

June 4, 2024:

Seasonal readiness guidelines starting to go out - Guidance on wildfires/smoke/ventilation guidelines

- Started to discover that very few schools/classrooms have air conditioning
- Interested if HA's are seeing a gap in this
- Maybe temperature surveillance is worthwhile in schools
- FYI, BC Cancer, Sun Safe BC, UBC School of Architecture & Landscape Architecture and one of my PhD students have developed and released a guide for designing for shade in play spaces to help deal with the more extreme climates we're dealing with
http://www.bccancer.bc.ca/prevent/Documents/ShadeLookbook_May2024.pdf

School Health Committee

Misty Wasyluk notes from June 4, 2024 meeting

Meeting chaired by Dr. Alexandra Choi, MHO VCHA

- Seasonal readiness: FHA and VCH are going to send something out. VCH sent email to all districts- sending to all schools- guidance on wildfires, smoke, ventilation. On VCH website. Sent to IHA to adapt for their purposes.
- No ETA on provincial guidance- document to be posted when ready. Update the group so can start pointing people to that. Very few schools have AC (discovering this). Number of grant programs for cte spaces, multi-unit spaces, etc. Question from Alex to other HAs if also seeing a gap?
- FYI, BC Cancer, Sun Safe BC, UBC School of Architecture & Landscape Architecture and one of my PhD students have developed and released a guide for designing shade in play spaces to help deal with the more extreme climates we are dealing with
http://www.bccancer.bc.ca/prevent/Documents/ShadeLookbook_May2024.pdf
- shade equity studies on playgrounds- BCCDC

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Subject: Re: School MHO Community of Practice
Sent: 05/24/2024 17:17:55

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Hi everyone,

Just an update on the BCCDC wildfire smoke resource we discussed on Tuesday. Angela has connected with the staff working on the RHA versions of school wildfire smoke guidance to coordinate release and communication. It looks like we won't be able to get our document published until June. We've worked to align messaging, but assume some RHAs may release the RHA guidance to schools earlier.

I've cc'd Angela in case there are additional questions.

Cheers,

Geoff

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Sent: Tuesday, February 14, 2023 4:01 PM
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Subject: School MHO Community of Practice
When: Tuesday, May 21, 2024 3:30 PM-4:30 PM.
Where: Microsoft Teams Meeting

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School and Wildfire Smoke

Wildfire smoke events are becoming more frequent as the climate changes, resulting in more days with poor air quality that can impact health. Wildfire smoke is a mixture of small particles and gases. The small particles, also known as fine particulate matter (PM_{2.5}), are the greatest health concern because they can travel deep into the lungs and cause irritation and inflammation. Exposure to PM_{2.5} can have both short-term and longer-lasting health impacts. For more information, visit [Wildfire Smoke \(bccdc.ca\)](https://www.bccdc.ca/wildfire-smoke)

Children are especially susceptible to wildfire smoke exposure for three reasons:

1. Their lungs, other organs, and immune systems are developing rapidly, and smoke may affect these processes at the cellular level.
2. They take in more smoke because they breathe faster and inhale more air per kilogram than adults.
3. They take in more smoke because they are more physically active than adults, especially outdoors.

Some children may be particularly susceptible to wildfire smoke, and in need of special attention during smoky conditions:

- Children with asthma may have acute attacks during smoky conditions. All children with asthma should have a documented asthma action plan. <https://rb.gy/lz0ur>
- Children with diabetes may find it more difficult to balance their blood sugar.
- Children with other chronic conditions such as obesity may also be more affected by smoke.
- Children with special needs and those who have difficulty communicating may need help assessing how the smoke is affecting them.

Reducing exposure to wildfire smoke is the best way to protect health during wildfire events. Schools should ensure that any children with symptoms promptly stop physical activity and seek cleaner air during smoky conditions. Those with severe symptoms may need medical attention.

Common symptoms of wildfire smoke exposure:

- Sore throat
- Eye irritation
- Runny nose
- Mild cough
- Phlegm production
- Headaches

Severe symptoms of wildfire smoke exposure:

- Difficulty breathing
- Persistent wheezing
- Severe cough
- Dizziness

Staff and other adults in school with asthma, COPD, and other chronic conditions may also be susceptible to wildfire smoke and should monitor their symptoms and reduce exposure.

School preparation checklist before wildfire season

- ☐ Subscribe to air quality advisories and alerts in your region
 - Metro Vancouver: <https://rb.gy/en1cb>
 - Outside Metro Vancouver: <https://u.nu/e3xtf>
- ☐ Develop a “Wildfire Smoke Readiness Plan” to prepare for wildfire smoke. Your regional public health authorities may have programs to support you.
- ☐ Install indoor and outdoor low-cost PM2.5 sensors at your school to monitor the outdoor air and the effectiveness of measures to improve indoor air. <https://rb.gy/a7zfn>
- ☐ Train school staff to recognize the signs of illness due to wildfire smoke and know when medical attention is needed.
- ☐ Keep up-to-date records of which students have chronic health conditions or special needs that make them more susceptible to wildfire smoke.
- ☐ Make appropriate plans and arrangements for susceptible students during wildfire smoke events:
 - Move outdoor activities inside.
 - Choose less strenuous activities for physical education.
 - Ensure those with rescue medications (e.g., inhalers for asthma) have easy access to them at school.
 - Ensure cool, cleaner indoor air spaces are available.
- ☐ Prepare your school to provide cleaner air during a wildfire smoke event:
 - ☐ Ensure building ventilation and air filtration systems are maintained according to the manufacturers’ specifications.
 - ☐ Where possible, install air filtration with a rating of MERV 13 or higher in the existing building ventilation system. <https://rb.gy/yy49h>
 - ☐ Purchase commercial portable air cleaners. Ensure that they are adequate for the size of the space. The Clean Air Delivery Rate (CADR) is a performance measure that can be used when selecting appropriate air cleaners. <https://u.nu/eerMF>
 - ☐ Construct do-it-yourself (DIY) air cleaners with box fans and furnace filters. DIY air cleaners, if made and operated properly, can provide similar air cleaning capacity to commercial units. <https://u.nu/QxeBd>
- ☐ Hot weather may also be a concern during smoky periods. Schools should plan to apply measures (e.g., air conditioning, window shading) to maintain safe indoor temperatures and cool spaces with cleaner air. For most people, including children, heat-related illness is a bigger health risk than wildfire smoke.

School action checklist during a wildfire smoke event

- ☐ Check wildfire smoke forecasts for your region to plan ahead. <https://u.nu/rmzk>
- ☐ Monitor the smoke situation closely. Check your local Air Quality Health Index (AQHI) and air quality advisories regularly. Note that the index can vary depending on your location and can change throughout the day. <https://u.nu/p-39>
- ☐ If you have a low-cost PM2.5 sensors installed at your school, check the readings to monitor the

outdoor air and assess the effectiveness of measures to improve the indoor air.

- ☐ If your school does not have its own low-cost sensors, check the nearest sensor available.
<https://rb.gy/hboc5>
- ☐ Be alert to symptoms among students. Take action to reduce their exposure to wildfire smoke and seek medical attention if they have severe symptoms.
- ☐ Reduce exposure to wildfire smoke as much as possible. Keep windows and doors closed during times of heavy smoke if temperatures allows. The risk for heat-related illness may increase at indoor temperatures over 26°C and may significantly increase at indoor temperatures over 31 °C.
- ☐ Use building air filtration systems, portable air cleaners, and DIY air cleaners to reduce indoor wildfire smoke concentrations.
- ☐ Use public health guidance based on the AQHI (shown below). Cancel outdoor recess and other outdoor activities if the AQHI is 7 or higher and support modified activities for students who are sensitive to smoke.

AQHI and Recommended Actions for Schools

1-HOUR PM _{2.5} (µg/m³)		AQHI	AQHI RISK CATEGORY	ACTIONS TO REDUCE STUDENT RISK	ACTIONS TO IMPROVE INDOOR AIR
	0-10	1	LOW	Normal outdoor air quality for BC. Encourage outdoor activities and play.	Normal outdoor air quality in BC. Maintain normal school operations.
	11-20	2			
	21-30	3			
	31-40	4	MODERATE	Be aware of students who are susceptible and support modified activities to reduce their smoke exposure.	<ul style="list-style-type: none">• Close exterior doors and windows if safe to do so without overheating.• Limit entry and exit to one or two doors.• Use commercial and DIY air cleaners.• Increase the filtration capacity of HVAC systems.• Monitor outdoor and indoor PM_{2.5} with low-cost sensors.
	41-50	5			
	51-60	6			
	61-70	7	HIGH	<ul style="list-style-type: none">• Move physical activities indoors.• Modify physical activities to reduce intensity.• Allow indoor recess and lunch.• Monitor susceptible students.	
	71-80	8			
	81-90	9			
	91-100	10			
	101+	10+	VERY HIGH		