

Subject: FW: 2022 alPHa Resolutions for Consideration
Date: Tuesday, May 17, 2022 3:27:55 PM
Attachments: [Resolutions_Voter_Registration_2022.docx](#)
[Resolutions_for_Consideration_Package_2022.pdf](#)



From: allhealthunits <allhealthunits-bounces@lists.alphaweb.org> **On Behalf Of** Gordon Fleming
Sent: May 17, 2022 3:19 PM
To: All Health Units <AllHealthUnits@lists.alphaweb.org>
Subject: [allhealthunits] 2022 alPHa Resolutions for Consideration

PLEASE ROUTE TO:
All Board of Health Members / Members of Health & Social Services Committee
Medical Officer of Health/Associate Medical Officers of Health
All Senior Public Health Managers

Dear alPHa members,

On behalf of alPHa Executive Director Loretta Ryan, I am pleased to circulate the Resolutions for Consideration package for the upcoming alPHa Annual General Meeting / Resolutions Session, which will take place online on Tuesday, June 14, 2022 as part of [alPHa's 2022 Annual Conference](#).

We are circulating this package prior to the conference to give our members ample opportunity to carefully review the proposed resolutions in advance of the Session. It is especially important that this information be distributed to delegates who will be attending the virtual conference on your health unit's behalf, particularly those who will be designated as voters.

Reminder: Given the technical requirements of online voting, individuals who are to be assigned voting rights on the health unit's behalf must be identified as such in advance by completing and returning the Voter Registration form (attached separately) no later than end-of-day, **Tuesday June 7**. Further details on voting allocation and procedures are included in the package.

We look forward to seeing you at the conference!

Gordon WD Fleming, BA, BASc, CPHI(C)
Manager, Public Health Issues
Association of Local Public Health Agencies
480 University Avenue, Suite 300
Toronto ON M5G 1V2
416-595-0006 ext. 223



To: Chairs and Members of Boards of Health
Medical Officers of Health and Associate Medical Officers of Health
alPHA Board of Directors
Presidents of Affiliate Organizations

From: Loretta Ryan, Executive Director

Subject: *alPHA Resolutions for Consideration at the June 14, 2022 Annual General Meeting*

Date: May 17, 2022

Please find enclosed a package of the resolutions to be considered at the Resolutions Session taking place following the 2022 Annual General Meeting (AGM) and important information on voting procedures.

Three resolutions were received prior to this year's April 22 deadline, and these have been reviewed by the alPHA Executive Committee and recommended to go forward for discussion at the Resolutions Session. One late resolution was received prior to the assembly of this package and is included here for your review.

NOTES ON LATE RESOLUTIONS:

Late resolutions are not reviewed by the Executive Committee and are subject to additional procedures for consideration of late resolutions. Please note that any further late resolutions received by alPHA will be added to the [online version](#) of the attached Resolutions for Consideration document as they come in to allow for review in advance.

Late resolutions will only be debated at the AGM if time allows and if delegates agree to consider these by a two-thirds majority vote. Please be reminded that such resolutions are otherwise subject to the same criteria as all other submitted resolutions, including the requirement that it be sponsored by a recognized alPHA Committee and not an individual acting alone. Please see the "[Procedural Guidelines for alPHA Resolutions](#)" for more details.

Due to the technical requirements of online voting, we must impose a deadline for late resolutions and cannot accept introduction of new ones during the meeting. To have a late resolution considered this year, it must be submitted in writing to loretta@alphaweb.org by 4:30 pm on Tuesday, June 7, 2022.

IMPORTANT NOTE FOR VOTING DELEGATES:

Members must register to vote at the Resolutions Session by filling out the attached registration form, wherein member Health Units must indicate who they are designating as voting delegates and which delegates will require a proxy vote.

Eligible voting delegates include Medical Officers of Health, Associate Medical Officers of Health, Acting Medical Officers of Health, members of a Board of Health and senior members in any of alPha's Affiliate Member Organizations. Each delegate will be voting on behalf of their health unit and only one proxy vote is allowed per person, up to the maximum total allocated per health unit (please see the table below).

The completed registration form must be received by Lindsay Koch (lkoch@nwhu.on.ca) no later than 4:30 pm on June 7, 2022.

Delegates who are voting will receive special log in instructions for voting purposes shortly before the conference.

If you have any questions on the above, please contact Loretta Ryan, Executive Director, 416-595-0006, x 222.

Enclosures:

Resolutions Voting Registration Form
Number of Resolutions Votes Allocated per Health Unit
2022 Resolutions for Consideration

**2022 alPHa Annual General Meeting
 Resolutions Session
 REGISTRATION FORM FOR VOTING**

Health Unit _____

Contact Person & Title _____

Phone Number & E-mail _____

Name(s) of Voting Delegate(s):

<u>Name and email address</u>	Proxy* (Check this box if the person requires a proxy voting card. Only one proxy is allowed per delegate.)	Is this person registered to attend the alPHa Annual Conference? (Y/N)
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Please email this form to IKoch@nwhu.on.ca by 4:30 pm on June 7, 2022 .

* Each voting delegate may carry their own vote plus one proxy vote for an absent delegate. For any health unit, the total number of regular plus proxy votes cannot exceed the total number of voting delegates allotted to that health unit.

aPHa RESOLUTIONS
NUMBER OF VOTES ALLOCATED PER HEALTH UNIT

HEALTH UNIT	VOTING DELEGATES
Toronto*	20
POPULATION OVER 400,000	7
Durham	
Halton	
Hamilton	
Middlesex-London	
Niagara	
Ottawa	
Peel	
Simcoe-Muskoka	
Waterloo	
York	
POPULATION OVER 300,000	6
Windsor-Essex	
POPULATION OVER 200,000	5
Eastern Ontario	
Kingston, Frontenac, Lennox and Addington	
Wellington-Dufferin-Guelph	
POPULATION UNDER 200,000	4
Algoma	North Bay-Parry Sound
Brant	Northwestern
Chatham-Kent	Oxford
Elgin-St. Thomas	Perth
Grey Bruce	Peterborough
Haldimand-Norfolk	Porcupine
Haliburton, Kawartha, Pine-Ridge	Renfrew
Hastings-Prince Edward	Sudbury
Huron	Thunder Bay
Lambton	Timiskaming
Leeds, Grenville and Lanark	

* total number of votes for Toronto endorsed by membership at 1998 Annual Conference

Health Unit population statistics taken from: Statistics Canada. [2016 Census. Census Profile](#)



Resolutions for Consideration 2022

**Resolutions Session
2022 Annual General Meeting
Tuesday, June 14, 2021
Online**

Resolution #	Title	Sponsor	Page
A22-1	Race-Based Inequities in Health	Council of Ontario Medical Officers of Health	3
A22-2	Public Health Modernization & COVID-19	Peterborough Public Health	4-5
A22-3	Provincial Cooling Tower Registry for the Public Health Management of Legionella Outbreaks	Simcoe Muskoka District Health Unit	6-15

LATE RESOLUTIONS: Resolutions received after the deadline may still be considered, but the onus is on the sponsor to submit them along with supporting materials to the alPHa office as soon as possible after the deadline for review and advance distribution to the membership. Late resolutions will only be debated at the AGM if time allows and if delegates agree to consider these by a two-thirds majority vote. Late Resolutions will be added below in order of date of receipt and the most up-to-date version of this document will be available on the [conference landing page](#).

A22-4	Late Resolution, received May 16: Priorities for Provincial Action on the Drug/Opioid Poisoning Crisis in Ontario	Council of Ontario Medical Officers of Health	16-19

TITLE: Race-Based Inequities in Health

SPONSOR: Council of Ontario Medical Officers of Health

WHEREAS the goal of public health is to reduce health inequities and improve the health of the whole population; and

WHEREAS this goal is mandated in the Ontario Public Health Standards; and

WHEREAS pre-existing health, social and economic disparities have been highlighted and deepened by the pandemic; and

WHEREAS evidence shows that racialized populations and low-income groups have suffered disproportionate harm related to COVID-19; and

WHEREAS alPHa denounces systemic racism and discrimination in all its forms and, instead, embrace diversity, in all its dimensions, as an asset and seek to promote respect for all; and

WHEREAS Ontario's [anti-racism strategic plan](#) includes the development of a disaggregated race data collection framework and guidelines to understand and address the adverse impacts of systemic racism; and

WHEREAS local public health agencies strive for equity and inclusion in our work environment in order to effectively deliver services to the communities we serve; and

WHEREAS local public health agencies have demonstrated the utility of systematic collection of sociodemographic data and its successful use to inform public health action so as to improve health outcomes and reduce inequities (for example, in the recent COVID-19 vaccination efforts);

THEREFORE BE IT RESOLVED THAT alPHa call on the Ministry of Health to work with stakeholders and communities to explore methods, supports, and resources to more systematically collect socio-demographic data including race, within the provincial health services and to make this data routinely available to local Public Health Units for assessment and planning, to ensure that we are deploying resources to the populations with the greatest need, supporting culturally safe public health services and preserving the capacity of the health care system.

DRAFT alPHa RESOLUTION A22-2

TITLE: Public Health Modernization & COVID-19

SPONSOR: Peterborough Public Health

WHEREAS the Province of Ontario has indicated its intention to “modernize” the process of public health delivery in Ontario; and

WHEREAS the consultations led by Mr. Jim Pine on behalf of the Province were interrupted by the emergence of the COVID-19 pandemic; and

WHEREAS public health has been significantly impacted both in the short and long term by the COVID-19 pandemic; and

WHEREAS there is a need to close the program deficit created during the last 28 months addressing COVID-19; and

WHEREAS there are significant lessons to be learned from addressing COVID-19; and

WHEREAS there is a need to engage municipal partners in any proposed financial changes to funding public health;

NOW THEREFORE BE IT RESOLVED that the Association of Local Public Health Agencies (alPHa) send formal correspondence to the Premier of Ontario, the Minister of Health of Ontario, and the Chief Medical Officer of Health of Ontario insisting that, prior to continuing with any renewal initiatives and/or implementing lessons learned from COVID-19, a new round of consultation with local public health agencies (LPHAs), alPHa, the Association of Municipalities of Ontario (AMO), the Ministry of Health and other relevant parties be conducted, and

AND FURTHER THAT alPHa take the position that the Ontario public health mandate as currently outlined in the Ontario Public Health Standards not be altered or diminished in an effort to achieve budget reduction targets, and that the Province continues to financially support LPHAs, in an adequate and predictable manner, to implement the Standards and not require municipalities to increase the percentage of their contribution, and

AND FURTHER THAT alPHa promote the following principles as fundamental to addressing modernization and COVID-recovery activities:

- That the recommendations, as outlined in the January 2022 alPHa Public Health Resilience in Ontario be given full consideration by the provincial government;
- That the current mitigation funding be continued until such time as the cost-shared arrangement is reset to 75/25 for all cost-shared programs and that the Province once again assumes 100%

funding for those programs identified as such in the public health budget for 2018-19.

- That COVID recovery be supported by 100% one-time funding from the Province to assist LPHAs in addressing non-COVID program deficits.
- That any amalgamation of existing public health units group units together that have similar communities of interest.
- That any reform of public health includes a local governance model.
- That the unique challenges of rural and urban communities be distinctly incorporated in any re-organization or modernization initiatives.
- That any re-organization, modernization or recovery initiatives be implemented with the meaningful participation of First Nations and Indigenous peoples.

TITLE: Provincial Cooling Tower Registry for the Public Health Management of Legionella Outbreaks

SPONSOR: Simcoe Muskoka District Health Unit Board of Health

WHEREAS Legionella can cause fatal disease and cases of Legionellosis remain underreported in the province of Ontario;

WHEREAS The burden of Legionellosis is increasing and is expected to continue to increase in the context of climate change;

WHEREAS Most non-healthcare-associated Legionellosis deaths are attributable to spread of Legionella from cooling towers by aerosolization;

WHEREAS Public health units must search for and identify cooling towers for environmental sampling and possible remediation in the context of community Legionella outbreaks, which delays remediation actions and causes considerable resource expenditure by public health units;

WHEREAS Legionella outbreak investigation and control could be streamlined if a province-wide cooling tower registry existed, yet no such registry exists;

NOW THEREFORE BE IT RESOLVED that the Association of Local Public Health Agencies (alPHa) write to the Minister of Municipal Affairs and Housing recommending the creation of a province-wide mandatory cooling tower registration system and mandating a risk management plan for cooling towers to operate;

AND FURTHER that the Minister of Health, the Minister of Environment Conservation and Parks, and the Chief Medical Officer of Health of Ontario be copied.

BACKGROUND:

PROVINCIAL COOLING TOWER REGISTRY FOR THE PUBLIC HEALTH MANAGEMENT OF LEGIONELLA OUTBREAKS

1. The burden of Legionella

Legionella bacteria are gram-negative aerobic bacilli that are ubiquitous in freshwater environments such as ponds, rivers, and lakes (1). Their ability to survive in biofilm and to reproduce within certain protozoa makes them resistant to chlorination and other traditional water disinfection protocols, enabling replication within plumbing systems (2), hence their designation as opportunistic premise plumbing pathogens. Most human infections are caused by Legionella pneumophila serogroups, though other legionellae species have been involved in human disease (3).

Legionella infection occurs primarily through inhalation of aerosolized water droplets and manifests as two distinct clinical syndromes in humans (1). Pontiac fever is generally mild in nature, self-resolving, involving febrile illness and muscle aches. Symptoms generally begin within 24 to 72 hours post exposure (4). Legionnaire's disease is a type of pneumonia that often manifests with overlapping systemic symptoms and can be severe. Hospitalization is common, and up to 10% of community-acquired cases (non-healthcare associated) are fatal (4). Risk factors for severe disease include age over 50, smoking, chronic lung disease, immunize system compromise, malignancy, or other chronic illness such as diabetes, renal failure, or hepatic failure (5). Cases of Legionnaire's disease are underreported because symptoms are non-specific, overlap significantly with those of other bacterial pneumonias, and Legionella testing is not performed routinely (6,7).

Transmission of Legionella is determined by the presence or absence of conditions that promote growth of Legionella, aerosol generation, and human exposure to aerosolized water (8). Aerosolization of contaminated water particles may occur through potable water systems (e.g., shower), cooling towers, whirlpool spas, or through other water sources such as decorative fountains, sprinkler systems, safety showers and eyewash stations, humidifiers, and nebulizers (2). Water stagnation, temperatures between 25°C and 45°C, and plastic and rubber plumbing materials favor the colonization and growth of Legionella (2).

Sources of Legionella infections can be difficult to determine, but cooling towers have been identified as significant contributors to the burden of Legionella. A cooling tower is an evaporative heat transfer device that places warm water from a building water system into direct contact with atmospheric air. The water is cooled upon contact, and the heat rejected into the atmosphere via evaporation (8). Legionella bacteria present in the cooling tower can be aerosolized via this process and spread to distances of over six kilometers away (9). In a large database that compiles published Legionella outbreaks worldwide, an infectious source for Legionella outbreaks was identified 68% of the time. While potable water systems account for a greater proportion of outbreaks (63%) relative to cooling towers (34%), the overall number of cases attributable to cooling towers is larger than the number of cases attributable to potable water systems (10). A separate review attributed 60% of Legionella outbreak-related deaths to cooling towers (11).

The reported incidence of Legionnaire's disease has been increasing provincially. From 2015 to 2019, the annual incidence rate for Legionellosis in Ontario more than doubled, from 0.9 cases per 100 000 population in 2015 to 2.6 cases per 100 000 in 2019 (12). Rates in Simcoe Muskoka have also increased in recent years and have exceeded provincial rates. In 2019, Simcoe Muskoka reported 3.5 cases per 100, 000 population. There have been two recent Legionella outbreaks in the Simcoe Muskoka region. On September 4, 2019, the Simcoe Muskoka District Health Unit (SMDHU) received a report of a confirmed case of Legionellosis in the City of Orillia. This single case was later associated with a cluster of cases. In

all, ten confirmed cases of Legionellosis were identified, with symptom onset ranging from August 9, 2019 to October 2, 2019. The investigation was completed on November 19, 2019. All ten cases required hospitalization and one death was reported. Thirty-nine locations were investigated for cooling towers within the Orillia area. Ten cooling towers in eight different locations were identified and sampled for Legionella. Of these, three cooling towers tested positive for Legionella, but only one of these samples matched the genetic sequence of Legionella found in two of the confirmed cases. As the cluster investigation in Orillia was being finalized, SMDHU received a report of a confirmed case of Legionellosis in the City of Barrie. Five cases were identified, with symptom onset between November 9, 2019 and December 12, 2019. All five cases required hospitalization, and two required admission to the intensive care unit. Twenty-eight cooling tower locations were identified by the SMDHU team as potential sources for the cases. Ultimately, ten cooling towers from 8 distinct locations were sampled for Legionella. Of the ten cooling towers sampled, three tested positive for Legionella spp. Further laboratory analysis with genomic sequencing showed no relation between the Legionella samples from the three cooling towers and confirmed cases.

Both clusters highlight the challenging nature of Legionella investigations. A necessary and time-consuming step in both investigations was the identification of operational cooling towers within a defined geographic area. A significant amount of time was spent in the search for potential cooling tower sites through a variety of means (including field assessments), which caused considerable delay in sampling of the potential sources of aerosolized Legionella and remediating towers with contamination.

The threat of Legionella is likely to increase in the context of climate change (13). Several empirical studies investigating the relationship between sporadic, community acquired Legionnaires Disease (LD) and meteorological variables were identified (14, 15, 16, 17, 18, 19, 20, 22, 23). Overwhelmingly, these studies found that increases in temperature, humidity, and precipitation increased the incidence of LD. Furthermore, Beute et al. (2016) suggest that higher temperatures are linked with behaviours that can increase the risk of potentially hazardous sources of Legionnaires (22). For example, higher outdoor temperatures are linked to increase use of air conditioning, taking showers, and using fountains (and air conditioning units, shower heads, and fountains are all potential sources of Legionnaires).

Finally, the COVID-19 pandemic may increase the risk of Legionella. Many buildings have been closed or have reduced their water usage in the past year in the context of public health measures, creating stagnant water conditions favorable to Legionella. The Ministry of the Environment, Conservation and Parks (23), Public Services and Procurement Canada (24), and the Canadian Water and Wastewater Association (25) have all issued statements to alert of or provided guidance to mitigate risks linked to Legionella in the context of building re-opening. The staged nature of our provincial re-opening plan and the increase in remote work arrangements mean these risks are likely to persist through 2021 and into next year.

2. Mitigating risks of Legionella outbreaks from cooling towers: Rapid review of the literature

SMDHU performed an environmental scan of jurisdictions in early 2020 to determine existing policies used to mitigate the risk of Legionellosis in buildings. It is useful to organize findings by jurisdictional level, namely national, provincial, and municipal.

The Federal role in mitigating the risk of Legionella is outlined in a joint 2018 report by the National Research Council of Canada (NRC), Health Canada, and Public Services and Procurement Canada (PSPC). The NRC publishes the National Model Construction Codes with oversight by the Canadian Commission on Building and Fire Codes. Included in the National Model Construction Codes are the National Building Code of Canada and the National Plumbing Code of Canada. Each contain provisions specific to the

control of Legionella in building systems to be implemented in the design and construction of cooling towers (26).

After construction, responsibility for mitigating Legionella risk at the Federal level is shared between Health Canada, the Treasury Board of Canada Secretariat (TBS), and PSPC. Health Canada creates drinking water guidelines, and Legionella is mentioned in its guidance document on waterborne bacterial pathogens, though the section on treatment technologies for Legionella offers a review of evidence for the relative effectiveness of various agents and technologies rather than firm recommendations (27). TBS indirectly mandates requirements for the investigation, risk assessment and control of Legionella as it relates to the health of federal employees (27). PSPC is responsible for mitigating the risk of Legionella on Government of Canada property and has developed the [MD-15161 Control of Legionella in Mechanical Systems](#) standard. Chapter 3 of the standard outlines design, construction, maintenance, and sampling requirements for mitigating the risk of Legionella in all crown-owned buildings (28). Different maintenance requirements are mandated on a weekly, monthly, and annual basis. Readers are directed to table 3.1 of the standard for a summary of mandated maintenance and testing requirements and to [Appendix D](#) for detailed cooling tower bacterial test protocols.

Finally, the Public Health Agency of Canada supports provinces by providing a national case definition for Legionellosis and by aggregating surveillance data (26).

Provinces and territories are responsible for development of their own protocols to prevent, investigate, and control Legionella-related outbreaks (26). The Ontario Public Health Standards (OPHS) Infectious Diseases Protocol puts forth high level principles for the prevention and control of Legionellosis. Section 6.2 of the disease-specific chapter on Legionellosis recommends implementation of a preventive maintenance program with hazard control measures, making specific reference to the American Society of Heating, Refrigeration and Air-Conditioning Engineers (ASHRAE) Standard 188-2015 – Legionellosis: Risk Management for Building Water (29).

The British Columbia Center for Disease Control guidelines for the management of Legionella outbreak investigation and control offer more comprehensive prevention recommendations (30). These include i) minimizing risk via design and installation recommendations, operational considerations, water temperature control and flushing, and regular disinfection protocols; and ii) implementation of a monitoring plan that may include testing routine parameters with heterotrophic plate count, weekly dipslide count, and testing at start of season and after disinfection (30).

Quebec has imposed the most stringent requirements for the control of Legionella. These include mandatory registration of all cooling towers with the Régie du bâtiment du Québec. Cooling tower operators must also provide the name of third-party professionals hired for implementation of a maintenance program, and the name and contact details of the laboratory to whom routine samples are sent for analysis (31).

Several municipalities in Canada have adopted local strategies for mitigating the risk of Legionellosis. The City of Hamilton, Ontario, passed the Cooling Tower Registry By-Law in 2011 that requires all cooling towers to be registered with the city with an accompanying risk management plan (32). The City of Vancouver, BC, has enacted a similar by-law mandating operating permits for cooling towers, decorative water features, alternate water systems, and building water treatment systems (33). The Middlesex-London Health Unit (MLHU) has also identified cooling tower registration as a key risk mitigation strategy for Legionella. The [MLHU Cooling Tower Registration Project](#) allows voluntary registration of cooling towers and assists cooling tower operators with their risk management plans.

The environmental scan also identified 13 guidelines for mitigating the risk of Legionella in cooling towers. The content of the guidelines was variable, though most (nine of the 13 guidelines) recommend a risk management plan. One of the more comprehensive guidelines is the ASHRAE Standard 188-2018, recently supplemented with Guidelines 12 (8), which offers operational considerations specific to cooling towers for implementing components of a risk management plan as outlined in Standard 188. Basic elements of a risk management plan include, but are not limited to (8):

- Documented system maintenance requirements, including scheduled inspection
- Specified routine water treatment protocols, including chemical treatment or other specialized treatment equipment. The goals of a water management plan are to extend equipment life, minimize energy consumption, minimize water consumption, and maintain a safe environment.
- System standby and shutdown protocols
- Disinfection protocols to remedy deviations from expected standards on routine monitoring, including when disinfection is urgently required
- Contingency response plan in the event of known or suspected cases of Legionellosis

Other risk mitigation strategies discussed in the guidelines include recommendations specific to risk assessment, testing, reporting and remediation actions. Auditing was only mentioned in two guidelines, and cooling tower registries was only mentioned in the BCCDC guideline. It is beyond the scope of this document to provide an in-depth review of the relative merits of each guideline.

The environmental scan also identified two synthesis documents that review control strategies for Legionella in plumbing systems. The first was produced by the US Environmental Protection Agency (EPA) and focuses exclusively on potable water plumbing systems (34). The second review was authored by Public Health Ontario (PHO), is more general in scope, and follows a question-and-answer format (2). The overarching findings from both documents were largely overlapping. In both documents, the challenges posed by Legionella's ability to survive in amoeba and biofilms is highlighted. Techniques for reducing Legionella contamination are extensively discussed, particularly in the EPA review. There is consensus that thermal control is effective, but that temperatures are hard to regulate consistently in complex water systems. The reviews identify monochloramine and chlorine dioxide as superior to chlorine for Legionella-containing biofilm penetration, but optimal concentrations of all chemical biocides are difficult to determine and depend on several system-specific variables including water pH, temperature, pipe material and condition, water turnover rate and turbidity. Moreover, chemical biocides may compromise integrity of the water system and come with a risk of disinfection by-products. Non-chemical biocides such as UV disinfection and ozone appear effective at decreasing Legionella counts that are associated with biofilms and amoebae but must be used in conjunction with other agents or techniques given their lack of a residual effect.

Both reviews also highlighted existing knowledge gaps concerning routine environmental sampling, and the large variation seen in guidelines recommending routine sampling. The PHO review cautions that interpretation of Legionella culture results can be challenging and lead to underestimation of risk. Culture of the organism, which is considered the gold standard for identification purposes, can be difficult on standard culture media and competing microorganisms may mask Legionella growth. Furthermore, Legionella contained within an amoeba host will not show up on culture (2).

Similarly, an evidence-based threshold of Legionella counts for remediation has not yet been determined. Some standards suggest using numerical cut offs based on colony-forming units per water volume. Others suggest a relative trigger for remediation, whereby remediation is performed when a sample exceeds average counts from historical samples by a certain margin. Neither are based in evidence.

To supplement the environmental scan, a rapid review of the evidence for various mitigation strategies to reduce the risk of spread of Legionella from cooling towers was performed. Seven observational studies

met inclusion criteria. Of these, one was discarded due to poor methodological quality. Two reports were from the province of Quebec, where a province-wide mandatory cooling tower registry, documentation of mechanical maintenance and water treatment programs and regular cooling tower sampling and culture were implemented following a significant outbreak in Quebec City in 2012. A decreasing trend in the number of samples exceeding a threshold of 10 000 colony-forming units per litre (cfu/L) was reported, though the level of significance for this observation was not clear and the association to human-cases of Legionella not discussed (35, 36). Similarly, France has required mandatory registration of all cooling towers since 2004 (also following a substantial outbreak), with obligatory sampling every two years. Findings from a cross sectional study suggest a decreasing trend in the number of Legionella cases since 2005 (37). A decrease in the number of yearly outbreaks was also reported (37).

The impact of routine sampling of plumbing systems and cooling towers was also described in Greece, where routine monitoring for Legionella was introduced in preparation for the Athens 2004 Olympic games. Greek authorities selected a threshold of 10 000 cfu/L for cooling towers and water distribution systems to trigger remediation. In hospitals specifically, a significant decrease in the contamination of potable plumbing systems was noted over the monitoring period, but no decrease in the proportion of cooling towers requiring remediation was noted (38). In community settings where the same measures were introduced, an inverse association was noted between Legionella contamination levels and the presence of a risk assessment and management plan with trained staff (39). The impact on Legionella cases was not discussed.

Finally, one mixed-methods study based in Texas investigated the impact of a requirement for owners of multi-family dwellings with cooling towers to perform annual testing for Legionella (40). Qualitative findings suggest that the testing requirement was effective in raising awareness of the potential risks of Legionella and enhancing overall controls, a finding that was also reported in Racine, 2019 (35). The low cost of testing (and possible remediation) was also identified as enabling by study participants. During the ten-year observation period from 2005 to 2015, the proportion of cooling towers with samples positive for Legionella decreased significantly. Trends in human cases were not noticeably different.

3. Policy options

To articulate policy recommendations, it is useful to discuss the expected real-world effects of the various risk mitigation strategies discussed above, while also accounting for implementation considerations.

The effectiveness of a mandatory cooling tower registry, and specifically, the impact of having a cooling tower registry on the number of human cases of Legionellosis, is difficult to assess because this intervention was never applied in isolation in the cross sectional studies we encountered in our rapid literature review. Mandatory registration was most often accompanied by routine sampling requirements and reporting. While the effectiveness of this intervention in reducing the burden of Legionella, therefore, cannot be commented on, there are several anticipated operational benefits to such a policy. First, having such a registry would improve the comprehensiveness and speed of public health response in the context of a suspected Legionella outbreak linked to a cooling tower. If a comprehensive list of cooling towers in each geographic area is readily available for reference by public health unit investigators, the task of identifying cooling tower locations is eliminated, and shutdown and remediation of potential sources of the outbreak can occur more rapidly, potentially saving lives. Procedures and processes that enable rapid detection and risk assessment during suspected Legionella outbreaks are essential (6) and SMDHU's own experience attests to this. Moreover, the human resources and other costs involved in a cooling tower outbreak response would also be diminished, because field investigations (for identification of potential cooling tower sites specifically) would be significantly reduced. Finally, mandatory registration of cooling towers would be necessary for other risk mitigation

strategies such as routine environmental sampling, reporting, and auditing to be effectively implemented.

The primary disadvantage of mandating cooling tower registration is the additional costs for multiple stakeholders. First, cooling tower operators will need to cover the cost of operating permits, though these are generally low (frequently under \$100 per annum) and some jurisdictions have provided operating permits at no cost in the initial phases of roll-out (41). Moreover, the processing of operating permit applications and maintenance of a cooling tower database will require administrative and technical staff support in government agencies at the local and provincial levels.

Implementation of a cooling tower registry can be done via various legal channels. While the examples of Hamilton and Vancouver demonstrate that cooling tower registries can be enacted through municipal by-laws, this approach is impractical for public health units who have jurisdiction over several distinct municipalities, as each would require its own by-law. A provincial approach, such as the one adopted in Quebec, could be implemented much more rapidly and with considerable savings (both in time and labour) for municipalities and their associated public health units across the province.

The cross-sectional articles we identified in our rapid review largely focused on frequent sampling and remediation. The overall impact on human cases of Legionella was largely equivocal. The benefits of routine sampling in a non-outbreak context remain unclear given the uncertain link between Legionella counts and likelihood of dissemination and human disease. Moreover, given the knowledge gaps that persist about interpretation of culture results and altogether arbitrary thresholds recommended in various guidelines, the effect of implementing a sampling protocol is difficult to forecast. In addition, a frequent sampling process imposes additional human resource demands on cooling tower operators and laboratories tasked with sample analysis. Therefore, a case for strong recommendation of routine sampling cannot be made at this time. Additional strategies, such as mandated reporting and preventive remediation would rely on routine environmental sampling being in place, and therefore cannot be recommended.

Most of the guidelines encountered in the environmental scan recommended implementation of a risk management plan, as described in the previous section. While the literature is equivocal on the association between implementation of a risk management plan and reduction of human cases of Legionellosis, the general principles of a risk management plan align with current understanding of factors that promote the growth of Legionella and how to mitigate these. A properly implemented risk management plan should decrease the presence of biofilm, monitor for, and remediate the presence of disinfectant residual, and control water age and water temperature. How to best achieve control of these factors, however, depends on a host of factors that may be unique to each facility. These include average temperature water, water replacement rate, plumbing system materials, turbidity level, and pH. Therefore, generalizable recommendations on the use of specific chemical biocides, their concentration, and potential supplementation with other effective decontamination techniques such as ozone or UV disinfection, are difficult to make. Instead, these decisions should be made by cooling tower owners for their specific system in consultation with manufacturers or third-party experts as they design their risk management plan and consider the potential for unwanted effects of various technologies including damage to plumbing infrastructure. Cooling tower operators should be directed to well-established guidelines for the formulation of risk management plans, such as the ASHRAE standard 188 (2018) and Guideline 12-2020 supplement, and the CDC Controlling Legionella in Cooling Towers resource. If testing is being considered by a cooling tower operator, Appendix D of the Mechanical design 15161-2013 control of Legionella in mechanical systems produced by the PSPC can be referenced (42).

4. Conclusion

The burden of Legionella is underestimated and rising. To protect Ontarians from potentially fatal disease, strategies mitigating the risk of Legionella spread from cooling towers must be adopted. Given operational considerations and the knowledge gaps that persist in the literature, the implementation of a province-wide mandatory cooling tower registry is recommended as a first step towards improving the control of Legionella in the province. Additional provisions could be made for cooling tower operators to have a risk management plan in place, though beyond general principles, decisions on the use of chemical biocides or other techniques should be made by cooling tower operators in consultation with experts familiar with the unique characteristics of their water system. Additional risk mitigation strategies, such as sampling, reporting, and auditing, could be added to the registration requirement if stronger evidence of their effectiveness becomes available. Finally, new technologies providing alternatives to wet cooling towers that would remove the risk of Legionella aerosolization entirely should be considered in the construction of new buildings.

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TITLE: Priorities for Provincial Action on the Drug/Opioid Poisoning Crisis in Ontario

SPONSOR: Council of Ontario Medical Officers of Health (COMOH)

WHEREAS the ongoing drug/opioid poisoning crisis has affected every part of Ontario, with the COVID-19 pandemic further exacerbating the issue, leading to a 73% increase in deaths from opioid-related toxicity from 2,870 deaths experienced in the 22 months prior to the pandemic (May 2018 to February 2020) to 4,951 deaths in the 22 months of available data since then (March 2020 to December 2021); and

WHEREAS the burden of disease is particularly substantial given the majority of deaths that occurred prior to the pandemic and the increase during the pandemic have been in young adults, in particular those aged 25-44, and the extent of the resulting trauma for families, front line responders, and communities as a whole cannot be overstated; and

WHEREAS the membership previously carried [resolution A19-3](#), asking the federal government to decriminalize the possession of all drugs for personal use based on broad and inclusive consultation, as well as supporting robust prevention, harm reduction and treatment services; and

WHEREAS the membership previously carried [resolution A21-2](#), calling on all organizations and governmental actors to respond to the opioid crisis with the same intensity as they did for the COVID-19 pandemic; and

WHEREAS the Association of Local Public Health Agencies (alPHa) has identified that responding to the opioid crisis is a priority area for local public health recovery in their *Public Health Resilience in Ontario* publication ([Executive Summary](#) and [Report](#)); and

WHEREAS recognizing that any responses to this crisis must meaningfully involve and be centred-around people who use drugs (PWUDs), inclusive of all backgrounds, and must be founded not only on evidence- and trauma-informed practices but also equity, cultural safety, anti-racism as well as anti-oppression; and

WHEREAS COMOH's Drug / Opioid Poisoning Crisis Working Group has recently identified nine provincial priorities for a robust, multi-sector response that is necessary in response to this crisis (see Appendix A); and

WHEREAS local public health agencies are well positioned, with additional resourcing, to play an enhanced role in local planning, implementation and coordination of the following priority areas: harm reduction, substance use prevention and mental health promotion, analysis, monitoring and reporting of epidemiological data on opioid and other substance-related harms, health equity and anti-stigma initiatives, efforts towards healthy public policy related to substance use including but not limited to decriminalization, and providing and mobilizing community leadership; and

WHEREAS this work of local public health agencies aligns with the Substance Use and Harm Reduction Guideline (2018) and the Health Equity Guideline (2018) under the Ontario Public Health Standards;

NOW THEREFORE BE IT RESOLVED that alPHa endorse the nine priorities for a provincial multi-sector response;

AND FURTHER that the noted provincial priorities and areas of contribution by local public health agencies be communicated to the Premier, Minister of Health, Associate Minister of Mental Health & Addictions, Attorney General, Minister of Municipal Affairs & Housing, Minister of Children, Community & Social Services, Chief Medical Officer of Health, Chief Executive Officer (CEO) of Ontario Health and CEO of Public Health Ontario;

AND FURTHER that alPHa urge the above-mentioned parties to collaborate on an effective, well-resourced and comprehensive multi-sectoral approach, which meaningfully involves and is centred-around PWUDs from of all backgrounds, and is based on the nine identified provincial priorities.

A22-4 Appendix A – Priorities for a Provincial Multi-Sector Response

The following was developed by the Drug / Opioid Poisoning Crisis Working Group of COMOH, and shared with the COMOH membership for review at its general meeting on April 27th, 2022:

1. Create a **multi-sectoral task force**, including people with lived experience of drug use, to guide the development of a robust, integrated provincial drug poisoning crisis response plan. The plan should ensure necessary resourcing, health and social system coordination, policy change, and public reporting on drug-related harms and the progress of the response. An **integrated approach** is essential, to address the overlap between the use of various substances, to integrate aspects of the response such as treatment and harm reduction, and to ensure a common vision for addressing health inequities and preventive opportunities.
2. Expand access to **harm reduction** programs and practices (e.g. Consumption and Treatment Service (CTS) sites, Urgent Public Health Needs Sites (UPHNS), drug checking, addressing inhalation methods as a key route of use and poisonings, and exploring the scale up of safer opioid supply access).
3. Enhance and ensure sustainability of support for substance use **prevention** and mental health promotion initiatives, with a focus from early childhood through to adolescence.
4. Expand the collection, analysis and reporting of timely integrated **epidemiological data** initiatives, to guide resource allocation, frontline programs and services, and inform healthy public policy.
5. Expand access to **treatment** for opioid use disorder, including opioid agonist therapy in a range of settings (e.g., mobile outreach, primary care, emergency departments) and a variety of medication options (including injectable). To support the overall health of PWUDs, also connect with and expand access to care for other substances, for mental illness and trauma as key risk factors for drug use, and for comprehensive medical care for PWUDs.
6. Address the structural **stigma**, discrimination and related harms that create systemic barriers for PWUDs, through re-orienting systems for public health, first responders, health care, and social services, to address service provider and policy-level stigma, normalize services for drug use, and better meet the needs of PWUDs. Also, support community and community leadership conversations to address drug use stigma and its societal consequences.
7. Advocate to and support the Federal government to **decriminalize** personal use and possession of substances, paired with increased investments in health and social services and a focus on health equity at all levels. These efforts aim to address the significant health and social harms of approaches that criminalize PWUDs, including Black, Indigenous and other racialized communities.
8. Acknowledge and address **socioeconomic determinants of health, systemic racism**, and their intersections that are risk factors for substance use and substance use disorders, and pose barriers to accessing supports. This includes a need for more affordable and supportive **housing** for PWUDs, and efforts to further address **poverty** and **unemployment/precarious employment**.
9. Provide funding and other supports to enable consistent **community leadership** by PWUDs and by community organizations, including engagement with local drug strategies. People who bring

their lived experience should be paid for their knowledge contribution and participation at community tables.