 60 days.

9. **Q:** What are the effects of bypassing a Heat Recovery Ventilation (HRV) system with 100% Fresh Air and maintaining the required indoor air temperature and humidity levels?

   A: As a proactive precautionary measure, bypass is recommended by ASHRAE for HRV system operations, where feasible. Where operational risks of maintaining required temperature and/or relative humidity levels exist, a HVAC professional should be consulted to determine the specific bypassing and operational needs for the HRV system.

10. **Q:** What are the benefits of humidification (not from a cooling/heating perspective), but from possibly lowering the viral transition of COVID 19 and should LTC homes consider the use of portable humidifiers?

A: The viability of all viruses can vary with relative humidity in a given environment. Studies have indicated that virus transmission is greater in lower indoor relative humidity settings and decreases with increasing relative humidity levels. IO strives to maintain relative humidity levels above 25% during the heating season and less than 60% during the cooling season. From an IO lessons learned perspective in response to recommended COVID 19 operations, replacing and/or upgrading building humidification systems is a key initiative to be undertaken. In buildings without an operating central humidification system, portable humidification units may be considered as a short term solution. A HVAC professional should be consulted to determine any short or long term humidification requirements/upgrades.

11. **Q:** Which ASHRAE standards exist for LTC homes?

    A: A HVAC professional should be consulted to determine the standards to be used for LTC environments.

12. **Q:** Is legionella a concern in humidification systems?

    A: Compared with other sources of Legionnaires' disease, such as cooling towers, research indicates that humidification systems represent a lower risk. However, as humidifiers are designed to introduce aerosols into the atmosphere, strict maintenance and water treatment practices are essential to prevent the spread of legionella.

    The operations and maintenance of humidification systems are complex, therefore, it is always recommended to obtain advice from the manufacturer and/or a heating, ventilation and air conditioning (HVAC) professional.

    Please see the attached link from the Public Health Agency of Canada for additional information:
    https://www.canada.ca/en/public-health/services/infectious-diseases/legionella.html

13. **Q:** What is IO's experience with duct cleaning and is there a preferred time of year to do it?

    A: Presently, no formal duct cleaning program exists in IO as a response to COVID-19 spread. IO is focusing on ensuring the integrity of the building filtration systems and upgrading to MERV 13A filters where operationally feasible. IO continues to monitor and investigate industry best practices and public health recommendations. Most weather conditions are acceptable for duct cleaning with

the required precautions, however as heating and cooling systems would be required to be off for an extended period, it is advisable to avoid severe weather conditions. Based on the lessons learned from the IO portfolio, having high quality filtration systems in place that are properly maintained, will avoid the requirement for ongoing duct cleaning. Prior to carrying out duct cleaning, a heating, ventilation and air conditioning (HVAC) professional should be consulted to determine the specific needs for each system.