CUPE·SCFP | Canadian Union of Public Employees
Syndicat canadien de la fonction publique

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MEMORANDUM

To: All University Local Presidents & Joint Health & Safety Committee Chairs

From: Andréane Chénier, Health and Safety Representative

Re: **Risk Reassessment COVID-19 Aerosolized**

Date: August 3, 2021

Any identified hazard to workers requires that information, instruct and supervision be provided to workers for their protection while they are working. During this pandemic, a significant hazard to CUPE members working in post-secondary institutions is SARS-CoV-2. Contracting this virus and developing its associated illness COVID-19 has resulted in the development of chronic health problems and the death of workers.

Post-secondary institutions are like small cities. Individuals attending will be diverse in the occupations, their habits and their residence. CUPE members are concerned about the lack of clear tools to assess the hazards of contracting SARS-CoV-2 when in-person contact is required because of work tasks.

The risks of exposure to CUPE members and other workers include the risk of transmission from asymptomatic and pre-symptomatic individuals. This risk increases with the amount of community transmission.

The Public Health Agency of Canada recently amended the hazards of SARS-CoV2 transmission to include the risks of aerosolized particles containing virus. CUPE endorses this amendment as being reflective of scientific evidence gathered over time and the course of this pandemic. Scientific evidence related to transmission by aerosols indicates that its more efficient at establishing infection - inhaled particles can land deep in the lung, past the primary defenses, to the target tissues in good conditions to establish infection.

In light of this change, CUPE believes that this an excellent opportunity for the occupational health and safety structures (joint health and safety committees and health and safety representatives) to reassess the hazards to workers and their risk of exposure. In particular, CUPE would see an assessment of criteria for in-person contacts that would consider these heightened transmission risks.

The following circumstances have been demonstrated to increase the risks to workers:

- The presence of face coverings: Face coverings work as a source control to limit the number of exhaled particles for being in the work environment. There are many factors that will influence how effective face coverings are as source control. These include the fit to the face, the materials used in the construction, the use by the wearer, donning and doffing protocols and how they are cleaned and maintained or disposed of. Face coverings, in particular cloth face coverings, do not provide respiratory protection from aerosols. Air and aerosols from the work environment can be inhaled around the periphery of the mask. This is also true for respirators that are not properly fit-tested or where their facial features or materials prevent a good seal (weight loss/gain, presence of facial hair, degradation of the material etc).
- Physical Distance: People exhale particles into the environment when they are breathing, talking, singing, sneezing, coughing etc. The distance that aerosol particles can travel depends on the speed, size and weight. Smaller particles can travel much farther, particularly if they are travelling at higher speed. For example, they would land farther when breathing hard after walking up the stairs or when sneezing. They would also land farther if they are allowed to float. Public health advice indicates that for low risk situations like running some errands, this would be a 2-metre distance in all directions. It should be noted that when individuals occupy physical space when congregating, they tend to move around. For example, if people attend a meeting, you would expect that they would need to move in and out of the room, shift in their chairs, move their chairs etc. You need to expect that movement and include some wiggle room. A strict adherence to 2m will result in people invariably being within the 2-metre distance.
- Continuous exposure: There are 2 aspects of continuous exposure that must be considered; the repetition of exposures to people outside of their cohorts and the duration of each exposure. There are no hard and fast rules on exposures to communicable illnesses - they depend on degree of contact and quantity of infectious particles.
    - Public health advice is to limit the number of contacts that members of the general public have. In a work context, this can be applied by limiting the number of contacts that a worker has. Each contact with a non-worker is an opportunity that the worker will come into contact with an asymptomatic or pre-symptomatic individual, particularly if there is increasing transmission in the community.
    - Public health guidance is that an exposure under 15 minutes would be considered low risk even within 2 metres. Therefore, any exposure that would extend beyond 15 minutes would have to be considered of higher risk. It should be noted that the 15-minute guidance is cumulative within a work schedule, rather than requiring that each encounter be over 15 minutes.
- Crowds: The number of people that occupy a space influences the number of exhaled particles that will accumulate in the environment. In addition, the number of people in a space will influence how well they are capable of maintaining a minimum of 2 metres within a physical space and with consideration to the fact that people move, even when in a specific space.

- Closed or poorly ventilated spaces: Ventilation capacity influences how much particles will remain in the air and whether they will be permitted to accumulate. When people are exhaling, their warm breath will float upwards above their heads in the absence of air currents. The more people that exhale in a given space; the more particles will float up in the environment. For this reason, ventilation that blows air towards workers must be avoided. For areas of higher population, greater ventilation is required to vent accumulated particles to the atmosphere. The number of particles that accumulate depends on the number of air exchanges, the amount of fresh air, filtration capacity, relative humidity, temperature and air currents. For example, HEPA filtration removes greater than 99% of all particles suspended in an environment and most modern buildings have this type of filtration capacity. In the absence of HEPA ratings, a minimum of MERV 13 is required to filter out suspended particles. This may not be possible in all buildings.
- Cool/cold work environments: There have been the so-called "super-spreader" events in meat processing plants, where aerosols can remain in suspension for greater periods of time.

It should be noted that all of these concerns are relative to a static/non-moving contact. *Many factors can influence the transmission, including movement of air currents when people are in movement, the force, quantity and quality of the exposure event.* For example, if an infected person were to cough directly in another's face, that event alone may be sufficient to transmit enough virus to establish a productive infection, irrespective of the amount of time that has elapsed.

The likelihood of coming into contact with asymptomatic or pre-symptomatic individuals increases with the amount of community transmission. The Occupational Health Clinics for Ontario Workers has an excellent Regional Risk Assessment Tool that outlines degrees of risk with respect to community transmission which may be helpful in establishing when transmission risks are increasing.

CUPE proposes that the criteria outlined above be used by staff to assess the risk of any in-person contact. Any in-person contact that would include one or more of these risks should not be conducted. If it must be conducted, then additional precautions must be put in place that are appropriate to the circumstances for the protection of a worker.

There are additional resources that can be accessed if any of these risk factors are present. A link to those resources has been included. Please do not hesitate to contact the Occupational Health and Safety Branch staff for any additional guidance.

Additional Resources

CUPE COVID-19 General Precautions

Health and Safety Practices while Working During a Pandemic - ALL SECTORS | Canadian Union of Public Employees (cupe.ca)

CUPE COVID-19 Sector-specific resources

Preventing exposure to COVID-19 - Sector-specific resources | Canadian Union of Public Employees (cupe.ca)

CUPE Incorporating public health advice into workplace protections

Incorporating Public Health Advice into Workplace Protections | Canadian Union of Public Employees (cupe.ca)

A checklist tool to audit your COVID-19 practices

General Health and Safety System Checklist for COVID-19 | Canadian Union of Public Employees (cupe.ca)

CUPE Ventilation memo

(Not sure where this is located)

OHCOW Control Banding Framework

Workplace COVID-19 Risk Management (Control Banding) Matrix (ohcow.on.ca)

OHCOW Regional Risk Assessment Tool

Regional Risk Tool & Tips (ohcow.on.ca)

OHCOW Ventilation Checklist

Ventilation Checklist (ohcow.on.ca)

COVID-19 Catalogue (current to October 26th, 2020).

Guide_COVID19_Catalogue_2020_10_26.docx (sharepoint.com)

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