Emergency Respiratory Protection Program
Guidance for School Nurses

Purpose

School nurses continue to support schools in their mission of providing safe and healthy in-person learning environments to the children of Vermont. The following document has been prepared specifically to ensure that school nurses have the adequate tools to maintain student and staff safety. This guidance is to assist school personnel in developing a Respiratory Protection Plan (RPP) for school health employees.

According to the Vermont Department of Health Personal Protective Equipment guidance, a RPP is necessary for school nurses and designated school personnel to use fit-tested N95 respirators for the care of individuals with symptoms suggestive of need for COVID-19 testing or when involved in procedures that generate aerosols. After a RPP is developed, schools may contact a vendor to purchase a supply for fit testing. School nurses will then need to complete their own documentation and arrange for the nearest fit testing site. Schools will need to purchase the supplies that fit each specific individual user. Finally, schools and nurses will need to maintain their RPP system and infection prevention measures.

Guidance

The pandemic caused by the coronavirus SARS-CoV-2 has created numerous challenges, including the use of respiratory protection by many who previously did not use it and difficulty obtaining proper respiratory protection because market supplies do not meet world-wide demand. Another challenge is that the occupational use of respiratory protection is regulated to minimize the risks of exposure to harmful agents. This document describes how those who employ school nurses can meet these challenges.

The use of respiratory protection by a school nurse requires the employer meet specific regulatory requirements enforced by the Vermont Occupational Safety and Health Administration (VOSHA). The respiratory protection regulations enforced by VOSHA are available online and VOSHA can be contacted to help answer questions about these regulations.

The most important requirements protect the health of the employee wearing a respirator. The regulations require a formal written Respiratory Protection Program (RPP), a medical evaluation by a physician or other licensed healthcare provider, training in the use of the particular respirator worn by the employee, and a respirator fit test that qualitatively or quantitatively verifies the specific user is actually protected by a specific brand, model and size of respirator assigned for their usage.

Contact Information:

Additional technical assistance can be provided by SEOC Health and Medical Branch Co-Director Bill Irwin at william.irwin@vermont.gov.

The purpose of an RPP is to reduce the risk from harmful airborne exposures, in this case that is the risk of infection from aerosolized coronavirus. After other risk reduction efforts have first been employed, a respirator may be needed to reduce the risk further. For SARs-CoV-2 coronavirus, respiratory protection is provided by air purifying respirators like the N95 respirator or a powered air purifying respirator (PAPR).

The N95 is a negative pressure air purifying respirator. While it filters out at least 95% of particles and aerosols (including SARS-CoV-2), negative pressure created while breathing in may allow leakage between the face and respirator in a poorly fitting respirator. This is why the fit test is so important. PAPRs, often a hood that covers the head and an attached air pump that supplies filtered fresh air to the hood, operate with a positive pressure so any leakage is out of the PAPR. For that reason, a PAPR does not require a fit test, though a written RPP, user medical evaluation and user training are.

When an N95 is worn, particles and aerosols slowly clog the filtering material until the N95 must be replaced. This adds respiratory stress which can lead to cardiovascular stress and it is why a user must have a thorough medical evaluation before being allowed to wear an N95. The medical evaluation is through a review of the person's medical history as revealed in a questionnaire the person completes. Some people also need a physical evaluation, as with a pulmonary function test.

Caution is appropriate when purchasing N95 respirators. There are some that are industrial grade. These may not provide droplet protection as they are for dry work. Wearing a face shield with it can provide droplet protection. When an N95 respirator has an exhalation valve, it provides wearer protection but does not provide source control on the wearer. The wearer must add a facemask over the N95 with an exhalation valve so others are protected from the exhalations of the N95 wearer. There are N95 alternatives, including the KN95. Currently, we are not recommending that N95 alternatives be used. Should N95 supplies reach crisis standards of supply, N95 alternatives like the KN95 may be recommended. A list of current statewide contracts, including for N95 respirators, is available on the Vermont Building and General Services website.

The behaviors of the respirator user are also important to proper protection so training helps cultivate those best practices. The RPP with designated roles and responsibilities meeting VOSHA standards must also provide additional controls on user behavior such as periodic inspection and annual program review.

VOSHA has provided a *Hospital Respiratory Protection Program Toolkit* to help those in healthcare create an RPP. It includes a Respiratory Protection Program Template for Hospitals in Appendix D. While the development of an RPP for SARS-CoV-2 is a significant effort, it will assist school nurses caring for those potentially infected with other airborne infectious diseases like measles, chickenpox and tuberculosis.

As explained in the Toolkit, medical evaluations must be accomplished by a physician or other licensed healthcare professional. The medical questionnaire to be completed by the employee can be found in Appendix C of the Toolkit. Fit testing can be provided by one of several

consultants in Vermont. They often can also provide respiratory protection training if the employer cannot do so. They are:

- The ATC Group in Williston at (802) 862-1980; Waterbury at (802) 241-4131 and Brattleboro at (802) 257-1195
- Concentra Urgent Care in Barre at (802) 223-7499 where the contact is Sharyl
- Champlain Medical Occupational Health and Urgent Care in South Burlington at (802) 448-9370
- Occupational Health Partners in Rutland at (802) 747-1753 where the contact is Caitlin Conner or info@ohp.healthcare
- Vermont Air Testing Services (Jericho) at (802) 373-3037 where the contact is David Wechsler or dave@vtairtesting.com

Where school nurses are confronted with higher risk activities while building their RPP, they must follow the Vermont Department of Health Personal Protective Equipment (PPE) Guidance. Where the guidance requires a respirator, some contingency actions may help. To illustrate, consider the following scenario. Infection control guidance for COVID-19 from the CDC is equally essential.

Consider a school nurse in close contact (less than six feet) with a symptomatic child or adult who needs medical care. The school nurse must follow the guidance prescribed for "staff performing highest risk duties" in Section 2 Table S Schools. Given no RPP exists yet so a respirator cannot be worn, the nurse must ensure the patient wears a facemask for source control. Next, the patient needs to be isolated perhaps by safely getting the patient home for care or waiting until a healthcare provider qualified to wear a respirator such as an emergency medical services provider arrives to administer assistance or transport the patient to a healthcare facility. If there remains a risk of exposure, the nurse should use multiple layers of available PPE, for example, a facemask and a face shield for droplet protection. This is in addition to other PPE (eye protection, gloves and a gown or coveralls).

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