Using Ventilation to Protect Healthcare Workers and Patients from COVID-19

Workplace safety and health hazards are best addressed by using engineering or administrative measures that stop or reduce the hazard at the source. After these measures are in place, personal protective equipment, such as respirators, can serve as a final line of defense.

Ventilation is one of the engineering tools available. Using ventilation to control and move hazards out of the facility should be in every facility’s arsenal against COVID-19. What is your facility doing on this front?

Here are measures they can be implementing:

Enhance existing ventilation system performance. There are two ways facilities can enhance ventilation in the overall facility, and sometimes in specific areas of the hospital:

- Increase the number of air changes per hour
- Increase the percentage of outside air used in the system

These steps do not require any added equipment. Is your facility enhancing ventilation performance during this time?

Expand the number of negative air pressure isolation rooms. Putting COVID-19 patients in these rooms is one of the best ways to reduce the spread of the virus in the facility, and protect workers caring for these patients. This method pulls airflow into the room and filters air that is exhausted from the room. By doing so, the virus that is present in the environment is pulled out and away. Most facilities have a limited number of these rooms.

More can be added. Operating rooms that are not in use because of cancelled elective surgeries are one example of spaces in the hospital that can be switched to negative air flow. Is your facility adding negative air pressure isolation rooms?

Move certain care functions outside the facility. Using tents and trailers for the intake and triage of potential COVID-19 patients can reduce cross contamination, and the levels of overall contamination, as well. Patients who are going to be sent home do not need to enter the facility. Dedicated staff in the tent, as well as the patients being seen, can benefit by natural or enhanced ventilation in the tent or trailer. Is your facility using tents, trailers or other remote screening set-ups?

Install HEPA air filtration equipment in patient rooms, or in larger areas such as ICU units, to help move and filter air in greater quantities and rates. Plant engineering can be enlisted to determine where and how this measure would be effective while not creating other hazards. Is your facility adding more HEPA filtration?

Leave no stone unturned! We must explore every option to protect the safety of staff and patients. Every facility should be implementing these engineering controls! These measures will help reduce the danger posed by transmission of SARS-CoV-2 in facilities.

If you have questions or need further information on this issue, please contact your NYSNA representative who can reach out the NYSNA Health & Safety staff for technical assistance.

Get the latest COVID updates: nysna.org/covid

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