



AUGUST 2021

# Report of Stakeholder Workshop on Reopening and Safe Operation of Workplaces in a Pandemic



## Legal Notice

This document is provided by the Canadian Standards Association (operating as “CSA Group”) as a convenience only.

### **Disclaimer and exclusion of liability**

This document is provided without any representations, warranties, or conditions of any kind, express or implied, including, without limitation, implied warranties or conditions concerning this document’s fitness for a particular purpose or use, its merchantability, or its noninfringement of any third party’s intellectual property rights. CSA Group does not warrant the accuracy, completeness, or currency of any of the information published in this document. CSA Group makes no representations or warranties regarding this document’s compliance with any applicable statute, rule, or regulation.

IN NO EVENT SHALL CSA GROUP, ITS VOLUNTEERS, MEMBERS, SUBSIDIARIES, OR AFFILIATED COMPANIES, OR THEIR EMPLOYEES, DIRECTORS, OR OFFICERS, BE LIABLE FOR ANY DIRECT, INDIRECT, OR INCIDENTAL DAMAGES, INJURY, LOSS, COSTS, OR EXPENSES, HOWSOEVER CAUSED, INCLUDING BUT NOT LIMITED TO SPECIAL OR CONSEQUENTIAL DAMAGES, LOST REVENUE, BUSINESS INTERRUPTION, LOST OR DAMAGED DATA, OR ANY OTHER COMMERCIAL OR ECONOMIC LOSS, WHETHER BASED IN CONTRACT, TORT (INCLUDING NEGLIGENCE), OR ANY OTHER THEORY OF LIABILITY, ARISING OUT OF OR RESULTING FROM ACCESS TO OR POSSESSION OR USE OF THIS DOCUMENT, EVEN IF CSA GROUP HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, INJURY, LOSS, COSTS, OR EXPENSES.

In publishing and making this document available, CSA Group is not undertaking to render professional or other services for or on behalf of any person or entity or to perform any duty owed by any person or entity to another person or entity. The information in this document is directed to those who have the appropriate degree of experience to use and apply its contents, and CSA Group accepts no responsibility whatsoever arising in any way from any and all use of or reliance on the information contained in this document.

### **Intellectual property rights and ownership**

As between CSA Group and the users of this document (whether it be in printed or electronic form), CSA Group is the owner, or the authorized licensee, of all works contained herein that are protected by copyright, all trademarks (except as otherwise noted to the contrary), and all inventions and trade secrets that may be contained in this document, whether or not such inventions and trade secrets are protected by patents and applications for patents. Without limitation, the unauthorized use, modification, copying, or disclosure of this document may violate laws that protect CSA Group’s and/or others’ intellectual property and may give rise to a right in CSA Group and/or others to seek legal redress for such use, modification, copying, or disclosure. To the extent permitted by licence or by law, CSA Group reserves all intellectual property rights in this document.

### **Patent rights**

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CSA Group shall not be held responsible for identifying any or all such patent rights. Users of this document are expressly advised that determination of the validity of any such patent rights is entirely their own responsibility.

### **Use of this document**

This document is being provided by CSA Group for informational and non-commercial use only. If you do not agree with any of the terms and conditions contained in this Legal Notice, you may not use this document. Use of this document constitutes your acceptance of the terms and conditions of this Legal Notice.

# Table of Contents

|  |           |
|--|-----------|
| <b>Foreword</b>  | <b>6</b>  |
| <b>Acknowledgements</b>  | <b>7</b>  |
| <b>Executive Summary</b>   | <b>8</b>  |
| <b>Introduction</b>  | <b>10</b> |
| <b>Overview of the Stakeholder Consultation Process</b>                                  | <b>10</b> |
| <b>Phase 1 - Webinar</b>   | <b>11</b> |
| <b>Phase 2 - CSA Communities Collaborative Workspace</b>                                 | <b>14</b> |
| Pre-Workshop Poll on The Need for a Standard   | 15        |
| Pre-Workshop Poll on the Scope of a Potential Standard                                   | 16        |
| Pre-Workshop Poll on the Level of Awareness of Other Standards                           | 17        |
| Pre-Workshop Poll on the Domains that Gave the Most Concern for Reopening Workplaces     | 17        |
| <b>Phase 3 - Virtual Workshop</b>  | <b>18</b> |
| Day 1 - Plenary  | 18        |
| Day 1 - Breakout Session   | 20        |
| Day 1 - Poll on the Logical Starting Point for Creating a Standard                       | 20        |
| Day 2 - Plenary  | 20        |
| Day 2 - Breakout Sessions  | 21        |
| Breakout Session A - Ongoing Pandemic Preparedness                                       | 21        |
| Breakout Session B - Intersection Between Public Health and OHS                          | 22        |
| Breakout Session C - Changes to Existing Documents                                       | 23        |
| Breakout Session D - Managing the Human Element  | 24        |
| Day 2 - Final Plenary  | 25        |
| <b>Summary of Workshop Outcomes</b>  | <b>26</b> |
| <b>Recommendations to Address the Need for a Standardization Solution</b>                | <b>26</b> |
| <b>Recommendations to Address the Lack of Coordination between Public Health and OHS</b> | <b>26</b> |
| <b>Recommendations to Address the Lack of Awareness About Existing Standards</b>         | <b>27</b> |

|   |           |
|---|-----------|
| <b>Next Steps</b>   | <b>27</b> |
| CSA Group Research  | 27        |
| Published Guidance Documents  | 27        |
| New Standards Under Development   | 27        |
| <b>Appendix A - Workshop Participants</b>   | <b>28</b> |
| <b>Appendix B - COVID-19 Resources Shared by Workshop Participants<br/>in the Collaborative Workspace</b>                                     | <b>30</b> |
| British Columbia  | 30        |
| Manitoba  | 30        |
| Ontario   | 30        |
| Nova Scotia   | 30        |
| Quebec  | 30        |
| Federal   | 31        |
| International Resources   | 31        |
| <b>Appendix C - COVID-19 Response Standards and Guidance Documents<br/>Available from CSA Group &amp; Other Standardization Organizations</b> | <b>32</b> |
| CSA Group   | 32        |
| International Organization for Standardization  | 32        |
| American Society of Heating, Refrigerating and Air-Conditioning<br>Engineers (ASHRAE)   | 33        |
| European Committee for Standardization (CEN)  | 33        |
| <b>Appendix D - Additional Comments Provided by Participants During<br/>Pre-Workshop Polls</b>  | <b>34</b> |
| Comments from Pre-Workshop Poll on Scope of a Potential Standard  | 34        |
| Comments from Pre-workshop Poll on Domains that Gave the Most Concern   | 35        |
| <b>Appendix E - Workshop Agenda</b>   | <b>37</b> |
| <b>Appendix F - Additional Prompts Provided to Moderators on Day 2</b>  | <b>39</b> |
| Breakout Session A: Ongoing Pandemic Preparedness   | 39        |
| Breakout Session B: Intersection Between Public Health & OHS  | 39        |
| Breakout Session C: Changes to Existing Documents   | 40        |
| Breakout Session D: Managing the Human Element  | 40        |

## List of Figures

|   |           |
|---|-----------|
| <b>Figure 1: Phases of the consultation process</b>   | <b>11</b> |
| <b>Figure 2: Webinar Polling Results on the Need for a Standard</b>                           | <b>12</b> |
| <b>Figure 3: Webinar Polling Results on the Domain Presenting the Most Concern</b>            | <b>13</b> |
| <b>Figure 4: Pre-Workshop Polling Results on the Need for a Specific vs. General Standard</b> | <b>16</b> |
| <b>Figure 5: Pre-Workshop Polling Results on the Domains that Gave the Greatest Concern</b>   | <b>17</b> |
| <b>Figure 6: Domains and cross-cutting themes from CSA Research Report</b>                    | <b>19</b> |

## List of Tables

|  |           |
|--|-----------|
| <b>Table 1: Number of Webinar Attendees, by Regions and Stakeholder Category Represented</b>   | <b>11</b> |
| <b>Table 2: Sections of the CSA Research Report that may be Applicable in Future Pandemics</b> | <b>14</b> |



# Foreword

Any group may come forward to request a standard. Often safety organizations, trade/industry associations or government departments see a need for a standard and submit a proposal for consideration. This particular initiative arose in 2020 after the Advanced Manufacturing Supercluster (NGen) approached the Standards Council of Canada (SCC) looking for guidance they could provide to their members on how to safely reopen their manufacturing facilities as they pivoted their focus to support the fight against the novel coronavirus disease (COVID-19), caused by SARS-CoV-2.

On March 11, 2020, the World Health Organization declared COVID-19 to be a global pandemic. On March 20, 2020, the Government of Canada announced Canada's Plan to Mobilize Industry to fight COVID-19. The Plan introduced measures to directly support Canadian businesses and manufacturers to build domestic capacity, to expedite innovative solutions, and to facilitate the procurement of essential equipment, supplies, and services needed to support Canada's response to COVID-19. The Plan also refocused Canada's existing industrial and innovation programs by adding a requirement to their mandate that they prioritize the fight against COVID-19. Three of the five Innovation Superclusters launched projects to help companies rapidly scale up production or retool their manufacturing lines to develop and commercialize Canadian-made products (NGen, Digital Technology Supercluster, and the Scale AI Supercluster).

Member companies of NGen responded to issues related to testing methodologies, the supply chain of personal protective equipment (PPE), the availability of critical equipment, and preventing the spread of the virus. Early in the pandemic, projects were launched to improve the accuracy of virus detection, to design and manufacture personal protective equipment for frontline healthcare workers, to increase the availability of ventilators, and to prevent the spread of COVID-19 on high-touch surfaces. More recently, projects have been launched to reduce Canada's reliance on foreign suppliers for critical raw materials required in the production of PPE and air purification filters, to establish and build a raw material supply chain to support mRNA vaccine manufacturing capacity within Canada, among others.

As manufacturing companies began to pivot their operations in early 2020, NGen started getting questions about how to safely reopen and protect their workers. To find answers for its 3,300 members – most of whom are small and medium enterprises (SMEs) with fewer than 50 employees – NGen reached out to SCC for answers. Through their discussions, SCC and NGen recognized that the lessons learned from the continually evolving understanding of COVID-19 presented an opportunity that could lay the foundation for Canada to be better prepared to manage its response in future pandemics.

The SCC subsequently approached the CSA Group's Occupational Health and Safety Standards Program to explore whether a standardization solution would provide the necessary guidance needed by workplaces to safely operate during the current, as well as a future, infectious disease pandemic. In light of the complexity of issues involved and the diversity of stakeholders affected, it was determined that a key first step would be to obtain input via a stakeholder consultation process. This process included a public webinar in March 2021 and a virtual workshop held over 2 days in April 2021. This report (a) synthesizes and summarizes what we learned from stakeholders who participated in the workshop and (b) provides a roadmap for moving forward on the creation of a national infectious disease pandemic standard for Canada.

# Acknowledgements

CSA Group wishes to acknowledge SCC for their financial support of this special workshop. In addition, we wish to thank the workshop participants for sharing their expertise and suggestions at the workshop, as well as their active and engaged participation throughout the consultation process and NGen for championing this initiative.

For questions and comments on this Report, or for more information on this initiative, please contact:

[WorkerAndPublicSafetyStandards@csagroup.org](mailto:WorkerAndPublicSafetyStandards@csagroup.org)

*August 2021*

# Executive Summary

On March 11, 2020, the World Health Organization declared the novel coronavirus disease (COVID-19), caused by SARS-CoV-2, to be a global pandemic. Within a very short time, COVID-19 rapidly and drastically changed the way we live and work. While existing standards from CSA Group and other organizations could be applied in particular contexts, there was very little guidance available at the outset of the pandemic. In September 2020, CSA Group published a comprehensive research report entitled “Workplaces and COVID-19: occupational health and safety considerations for reopening and operating during the pandemic”. This report reviewed and summarized occupational health and safety (OHS) practices that could support safe reopening and ongoing operation of workplaces during the COVID-19 pandemic. The authors noted that although the report was focused on COVID-19, its findings could be used as a starting point to initiate the development of a new national standard focused on workplaces during any infectious disease pandemic.

In light of the complexity of issues and diverse stakeholders involved with this subject area, a stakeholder consultation process was conducted to evaluate the need for a standards-based solution(s). The stakeholder consultation process included a public webinar in March 2021 and a virtual workshop held on April 7<sup>th</sup> and 9<sup>th</sup>, 2021. This workshop provided an opportunity for 20 invited stakeholders to provide input on the guidance needed for workplaces to remain open and to operate during an infectious disease pandemic. This report (a) synthesizes what we learned from stakeholders who participated in the workshop and outlines the level of support for a standardization solution and (b) provides a roadmap for moving forward on the creation of a national infectious disease pandemic standard for Canada.

The following findings emerged from the consultation process:

1. There is overall agreement that workplace guidance on infectious disease pandemics is lacking and there is a need for one or more overarching workplace standard(s). Participants recommended that standards be developed to address three specific issues: pandemic planning and preparedness, pandemic response, and reopening workplaces during a pandemic. The planning and preparedness standard should be linked to an emergency preparedness standard and should provide guidance on resilient design and operation of building systems.
2. Any standard(s) developed must incorporate a clear, consistent framework anchored in well-established, rigorous, and up-to-date systems. Such a framework could be built around a structured risk approach (such as the Plan-Do-Check-Act model) or around business continuity and/or emergency preparedness principles. Further, it was recommended that any standard developed should provide guidance for all workplaces. Specific tools and annexes can be developed to deal with specific situations and industries.
3. Several documents already exist that could be good starting points. For example, the pandemic planning and response standards could be developed by building on the CSA Research Report and ISO/PAS 45005:2020 *Occupational health and safety management — General guidelines for safe working during the COVID-19 pandemic*. Guidance documents from organizations like the CNIB, the March of Dimes and the INSPQ in Quebec should also be consulted to ensure that (a) the needs of vulnerable populations are included and appropriately met and (b) the lessons learned from previous pandemic preparedness efforts are considered. Examples of best practice documents provided by workshop participants are included in Appendix B. Appendix C includes standards and guidance documents available from CSA Group & other standardization organizations that may also provide useful references for reopening and safe operation of workplaces during a pandemic.



4. The lack of coordination and harmonization between Public Health (PH) and Occupational Health and Safety (OHS) was identified as a key gap. Recommendations to address this gap include the harmonization of regulatory frameworks, clear and uniform messaging between various government agencies, and better integration of OHS into PH.
5. Other key gaps identified were a lack of awareness about (a) what already exists, (b) which organizations are authoritative sources of evidence, and (c) how to create psychologically safe environments. Recommendations to address these gaps include: cataloguing of all available standards to make it easier for someone to quickly determine which standards would be relevant in a given situation and to have a general understanding of what else is out there; legitimize sources of information that the CSA supports for use in a public health emergency to help workplaces and individuals differentiate between trusted vs. other sources of information.



## Introduction

On March 11, 2020, the World Health Organization declared the novel coronavirus disease (COVID-19), caused by SARS-CoV-2, to be a global pandemic. On that date, there were approximately 100 cases of COVID-19 in Canada. Less than 10 days later, the case count had climbed to 1,000 and businesses across Canada began closing or pivoting their operations in order to comply with public health orders. Within a very short time, COVID-19 rapidly and drastically changed the way we live and work.

Existing standards from CSA Group and other sources could be applied in particular contexts to the global pandemic and CSA Group made their relevant standards available for free viewing at the outset. However, there was very little guidance available that was COVID-specific and that could be broadly applied to the issues that many workplaces in Canada were struggling with. In September 2020, nearly six months into the pandemic, CSA Group published a comprehensive research report (entitled “Workplaces and COVID-19: occupational health and safety considerations for reopening and operating during the pandemic”) that reviewed and summarized occupational health and safety practices that could support safer reopening and ongoing operation of workplaces during the COVID-19 pandemic. Appended to the research overview was an evidence-informed guidance document intended to support workplace parties in reopening safely and implementing ongoing occupational health and safety practices to protect workers from COVID-19. The authors noted that although these two documents were focused

on COVID-19, they could be used as a starting point to initiate the development of a new national standard focused on workplaces during any infectious disease pandemic.

In light of the complexity of issues and diverse stakeholders involved with this subject area, it was determined that a stakeholder consultation process was a necessary first step to assess whether a standards-based solution could address important aspects of this complex issue. The stakeholder consultation process included a public webinar in March 2021 and a virtual workshop held on April 7<sup>th</sup> and 9<sup>th</sup>, 2021. This workshop provided an opportunity for 20 invited stakeholders (see Appendix A for a list of participants) to provide input on the guidance needed for workplaces to remain open and to operate during an infectious disease pandemic. This report (a) synthesizes what we learned from stakeholders who participated in the workshop and outlines the level of support for a standardization solution and (b) provides a roadmap for moving forward on the creation of a national infectious disease pandemic standard for Canada.

## Overview of the Stakeholder Consultation Process

Because the COVID-19 pandemic precluded a face-to-face consultation, a 3-phase virtual consultation process was designed to gather stakeholder perspectives (see Figure 1). The overall goal of the process was to engage in a dialogue with a representative group of thought leaders with relevant

**Figure 1:** Phases of the consultation process



expertise on best practices for safe operation of workplaces during an infectious disease pandemic. Two specific objectives of the consultation were:

- to assess the level of support for a national standardization solution(s) focused on the safe operation of workplaces during an infectious disease pandemic
- to provide a diverse range of stakeholders with the opportunity to provide feedback on the proposed solution of a standardization solution

The consultation process was planned by two external contractors (Joy Weismiller and Anya Keefe), in collaboration with CSA Group. Both the webinar and the workshop were moderated by Joy Weismiller of Juniper Consulting. CSA Group provided technical support for the entire process, as well as moderators to facilitate breakout sessions during the virtual workshop.

### Phase 1 - Webinar

The starting point for the consultation was a public webinar held on March 11<sup>th</sup>, 2021. The webinar was built around the findings of the CSA Group’s September 2020 research report “Workplaces and COVID-19: occupational health and safety considerations for reopening and operating during the pandemic”. Its goal was two-fold: to share information (via a keynote presentation from the report author) and to gather intelligence (via polls of webinar attendees and monitoring the issues and questions that emerged in the chat and during the question period) to help inform the planning of the workshop.

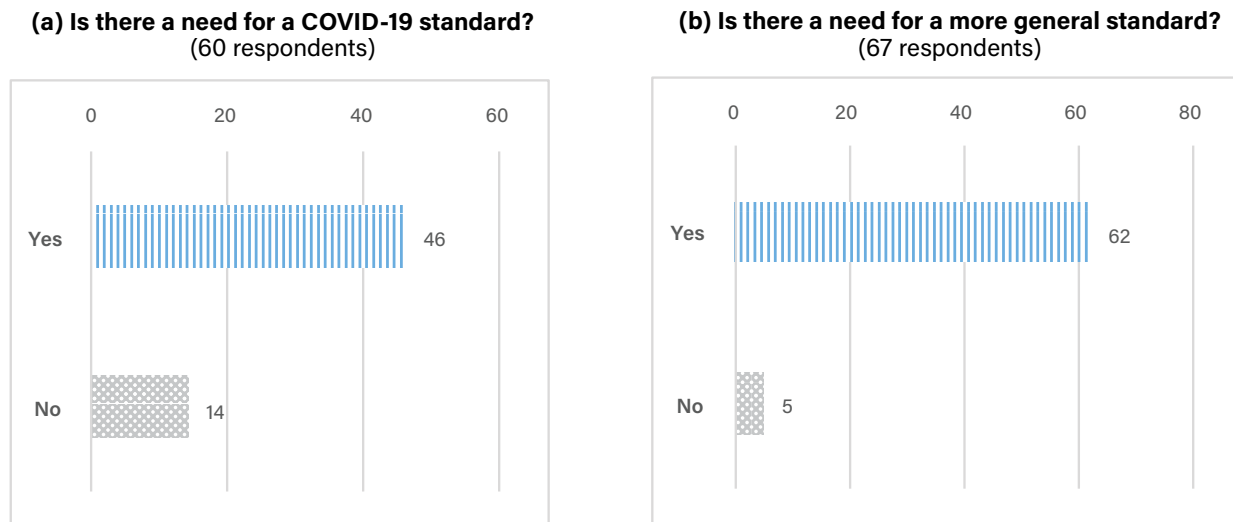
In total, 141 people registered to attend the webinar and 97 people attended. As shown in Table 1, the webinar attracted attendance from across Canada and across a diverse range of stakeholders. To allow for interactive engagement with the webinar audience, five polls were sprinkled throughout the keynote presentation.

**Table 1:** Number of Webinar Attendees, by Regions and Stakeholder Category Represented

| Region                  | Number <sup>1</sup> | Stakeholder Category                    | Number <sup>1</sup> |
|-------------------------|---------------------|---|---------------------|
| Alberta                 | 9                   | Government                              | 32                  |
| British Columbia        | 5                   | Academia                                | 25                  |
| Newfoundland & Labrador | 2                   | Industry                                | 12                  |
| Nova Scotia             | 5                   | Labour                                  | 1                   |
| Nunavut                 | 1                   | OHS Organizations                       | 5                   |
| Ontario                 | 64                  | Consultants                             | 1                   |
| Quebec                  | 5                   | Standardization Entities                | 13                  |
| Saskatchewan            | 1                   | Other (not specified; general interest) | 3                   |
| <b>Total:</b>           | <b>92</b>           | <b>Total:</b>                           | <b>92</b>           |

<sup>1</sup> Does not include the keynote speaker and the organizers of the webinar (2 from CSA Group, 2 contractors)

**Figure 2:** Webinar Polling Results on the Need for a Standard



Approximately two-thirds of the attendees participated in the five polls; however, the exact number of respondents varied by question.

The webinar began with brief introductory presentations from CSA Group (Candace Sellar, Program Manager, Worker and Public Safety), Standards Council of Canada (Brendan McManus, Manager, Innovation and IP), and Next Generation Manufacturing Canada (Stewart Cramer, Chief Manufacturing Officer). Dr. Victoria Arrandale, Assistant Professor at the Dalla Lana School of Public Health, gave the keynote address entitled “Workplaces and COVID-19: Occupational Health and Safety Considerations for Reopening and Operating During the Pandemic”.

Dr. Arrandale began her presentation by providing some background and context on COVID-19 in Canada and in the workplace. Before the findings of the CSA rapid research report were presented, the attendees were polled on (a) whether there was a need for a specific workplace standard focused on COVID-19 and (b) whether there was a need for a more general workplace standard focused on infectious disease pandemics. As shown in Figure 2, 77% of those who responded to Question (a) thought there was a need for a COVID-19 standard, while 93% of those who

responded to Question (b) thought there was a need for a more general standard on infectious disease pandemics.

In summarizing the findings of the CSA Research Report, Dr. Arrandale talked about the importance of breaking the chain of transmission and suggested that practices for preventing the introduction and transmission of COVID-19 in the workplace could be organized into three domains:

- 1. Domain I - Building Systems:** this domain is focused on systems that are critical to the safe and healthy operation of a building, including ventilation, cooling towers and water systems. The goal of practices falling into this domain is to reduce chemical and microbiological hazards, in addition to COVID-19.
- 2. Domain II - Workplace Organization:** this domain is focused on the physical design of the workplace and includes engineering controls (e.g., improved filtration and reduced recirculation in the Heating/Ventilation/Air Conditioning system), administrative controls (e.g., work practices like increased sanitization, fewer workers on site) and personal protective equipment (e.g., face masks or shields). The goal of practices falling into this domain is to reduce transmission in the workplace.

**3. Domain III – Supports for Individual Workers:** this domain is focused on efforts to improve or maintain an occupational health and safety culture that can support positive physical and psychological health in the workplace, including elimination (e.g., preventing COVID-19 from entering the workplace) and administrative controls (e.g., providing necessary accommodations). The goal of practices falling into this domain is to prevent the introduction of COVID-19 into the workplace and transmission within the workplace.

In addition to these domains, Dr. Arrandale identified two cross-cutting themes that are critical to mitigating the risk of COVID-19 in the workplace: (a) the presence of a strong health and safety culture and (b) clear ongoing communication about local risk and the reasons why policies are being implemented. Successful strategies in both of these thematic areas rely on active worker participation and engagement, as well as the recognition that an individual's response to risk is impacted by their perception of risk.

At this point of the webinar, the attendees were polled on which of the three domains described above gave them the greatest concern for reopening their workplaces. As Figure 3 illustrates, the majority of respondents indicated that Domain II – Workplace Organization gave them the greatest concern. Of the 53 respondents who answered this question, 25%

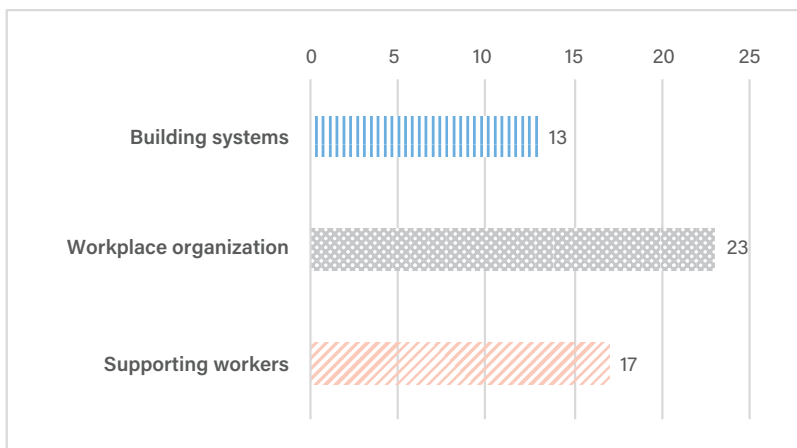
selected Domain I, 43% selected Domain II and 32% selected Domain III.

Dr. Arrandale subsequently presented a table that illustrated which sections of the CSA Report may be applicable to future pandemics (see Table 2) and discussed other standards that could be potentially useful. To assess the level of awareness about other standards, attendees were polled on whether they were aware of ISO/PAS 45005:2020 – *Occupational health and safety management – general guidelines for safe working during the COVID-19 pandemic*. Of the 42 respondents who answered this question, only 11 (26%) were aware of the ISO/PAS standard.

Dr. Arrandale concluded her presentation with four key messages:

1. COVID-19 is a challenge for workers and employers. Future infectious disease pandemics are likely to pose similar – not identical – challenges and any preparations need to be adaptable.
2. From a workplace perspective, the goal in any pandemic should be two-fold: to prevent introduction into the workplace and to prevent transmission within the workplace.
3. Multifaceted controls are needed from across the hierarchy of controls to address multiple domains: building health (building systems), workspace design and prevention, workers' physical and psychological health.

**Figure 3:** Webinar Polling Results on the Domain Presenting the Most Concern



**Table 2:** Sections of the CSA Research Report that may be Applicable in Future Pandemics

| Domain & Subdomain                       | Applicable in future pandemics? |
|--|---------------------------------|
| <b>Domain 1 - Building systems</b>       |                                 |
| Ventilation (HVAC)                       | May differ                      |
| Water systems                            | if shutdowns                    |
| <b>Domain 2 - Workplace organization</b> |                                 |
| Physical distancing                      | ✓ but may differ                |
| Cleaning and disinfecting                | ✓ but may differ                |
| PPE, masks, face coverings               | ✓ but may differ                |
| <b>Domain 3 - Supporting workers</b>     |                                 |
| Monitoring cases                         | ✓                               |
| Accessibility & accommodations           | ✓                               |
| Training and education                   | ✓                               |
| Psychological health                     | ✓                               |
| Transportation                           | May differ                      |
| New work environments                    | ✓ if shutdowns                  |
| Financial supports                       | ✓ if shutdowns                  |
| <b>Cross-cutting themes</b>              |                                 |
| <b>Risk assessment</b>                   | ✓                               |
| <b>Communication</b>                     | ✓                               |
| Worker consultation                      | ✓                               |
| <b>OHS Culture</b>                       | ✓                               |

4. Occupational health is closely linked with public health. Workplaces are sites of transmission and therefore, preventing transmission at work will not only protect workers, but also their families and communities.

Before opening the floor for questions, webinar attendees were polled on one final question: what should the scope of a Canadian standard be? Respondents were given three choices:

- a. The standard should cover all workplaces.
- b. The standard should focus on specific industries.
- c. I do not think a workplace standard is needed.

Of the 45 respondents, 31 (69%) indicated that the standard should cover all workplaces, 11 (24%) indicated that the standard should focus on specific industries, and 3 (7%) indicated that they did not think a workplace standard was needed.

### Phase 2 - CSA Communities Collaborative Workspace

Following the webinar, CSA Group issued a public call for expert volunteers to apply to participate in the virtual workshop. Interested stakeholders were encouraged to submit their CV and a short statement outlining their interest and ability to contribute to the work of this initiative. Workshop participants





were selected from the following interest categories, based on their expertise and ability to provide diverse stakeholder input on national standardization solutions. The selection process was designed to ensure a balance of stakeholder interests, as well as geographic and gender representation.

- **Commercial/Service Providers** — Includes those who are predominantly involved with production, promotion, retailing, or distribution of equipment or services related to workplace reopening in a pandemic.
- **User Management** — Includes those who represent the user interest, specifically employers, in the area of occupational health and safety.
- **User Labour** — Includes those who represent the user interest, specifically labour, in the area of occupational health and safety.
- **Government and/or Regulatory Authority** — Includes those who are predominantly involved in regulating the use of the subject product(s), material(s), or service(s).
- **General interest** — Includes those who are not associated with production, promotion, retailing, distribution, direct use, or regulation of the subject product(s), materials(s), or services(s). This category predominantly includes representatives of academic and scientific interests.

To ensure that the virtual workshop would not only be productive but would also maximize participant interactivity and engagement, it was decided to cap

participation in the workshop at 20 attendees. The list of workshop participants is provided in Appendix A.

Prior to the workshop, CSA Group created an invitation-only, collaborative workspace in CSA Communities for workshop participants. The goal was to provide a space that would allow for some pre-workshop engagement, discussion, and sharing of ideas and information. In addition, it allowed for the workshop organizers to gather some intelligence via polls and moderated discussions ahead of the workshop. To assess the level of agreement with the webinar poll results, the workshop participants were polled, in advance of the workshop, on the same 5 questions. The majority of the workshop participants participated in the advance polls. In addition to the polls, workshop participants were invited to share examples of best practice. These examples have been tabulated in Appendix B.

### **Pre-Workshop Poll on The Need for a Standard**

To assess the level of support for a standardization solution, workshop participants were polled on two questions:

- a. Is there a need for a specific workplace standard focused on COVID-19?
- b. Is there a need for a more general workplace standard focused on infectious disease pandemics?

Based on the relatively high number of non-responses in the webinar polls to these questions, the response categories were slightly modified to allow for participants to express if they were unsure a standard is needed or if they did not think a standard is the solution.

Like the webinar attendees, the majority of workshop participants thought there was a need for both a COVID-19 standard and a more general standard. As shown in Figure 4, 64% of those who responded to Question (a) thought there was a need for a COVID-19 standard, while nearly 30% weren't sure; and 81% of those who responded to Question (b) thought there was a need for a more general standard, while 19% indicated that a standard was not the solution.

For both questions, the proportion of those in agreement that a standard was needed was lower amongst workshop participants than it was amongst webinar attendees:

- 64% of workshop participants supported the need for a COVID-19 standard vs. 77% of webinar respondents.
- 81% of workshop participants supported the need for a general standard vs. 93% of webinar respondents.

### Pre-Workshop Poll on the Scope of a Potential Standard

Workshop participants were asked to provide input on what the scope of a standard should be if a national standard addressing pandemics in the workplace were developed. Three response categories were provided:

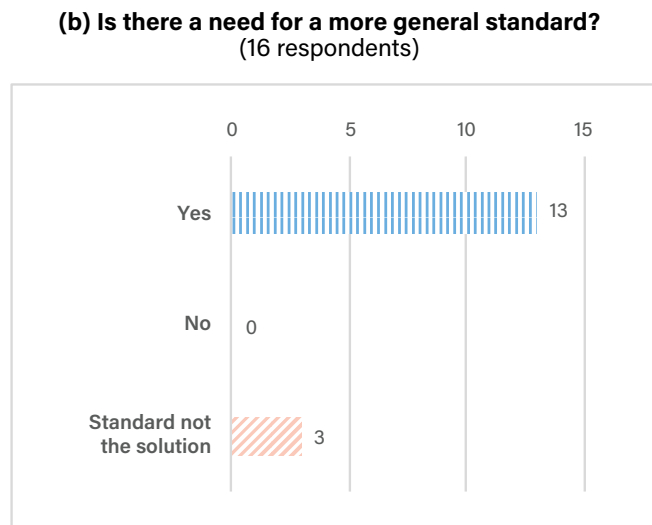
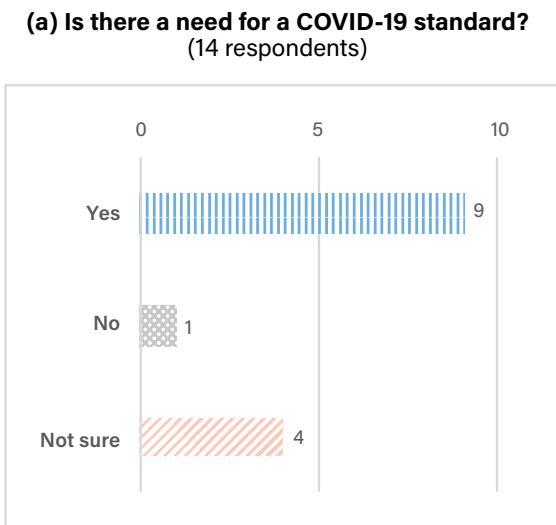
- The standard should be general and provide guidance for all workplaces.
- The standard should be specific and provide guidance for specific industries.
- I do not think that a workplace standard is needed.

Respondents were also invited to expand on their answers in the comments section below the poll.

Of the 15 participants who responded to this poll, 11 (73%) thought a potential standard should be general and provide guidance for all workplaces, while 4 (27%) thought it should be specific and provide guidance for specific industries. The proportion of workshop participants who agreed that a potential standard should be general and cover all workplaces was comparable to that of the webinar attendees (73% vs. 69%).

Six participants expanded on their selected preference. Their comments, with minor edits, are reprinted in

Figure 4: Pre-Workshop Polling Results on the Need for a Specific vs. General Standard



Appendix C. Although these six participants differed in whether they had selected answer (a) or answer (b), their comments clarified that they saw value in providing general guidance for all workplaces and they agreed that more specific guidance is warranted in certain high-risk situations.

### Pre-Workshop Poll on the Level of Awareness of Other Standards

Workshop participants were asked whether they were aware of ISO/PAS 45005:2020 – *Occupational health and safety management – general guidelines for safe working during the COVID-19 pandemic* before completing the poll or before signing up for the workshop. The response to this poll echoed what was heard in the webinar. The majority of workshop participants were not aware of the ISO/PAS standard. Of the 16 participants who completed this poll, only 6 (38%) were already aware of the ISO/PAS standard. In contrast, only 26% of webinar attendees were aware of the standard

### Pre-Workshop Poll on the Domains that Gave the Most Concern for Reopening Workplaces

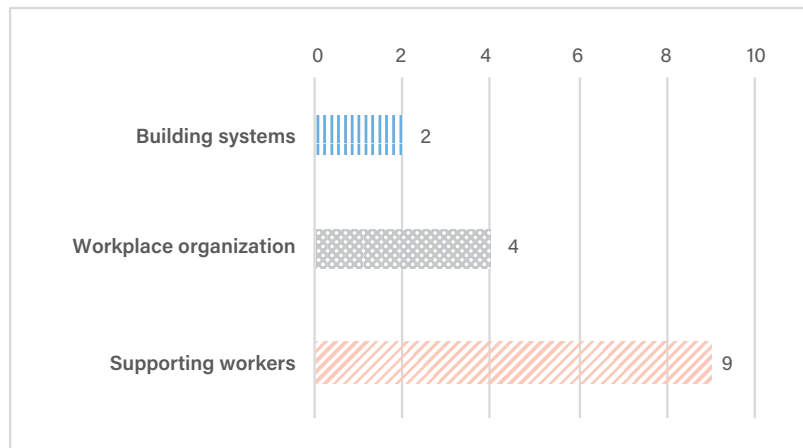
Workshop participants were provided a copy of the CSA Research Report and were asked to watch the webinar. In advance of the workshop, participants were polled on which of the three domains described in the

report gave them the greatest concern for reopening their workplaces. Participants were invited to explain and/or expand on their answers in the comments section below the poll.

As Figure 5 illustrates, the majority of responses from workshop participants indicated that Domain III – Supports for Individual Workers gave them the greatest concern. This is in contrast to the webinar attendees who indicated that Domain I gave them the greatest concern for reopening their workplaces. Of the 15 workshop participants who participated in this poll, 13% selected Domain I, 27% selected Domain II and 60% selected Domain III.

Seven participants expanded on their response. Their comments, with minor edits, are reprinted in Appendix C. These seven participants were divided on whether they felt Domain II (Workplace Organization) or Domain III (Supports for Individual Workers) was more important. Reasons given for being more concerned about Domain II included the cost and effort involved in making meaningful physical changes to help ensure safeguards are in place, while those given for Domain III focused on placing the burden of responsibility or cost onto the individual worker. It was also noted that the sheer amount of time and money required to install new or retrofit deficient building systems made Domain I a high priority over the long-term in order to be prepared for future pandemics or other disasters.

Figure 5: Pre-Workshop Polling Results on the Domains that Gave the Greatest Concern



## Phase 3 - Virtual Workshop

The information gathered from polls conducted during the webinar and in the collaborative workspace was used to plan the 5-hour virtual workshop that was convened over 2 days in early April 2021. The overarching objective of the workshop was to build on the findings of the CSA research report by engaging the participants in a deeper discussion about the kind of guidance needed for workplaces to remain open and operate safely during an infectious disease pandemic. One of the key goals was to gather further intelligence (via polls, plenary discussion and moderated breakout sessions) in order to (a) determine if support for a national standard exists and (b) develop a road map for moving forward that documented if and where there were areas of disagreement. To accomplish this, the agenda was structured to include plenary presentations, breakout sessions and opportunities for the small-group discussions to report back in plenary (see Appendix D).

### Day 1 - Plenary

The primary focus of the first day of the workshop, which was 3 hours long, was to lay the foundation for deeper discussion about the need for an infectious disease pandemic standard. Day 1 began with introductory comments and welcoming statements from representatives of CSA Group (Andrea Holbeche), Standards Council of Canada (Brendan McManus), and Next Generation Manufacturing Canada (Stewart Cramer). To set the stage for the rest of the workshop, Dr. Victoria Arrandale then gave a very brief, high level presentation on the key findings of the CSA research report.

Following this, CSA Group (Andrea Holbeche) briefly described how both the webinar and the workshop built on the findings of the research report and how they would both inform next steps, which would include consideration of whether there is a need to translate the research and experiences of the COVID-19 pandemic into standards for reference during potential future pandemics. In addition, two more pieces of information were shared with the participants: (a) polling insights from the webinar and collaborative workspace; and (b) a high-level description of what a standard is.

Before breaking out for small group discussion, another poll was conducted to take the pulse of the group regarding whether there was a need for one or more general workplace standard(s) focused on infectious disease pandemics. The purpose of repolling the participants on this question was to gauge whether their response changed after listening to the keynote presentation and learning more about the standards development process. Three response categories were provided:

- a. Yes, a more general workplace standard(s) focused on infectious disease pandemics is needed.
- b. No, a more general workplace standard(s) focused on infectious disease pandemics is not needed.
- c. I do not think a workplace standard(s) is the solution.

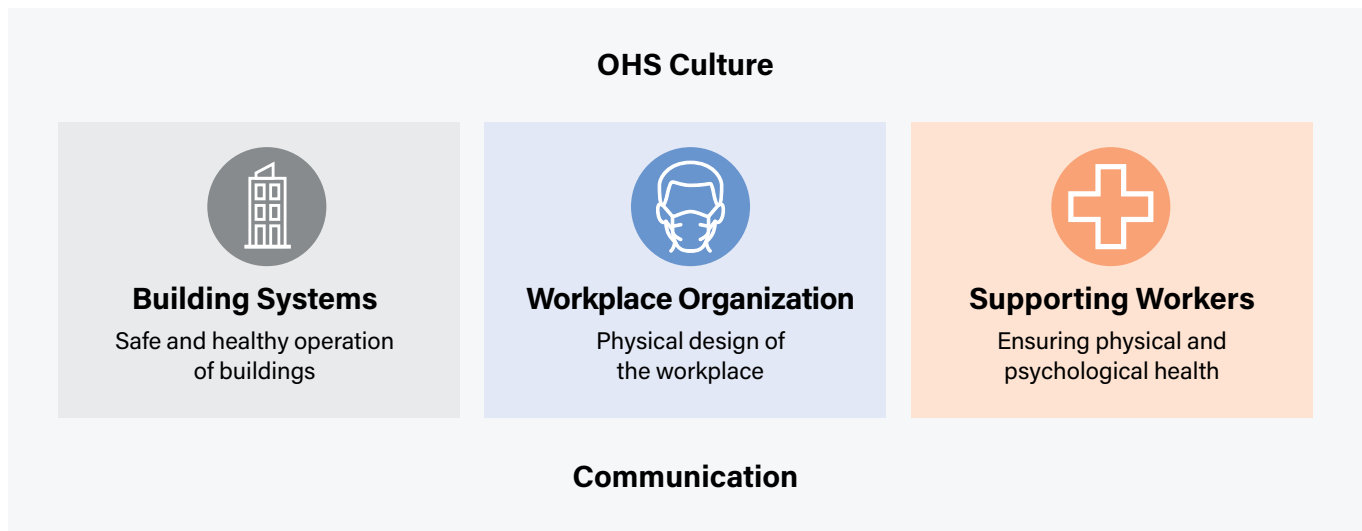
In contrast to the pre-workshop poll in which 3 individuals (or 19% of the respondents) indicated that they did not think a standard was the solution, there was unanimity amongst all 20 workshop participants that yes, a more general workplace standard focused on infectious disease pandemics is needed.

### Day 1 - Breakout Session

Workshop participants were divided into 4 groups and assigned to a 20-minute breakout session during which they were all asked to consider the following question: "Do you think the areas of guidance and practice set out in Part B [of the CSA Research Report] would hold for a future infectious disease pandemic?" Moderators were asked to focus the discussion on the domains and cross-cutting themes from the CSA research report (see Figure 6) and were provided with a copy of Table 2 to prompt deeper discussion where needed.

Following the breakout session, the moderators reported back to the full group in plenary. Each moderator was assigned one domain/theme and asked to lead a section of the recap. The recap order was as follows: Domain 1, Domain 2, Domain 3, Cross-cutting themes. For each recap, the assigned moderator started with a recap of the points for the Domain or Cross-cutting Theme in their breakout. The remaining moderators then followed with any additional points for that Domain or Theme.

Figure 6: Domains and cross-cutting themes from CSA Research Report



This topic generated a lot of good discussion – both in the breakout groups and in the chat during the subsequent report back period. The content of this discussion was subsequently used to inform the agenda for Day 2 and to redesign the four breakout sessions. Two key pieces of feedback that emerged during the recap were (a) the Domain Approach was not helpful as there was considerable overlap in domains and (b) there were gaps in Part B of the CSA Research Report and its approach to risk assessment was not consistent with other standards.

Across the four breakout groups, the following key themes emerged:

- **Workplace planning and preparedness** is crucial for a future pandemic.  
Any preparedness work should be situated under a broader umbrella of “business continuity planning”. The business continuity plan needs to address issues like working remotely, shutdowns, maintenance of equipment (especially critical fail-safe equipment and water systems), maintenance of building operation protocols, etc. The framework for managing any pandemic should be grounded in the precautionary principle. Policies must be developed with a continual improvement mindset and should not only factor in the impact on workers, but also their perspectives and experience. OHS professionals need to see epidemic preparedness as a core part of

their responsibility. There is a need to build pandemic preparedness into the culture of OHS prior to an ‘incident’ occurring.

- **Resilient operation and design** of buildings and building systems is paramount.

Heating, ventilation and air conditioning (HVAC) systems, particularly in office buildings, align with ASHRAE guidelines and are designed for comfort, not for control of chemical, biological or infectious agents. Some buildings (e.g., schools) rely on natural ventilation (i.e., open windows) rather than an HVAC system. In these situations, there may be a need to bring in additional equipment (e.g., air purifiers) and/or to upgrade the type of filters used. For longer term shutdowns, the water systems could potentially introduce another hazard, becoming a mechanism of transmission for water-borne diseases (e.g., Legionella) or of concentrating heavy metals. In considering whether building systems are designed to switch from normal operations to an infectious disease circumstance, there are a range of issues that need to be considered, including the impact that physical distancing and other control measures (i.e., plexiglass barriers) have on air flow and distribution, ventilation rates, etc. The degree to which an employer is able to retrofit or redesign the building systems is determined by who owns the building. Another factor affecting building retrofits is the balance between energy efficiency and costs.



- **Managing the perception of risk** is central to effective risk communication – particularly when it comes to low probability, high consequence events.

There is a need for tools that are nimble and that can adapt as evidence, knowledge, and understanding changes and evolves. Three examples that were highlighted from COVID-19 were surface cleaning requirements, the mechanism of transmission, the role of aerosol transmission. Communication strategies should not only focus on the integration of different groups and the sharing of resources, but also take advantage of opportunities to learn from the experience of other sectors (e.g., mine rescue) or other global events. Worker participation and consultation needs to be part of any strategy. It is also important to be mindful that risk perception is different for people with vulnerabilities or without vaccines.

- **The intersection of public health and occupational health** creates some unique challenges when dealing with an infectious disease pandemic.

In most of Canada, public health and occupational health and safety are governed by two different regulatory frameworks. The challenges created by these regulatory siloes could be addressed by an approach that integrates health protection on the job with health promotion off the job. One example of such an approach is the Total Worker Health® (TWH) approach developed by the US National Institute for Occupational Safety and Health (NIOSH). NIOSH defines TWH as “policies, programs, and practices that integrate protection from work-related safety and health hazards with promotion of injury and illness-prevention efforts to advance worker well-being”<sup>1</sup>. TWH builds on traditional approaches to OHS by recognizing that work is a social determinant of health<sup>2</sup>.

- **Policies to protect vulnerable workers** must be created and implemented.

These policies should cover workers at high risk of severe disease/death (i.e., those who are older, those who have chronic medical conditions and/or

are immunocompromised) as well as workers who are racialized, socially disadvantaged, marginalized and/or precariously employed. Policies developed to accommodate workers with disabilities must take into account that important differences exist in how workers with disabilities are accommodated in the office vs. how they are accommodated at home. To avoid secondary injuries, there is a need for policies to support workers who are working from home with ergonomic evaluations.

## Day 1 – Poll on the Logical Starting Point for Creating a Standard

Before the workshop adjourned for the day, workshop participants were polled to determine whether one of the existing guidance documents was a logical starting point for a future standard (should one be developed). Five response categories were provided:

- a. Part B of the CSA Research Report.
- b. ISO/PAS 45005:2020.
- c. A combination of both.
- d. Neither.
- e. Other.

Nineteen of the 20 workshop participants were present for this poll. Of the 19 participants, 2 (11%) selected Part B of the CSA Research Report, 4 (21%) selected the ISO/PAS standard and 13 (68%) selected ‘a combination of both’.

## Day 2 – Plenary

The primary focus of the second day of the workshop, which was 2 hours long, was to engage in deeper discussion about the need for an infectious disease pandemic standard. Day 2 began with the moderator

(Joy Weismiller) providing a brief recap of what had been learned on Day 1 and explaining how these learnings had been used to pivot and inform the focus of Day 2 breakout sessions. The Workshop Chair and Project Champion (Stewart Cramer) then welcomed

<sup>1</sup> For information about TWH, tools, and resources, see <https://www.cdc.gov/niosh/twh/totalhealth.html>

<sup>2</sup> For information on the social determinants of health, see [https://www.who.int/health-topics/social-determinants-of-health#tab=tab\\_1](https://www.who.int/health-topics/social-determinants-of-health#tab=tab_1)



everyone back to the workshop and took a moment to frame the day's discussions with the following 3 observations:

1. Because the Canadian context is distinct from the US and the EU, there is a need to address ongoing preparedness that is Canadian facing.
2. In the case of pandemic preparedness, there are multiple regulatory frameworks that are odds with each other.
3. Standards are pragmatic evidence-informed solutions that are Informed by science, but also factor in what is practicable and technically achievable.

## Day 2 – Breakout Sessions

The moderator then introduced the 4 topics of discussion for the breakout sessions and explained how the breakout sessions were going to work. To maximize opportunity for feedback, the 4 breakout sessions were organized as a wandering flip chart exercise. The moderators were each assigned a single question that they stayed with the entire time, while the participants “wandered” between questions in each time block. Each session was broken into 4 blocks of varying duration (Block 1: 20 minutes; Block 2: 10 minutes; Block 3: 7 minutes; Block 4: 7 minutes). Because of the virtual format, the duration of each Block included time for transition from the previous Block.

With the initial group (i.e., Block 1), the moderators began with the full breakout question and prompts. With the subsequent groups (i.e., Blocks 2-4), the moderator provided the group with a summary of the previous group/groups input and then asked: “Do you have any refinements or additions to what the previous group has proposed?” After the breakout, each moderator recapped their session in the main plenary.

### Breakout Session A – Ongoing Pandemic Preparedness

The goal of this session was to develop a framework for ongoing pandemic preparedness for workplaces. Participants were tasked with considering two overarching questions:

1. How do you ensure organizations are resilient and/or stay prepared for low probability/high consequence events in the future?
2. If a basic framework for organizations to maintain ongoing pandemic preparedness were developed, what does it include?

To assist participants with answering Question 2, the moderator was also provided with an additional prompt that compared elements in Part B of the CSA Research with elements of the ISO/PAS 45005 Standard (see Appendix E). The reason for providing this prompt was that the majority of participants had indicated in the final poll of Day 1 that elements of these two documents could be combined as a starting point for the development of a national standard.

Key themes that emerged in this breakout session were:

- A **structured risk approach**, such as the Plan-Do-Check-Act (PDCA) model, is needed.  
  
Leadership commitment is essential. The framework must become part of the managerial fabric (i.e., incentives, repetition, something that has to be measured each year). Participants noted that building the tool is the easy part, keeping it part of the operations going forward will be hard. Regardless of the structured approach taken, it must address risk, tools, risk mitigation measures (such as the hierarchy of controls), and risk communication.
- **Business continuity planning** is a key component of the framework.

Businesses need to be able to navigate risk on a day-to-day basis, but not all businesses need the same kind of interventions. A pandemic planning standard should include an Incident Command Structure with criteria for when the situation meets the definition of ‘emergency’, as well as information on who would fill certain roles during the emergency. It should also include information about phases of the pandemic so that workplaces can be aware and potentially plan for what’s coming as opposed to just waiting for public health orders.



- Any **framework must be linked and anchored** to something that is well-established and that has rigor.

Pandemic planning should be addressed as part of ongoing operations/health and safety/risk management. The basic framework may fit into the Emergency Preparedness and Response Standard or it could be laid out to align with standard occupational health and safety management (OHSMS) frameworks. The hierarchy of controls should be applied to determine what is most effective (administrative controls are particularly important) and whether new hazards are introduced when businesses and physical structures reopen after prolonged shutdowns. The framework must factor in inclusive design (i.e., mental wellness, accessibilities, Indigenous populations). Planning for the “statistical average” in situations of low impact/high consequence does not work in all situations and does not encompass inclusive design. At the outset of a pandemic, when little is known, application of the Precautionary Principle<sup>3</sup> is really critical.

- There must be **clarity on the rights and responsibilities** of workers and of employers.

Individual rights and responsibilities change during a pandemic or an emergency. For example, the rights of the individual worker that are guaranteed under labour legislation may be affected in a public health emergency. This has implications on who may be entitled to access and share personal information,

such as the health information of workers. Further, it is also important that roles and responsibilities during a pandemic be appropriate. For example, it is not appropriate to require that workers ensure that colleagues stay home when sick.

### **Breakout Session B - Intersection Between Public Health and OHS**

The goal of this session was to explore the intersection between public health and occupational health and safety frameworks. Participants were tasked with considering two over-arching questions:

1. What is needed to support employers in addressing the intersection between public health measures and occupational health frameworks?
2. Are there differences between what larger vs. small employers need?

To assist participants with answering these questions, the moderator was provided with a list of public health messages from the COVID-19 pandemic that, although simple in concept, were challenging to implement in workplaces (see Appendix E). Examples included: stay home and away from others if you feel sick; maintain a physical distance of 2 metres from people outside of your household; ensure good indoor ventilation; avoid/limit closed spaces (with poor ventilation), exposure with people outside your immediate household, close contact settings and close-range conversations.

<sup>3</sup> The Precautionary Principle is invoked in situations where there is an absence of scientific consensus or incomplete scientific proof on risk. The principle implies that in these situations, the lack of scientific certainty should not be used as a reason to justify not taking action. In other words, despite the absence of proof or certainty, there is a social responsibility to protect the public or the workforce from harm.

Key themes that emerged in this breakout session were:

- There is a **disconnect between Public Health and OHS**.

While Public Health may be experienced in general infectious disease, it lacks technical knowledge of OHS principles (e.g., a working knowledge of a ventilation system). The intersection between OHS and Public Health must be approached with a risk-framing perspective and an OHS perspective should be factored into the decision-making tables when deciding on Public Health measures.

- There is a **need for a strong, mutually respecting, and collaborative relationship** between Public Health and OHS.

Most employers have a working relationship with OHS professionals and OHS frameworks but have a limited understanding of Public Health. The model in Quebec, where OHS is within the Public Health umbrella, offers an instructive example of how the two disciplines could work together. Another model that integrates the two domains is the Total Worker Health® approach (described above on page 18). In 2020, the American Society of Safety Professionals (ASSP) initiated the development of a new American National Standard entitled BSR/ASSP Z590.7-202x – *Management Systems for the Implementation of Total Worker Health® Programs in the Workplace*. The proposed standard will define requirements for the implementation, enhancement, and ongoing improvement of a management system addressing Total Worker Health Programs® in the Workplace.

- There is a need for **clear and uniform messaging** between the various governmental agencies.

During the COVID-19 pandemic, there was a lack of clarity from various governmental agencies. For example, the general population was being asked to stay at home, while essential workers with critical care duties were asked to continue working but within a prescriptive bubble. When it comes to Public Health, the importance of OHS is highly understated. The message of the COVID-19 pandemic was that Public Health is fighting the COVID-19 virus, while OHS is fighting sickness at the workplace.

- There is a **need for multi-dimensional thinking**, particularly in relation to vulnerable populations, and for consultation with accessibility professionals.

During the COVID-19 pandemic, public health orders didn't take into consideration the needs of vulnerable communities, such as the disabled or differently abled. The impact of the pandemic on work-based accommodation health plans needs to be examined.

## Breakout Session C – Changes to Existing Documents

The goal of this session was to identify priorities for updating existing documents and standards. Participants were tasked with considering two overarching questions:

1. What existing documents and/or standards need to be updated to prepare for the next pandemic?
2. What documents do you wish had already contained requirements and/or information at the start of the pandemic?

To assist participants with answering these questions, the moderator was also provided with the following prompt: "Some examples of existing CSA Standards that might include criteria relevant to a pandemic include the following (see Appendix E). There are many other standards and regulations in use (e.g., ASHRAE was mentioned on Day 1) that could be updated to enhance resiliency and ongoing pandemic preparedness."

Key themes that emerged in this breakout session were:

- There is a **need for an overarching standard(s)** that reference or point to other standards.

An overarching standard – whether under business continuity or OHSMS – is essential so that people don't have to piece this together. Separate standards should be developed that address pandemic planning, pandemic response and reopening workplaces during a pandemic. Specific tools and annexes should also be developed to deal with specific situations and specific industries (e.g., gyms, factories), as well as to help employers who aren't equipped to make OHS management decisions.

There is not much described in CSA standards about building safety plans and how to establish them. Creating a general framework for small buildings vs. large buildings would also be relevant for non-pandemic situations. This could be achieved by regrouping the good elements from other standards. As an example, the Building Standard should be revised to specifically address humidity control and air flow. Clearer guidance is needed for smaller buildings with traditional heating, ventilation and air conditions (HVAC) systems and how to effectively use windows.

Whatever standardization solution is developed, there is a need to address interprovincial differences in Public Health and to incorporate minimum Public Health requirements.

- Documents with **existing frameworks are good starting points.**

A number of documents exist that could be used as starting points for any standards that are developed. For example, the CSA Research Report and the ISO standard could be used to inform the development of the pandemic planning and the pandemic response standards. Quebec developed guidance for H1N1 preparedness and a hierarchy of what to do in workplaces that is highly relevant to the development of a pandemic preparedness standard. To ensure that accessibility issues are appropriately considered, guidance documents from organizations like the CNIB and the March of Dimes should be consulted.

- There is a **general lack of awareness about what already exists.**

CSA Group's "Z" standards are all voluntary and, as a result, many businesses didn't know they existed. There is a need for better communication of what guidance already exists and for that guidance to be understandable. It was noted that often the information is so technical that it's not accessible for smaller employers. It's not realistic that small businesses will hire experts to fix the problem. Therefore, it is important to give them resources in a format that is usable. Annexes that deal with specific situations would be helpful.

## Breakout Session D – Managing the Human Element

The goal of this session was to explore approaches for managing the human element. Participants were tasked with considering two over-arching questions:

1. What is the best approach to address some of the human elements related to pandemic preparedness and response?
2. How do we address issues such as workplace safety perception and confidence, communication and training, access to supports, complacency in applying certain controls (e.g., screening tools) in a prolonged response?

To assist participants with answering these questions, the moderator was also provided with prompts to elicit discussion on specific supports for workers, psychological health and safety, and worker perceptions of safety and exposure (see Appendix E).

Key themes that emerged in this breakout session were:

- **Internal resources, technical skills, and organizational ability** to adapt play an important role.

During the COVID-19 pandemic, employers struggled to find information in plain sight to help them keep people safe. The dynamic nature of the pandemic made it difficult to manage the speed of information and to disseminate it effectively. Frontline supervisors were the ones who had to implement the changes, but if they don't have a cohesive answer on WHY things were being changed, it undermined confidence. In developing a standard, it will be necessary to consider where organizations are starting from and that they have different tools available, as well as varying abilities to respond, adapt and support their workforce. Mental health, well-being, psychological health must also be integrated, although compliance in the field is challenging. It is essential that leaders understand, reinforce and communicate psychological health and safety.



- **Clear and consistent communication** is vital.

Open, honest communications are essential to minimize anxiety and fear, to empower individuals to further reduce the risks, and to help them understand that there are some measures they do not have control over. Organizations need to build up a culture of communication that is inclusive of pandemics. It is important to be clear in setting expectations and in communicating about hazards and risks. This will help to keep pandemic fatigue in check.

- Many **vulnerable populations were uniquely affected** by the pandemic.

The COVID-19 pandemic had different impacts on individuals with disabilities or special needs, as well as on vulnerable populations. For example, prior to the pandemic, some categories of workers (e.g., temporary workers, seasonal workers) were not provided the same level of safety training or personal protective equipment as other workers. During an infectious disease outbreak, the individual is the vector; therefore, paid sick leave policies are important. Accessibility and inclusion needs very careful consideration. For example, there is no word for 'fever' in Indigenous languages. This impacts on how information is translated, as well as on understanding and reaction.

## Day 2 – Final Plenary

Before the workshop adjourned for the day, the moderator reminded the participants of the workshop's over-arching question: "What guidance does Canada need for workplaces to reopen and operate during an infectious disease pandemic?" She then did a rapid-fire round robin asking each participant to share with the group (in 30 seconds or less) what they wished people knew about.

The following themes emerged in the rapid-fire round robin:

- **The needs of vulnerable populations:** the needs of vulnerable populations and workers with disabilities must be considered at the centre, not at the edge (i.e., inclusion); information must be tailored to vulnerable workers.

- **Better coordination between Public Health and OHS:** there needs to be a better interface between Public Health and OHS standards (e.g., PPE, testing), as well as harmonization of regulatory frameworks; there needs to be a consensus between Public Health and OHS so that there isn't conflicting guidance from different authorities on building management; there needs to be consensus ahead of time to target those most at risk; government bodies must have good clarity about their respective roles and provide workplaces with reliable information; need information on the guidelines and best practices that already exist and how they can be integrated into OHS and Public Health; have to learn from past experiences like SARS to identify what prevention measures need to be taken to help ensure workers are protected
- **Improved awareness and understanding:** a better understanding of risk (particularly as it relates to transmission) would improve the selection and layering of controls, as well as how information about controls is communicated; need more awareness around PPE and social distancing; need information on how to motivate different groups to comply
- **Evidence- and principle-based framework:** need a clear, consistent framework that is anchored in existing and up-to-date systems; need a principle-based framework that integrates OHS into pandemic preparedness;
- **Clear and consistent communication:** there needs to be better synergy in risk communication between Public Health and OHS; need to communicate in one coordinated voice; front-line communication needs to be evidence-based; there is a lack of plain-language information; information must be tailored to vulnerable workers; need to be better prepared for communicating about risk and how to reduce risk (e.g., how layers of control support individuals);
- **Psychological health and safety:** a better understanding of psychological health and safety, as well as more information on the mental health impacts of the pandemic, are required;
- **Authoritative sources of evidence:** need information on who to turn to for the best information.



## Summary of Workshop Outcomes

There was overall agreement amongst the workshop participants that workplace guidance on infectious disease pandemics is lacking and that there is a need for a standardization solution. Workshop participants also identified two key gaps: the lack of coordination and harmonization between Public Health and Occupational Health and Safety; and a lack of awareness about (a) what already exists, (b) which organizations are authoritative sources of evidence, and (c) how to create psychologically safe environments. Workshop participants made a number of key recommendations to address the need for a standardization solution and the two key gaps.

### Recommendations to Address the Need for a Standardization Solution

1. Standards should be developed to address three separate issues: pandemic planning and preparedness, pandemic response, and reopening workplaces during a pandemic. The planning and preparedness standard could be linked to an emergency preparedness standard and should provide guidance on resilient design and operation of building systems.
2. Any standard(s) developed must incorporate a clear, consistent framework anchored in well-established, rigorous, and up-to-date systems. Such a framework could be built around a

structured risk approach (such as the Plan-Do-Check-Act model) or around business continuity and/or emergency preparedness principles.

3. Any standard(s) developed should provide guidance for all workplaces. Additional resources, such as tools and annexes, can be developed to deal with specific situations and industries.
4. Both the CSA Research Report and the ISO/PAS 45005 standard can serve as starting points to develop a seed document for a Canadian standard. Guidance documents from other organizations should also be consulted to ensure that (a) the needs of vulnerable populations are included and appropriately met and (b) the lessons learned from previous pandemic preparedness efforts are considered.

### Recommendations to Address the Lack of Coordination between Public Health and OHS

1. Better integration of OHS into Public Health is required. This will entail developing a better interface between Public Health and OHS, as well as the harmonization of the regulatory frameworks.
2. Synergy in risk communication between the various government agencies responsible for Public Health and OHS is essential. This can be achieved by developing consensus ahead of time on best practices, key messages, and strategies to target populations that are at the most risk.



## Recommendations to Address the Lack of Awareness About Existing Standards

1. Organize and catalogue all existing standards (individual standards, as well as over-arching standards that point to other standards and annexes) to make it easier for someone to quickly determine what standards are available and which ones apply in a given situation.
2. Create an authoritative list of resources to help workplaces and individuals identify trusted and reliable sources of information.

## Next Steps

In response to the COVID-19 pandemic, CSA Group has undertaken research, published guidance documents and initiated the development of new standards. CSA Group has also made a selection of relevant standards available for no-fee view access through its online platform, [CSA Communities](#). Appendix F provides a list of available CSA Group COVID-19 response handbooks and standards, along with a list of similar documents from other standardization organizations.

## CSA Group Research

- Workplaces and COVID-19: Occupational Health and Safety Considerations for Reopening and Operating During the Pandemic (completed)
- Envisioning a Made-in Canada Pandemic Response Products Ecosystem: Towards Self-sufficiency and Sustainability (in development)
- Pandemic Implications on Psychological Health and Safety in the Workplace (in development)

## Published Guidance Documents

- CSA Z94.3:20, Eye and face protectors – Q&As related to bioaerosols and airborne infectious substances
- CAN/CSA-Z94.4-18, Selection, use, and care of respirators – Q&As related to bioaerosols and airborne infectious substances

## New Standards Under Development

- CSA Z94.41:21, Performance standard on filtering respirators

# Appendix A

## Workshop Participants

**Craig Arthur**, Manager, Industrial Safety, Dalhousie University

**Monica Bienefeld**, Pandemic Workplace Safety Branch, Ontario Ministry of Labour, Training and Skills Development

**Doug Boughner**, National Health, Safety & Environmental Coordinator, Unifor

**Amy Campbell**, Health and Safety Program Manager, Canadian Centre for Occupational Health and Safety

**Dion Durdle**, Director, Health and Safety, Purolator

**Alec Farquhar**, Asbestos Free Canada

**Gordon Harkness**, Director, Risk Analysis Unit, WorkSafeBC

**Arif Jetha**, Scientist, Institute for Work & Health & Assistant Professor, Dalla Lana School of Public Health, University of Toronto

**Shannon Jones**, VP Field Operations, Workplace Safety Prevention Services

**Denise Koh**, Chief Occupational Medical Officer (Workplace Safety and Health) and Medical Officer of Health (Public Health, Manitoba Health), Government of Manitoba

**Darren MacPherson**, Associate Director, Occupational Health and Safety and Employee Health Services, Canadian Blood Services

**Jason McInnis**, Canadian Director - Health and Safety, Boilermakers International

**Jeff Moffat**, Acting Program Manager, Public Services and Procurement Canada (PSPC), Government of Canada

**Joel Moody**, Chief Public Safety Officer and Senior Director, Analytics, Electrical Safety Authority

**Hamza Nasir**, Operation Support Services Analyst, Toronto Hydro-Electric System Ltd

**Melody Pardoe**, Chief Engagement Officer, Canada's Ocean Supercluster

**Michele Prevost**, Professor and Principal Chairholder, NSERC Industrial Chair on Drinking Water Civil, Geological and Mining Engineering, Polytechnique Montreal

**Susan Stock**, Spécialiste en médecine du travail et en médecine préventive et santé publique, INSPQ, Professeure agrégée de clinique, Département de médecine sociale et préventive, Université de Montréal

**Mahadeo Sukhai**, Director of Research and Chief Inclusion & Accessibility Officer, IDEA Team, CNIB

**Donald Weekes**, President, InAIR Environmental Ltd (retired 2019), Retired consultant

## **Keynote presenter**

**Dr. Victoria Arrandale**, Assistant Professor, Dalla Lana School of Public Health, University of Toronto & Associate Director, Occupational Cancer Research Centre

## **Observers:**

**Brendan McManus**, Standards Council of Canada

**Stewart Cramer**, Next Generation Manufacturing Canada

## **Moderators and Break-out Facilitators:**

**Joy Weismiller**, Juniper Consulting

**Anya Keefe**, Anya Keefe Consulting

**Andrea Holbeche**, CSA Group

**Jennifer Teague**, CSA Group

**Omer Ainanshe**, CSA Group

**Karyn Ferguson**, CSA Group

# Appendix B

## COVID-19 Resources Shared by Workshop Participants in the Collaborative Workspace

### British Columbia

[WorkSafeBC | COVID-19 resources](#)

### Manitoba

[Province of Manitoba | Guidance for Industry Sectors \(gov.mb.ca\)](#)

[Province of Manitoba | Workplace Guidance for Business Owners](#)

[Manitoba | Workplace Self-Assessment Tool](#)

[Manitoba | Workplace Cluster Guidance for Employers](#)

[Manitoba | Employee Under Investigation and Case Summary Template](#)

[Manitoba | Employee Under Investigation and Case Summary Guideline](#)

### Ontario

[Province of Ontario | Guide to developing a COVID-19 workplace safety plan](#)

[Province of Ontario | Using masks in the workplace](#)

[Province of Ontario | Guidance on making meal and break periods safer at work](#)

[Province of Ontario | COVID-19: self-isolation and return to work](#)

[WSPS | COVID-19 Resources](#)

[Occupational Exposure to COVID-19 Risk Tool](#)

### Nova Scotia

[Nova Scotia | Coronavirus \(COVID-19\): posters, factsheets and resources](#)

### Quebec

[INSPQ | COVID-19 \(coronavirus\)](#)

[INSPQ | Le télétravail en contexte de pandémie](#)

[CNESST | COVID-19 Toolkit](#)

[Guide - Mesures de prévention dans un contexte de pandémie d'influenza à l'intention des employeurs et travailleurs du Québec](#)

[INSPQ | Hiérarchie des mesures de contrôle en milieu de travail](#)

## **Federal**

[Government of Canada | Guidebook for departments on easing of restrictions: Federal worksites](#)

[CCOHS: Pandemic \(COVID-19\) Tip Sheets](#)

## **International Resources**

[AIHA | Back to Work Safely](#)

[Coronavirus \(COVID-19\) Response Resources from ASHRAE and Others](#)

[Federation of European HVAC Association | COVID-19 Guidance Directory](#)

# Appendix C

## COVID-19 Response Standards and Guidance Documents Available from CSA Group & Other Standardization Organizations

### CSA Group

- CSA Z1600-17, Emergency and continuity management program
- CAN/CSA-Z94.4-18, Selection, use, and care of respirators
- CSA Z8002:19, Operation and maintenance of health care facilities
- CSA Z317.2:19, Special requirements for heating, ventilation, and air-conditioning (HVAC) systems in health care facilities
- CSA Z8000-18, Canadian health care facilities
- CAN/CSA-Z1630-17, Community paramedicine: Framework for program development
- CSA Z317.10:21, Handling of health care waste materials
- CAN/CSA-Z317.13-17, Infection control during construction, renovation, and maintenance of health care facilities
- CSA Z317.14-17, Wayfinding for health care facilities
- CSA Z1003.1-18, Psychological health and safety in the paramedic service organizations
- CAN/CSA-Z1003-13/BNQ 9700-803/2013 (R18), Psychological health and safety in the workplace – Prevention, promotion, and guidance to staged implementation
- SPE Z1003 Implementation Handbook, Assembling the Pieces: An Implementation Guide to the National Standard for Psychological Health and Safety in the Workplace

### International Organization for Standardization

- ISO 374-5:2016, Protective gloves against dangerous chemicals and micro-organisms - Part 5: Terminology and performance requirements for micro-organisms risk
- ISO 13688:2013, Protective clothing – General requirements
- ISO/TS 16976-8:2013, Respiratory protective devices – Human factors – Part 8: Ergonomic factors
- ISO 22301:2019, Security and resilience – Business continuity management systems – Requirements
- ISO 22316:2017, Security and resilience – Organizational resilience – Principles and attributes
- ISO 22320:2018, Security and resilience – Emergency management – Guidelines for incident management
- ISO 22395:2018, Security and resilience – Community resilience – Guidelines for supporting vulnerable persons in an emergency
- ISO 22609:2004, Clothing for protection against infectious agents – Medical face masks – Test method for resistance against penetration by synthetic blood (fixed volume, horizontally projected)
- ISO 31000:2018, Risk management – Guidelines
- ISO/PAS 45005:2020, Occupational health and safety management – General guidelines for safe working during the COVID-19 pandemic



## **American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)**

- Guideline 1.4-2019 – Preparing Systems Manuals for Facilities
- ASHRAE Guideline 11-2018 – Field Testing of HVAC Control Components
- ASHRAE Guideline 12-2020 – Managing the Risk of Legionellosis Associated with Building Water Systems
- ASHRAE Guideline 29-2019 – Guideline for the Risk Management of Public Health and Safety in Buildings
- Guideline 36-2018 – High-Performance Sequences of Operation for HVAC Systems
- ANSI/ASHRAE Standard 52.2-2017 – Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size
- ANSI/ASHRAE Standard 55-2017 – Thermal Environmental Conditions for Human Occupancy
- ANSI/ASHRAE Standard 62.1-2019 – Ventilation for Acceptable Indoor Air Quality
- Standard 84-2020 – Method of Testing Air-to-Air Heat/Energy Exchangers (ANSI Approved)
- ANSI/ASHRAE Standard 111-2008 (RA 2017) – Testing, Adjusting, and Balancing of Building HVAC Systems (ANSI Approved)
- ANSI/ASHRAE/ASHE Standard 170-2017 – Ventilation of Health Care Facilities
- ANSI/ASHRAE Standard 180-2018 – Standard Practice for Inspection and Maintenance of Commercial Building HVAC Systems (ACCA Co-sponsored)
- ANSI/ASHRAE Standard 183-2007 (RA 2017) – Peak Cooling and Heating Load Calculations in Buildings Except Low-Rise Residential Buildings (ACCA Co-sponsored)
- ANSI/ASHRAE Standard 185.1-2020 – Method of Testing UV-C Lights for Use in Air-Handling Units or Air Ducts to Inactivate Airborne Microorganisms
- ANSI/ASHRAE Standard 185.2-2020 – Method of Testing Ultraviolet Lamps for Use in HVAC&R Units or Air Ducts to Inactivate Microorganisms on Irradiated Surfaces
- ANSI/ASHRAE Standard 188-2018 – Legionellosis: Risk Management for Building Water Systems
- ANSI/ASHRAE Standard 211-2018 – Standard for Commercial Building Energy Audits

## **European Committee for Standardization (CEN)**

- EN 149:2009 Respiratory protective devices – Filtering half masks to protect against particles - Requirements, testing, marking (commonly referred to as 'FFP masks')
- EN 14683:2019 EN Medical face masks – Requirements and test method
- EN 166:2001 Personal eye-protection – Specifications
- EN 14126:2003 Protective clothing – Performance requirements and tests methods for protective clothing against infective agents
- EN 14605:2009 Protective clothing against liquid chemicals – Performance requirements for clothing with liquid-tight (Type 3) or spray-tight (Type 4) connections, including items providing protection to parts of the body only
- EN ISO 374-5:2017 Protective gloves against dangerous chemicals and micro-organisms – Part 5: Terminology and performance requirements for micro-organisms risks
- EN ISO 13688:2013 Protective clothing – General requirements

# Appendix D

## Additional Comments Provided by Participants During Pre-Workshop Polls

### Comments from Pre-Workshop Poll on Scope of a Potential Standard

- The challenges between industries (teaching, retail, food service, health care, construction, manufacturing, etc.) will all have underlying fundamentals that will carry a common thread of basic public health measures. That being said, the best methods of implementation may vary widely between groups. Specific advice and best practices for certain industries would provide more tailored guidance, which might be of added benefit to those in these fields.
- Specific guidelines to industries that address their specific issues during a pandemic will likely be the guidelines that are implemented by industry leaders, building owners and managers, and public building management. It is unlikely that the same guidelines could be applied to a meat packing facility and a downtown office building. Each type of facility has its own set of concerns and issues that should be addressed in specific guidelines.
- The basic risks and control measures are much more similar than different, and the patchwork of sector/industry-specific guidance is confusing and unhelpful. It is important to have the basics clearly explained and understood by all. Where there may be some differences in terms of which particular risks are most relevant to a given workplace, there are factors other than industry sector that may be much more salient. For example, there are more similarities between large retail operations and office spaces/buildings and large automated workplaces such as food processing, manufacturing and warehousing/distribution as compared to a big box store in comparison with a small "main street" retailer with 3 or 4 employees. It is important to be able to outline some of these differences, but I don't think this is best served by different standards (where people may not be sure which standard is most applicable) and is better addressed within a standard itself. For example, the HACCP [Hazard Analysis and Critical Control Points] approach of identifying the critical control points (= highest risk activities/locations/processes for COVID transmission) may be particularly helpful to consider.
- Agree that the basics of risk/mitigation remain the same, irrespective of industry. Where there are sector-specific application differences, examples etc. can be used and this is best done with a generic standard. It is more important to have the standard reinforce and 'teach' the common elements rather than creating overly specific (and potentially missing key sub sectors in the process) standards which may less adequately deal with the essential principles. Moreover, many sectors have common elements that can benefit other sectors and need not be confined to learning uniquely from their own standard.
- I actually believe there should be a general standard for all workplaces plus extra recommendations/guidance for higher risk workplaces and work scenarios. For example, congregate settings (including living/lodging together such as work camps, TFWs [temporary foreign workers], overnight shiftwork, etc.), places where physical distancing cannot be ensured, higher proportion of vulnerable workers (older, chronic medical conditions, English as a Second Language, new immigrants/refugees, younger/new workers, racialized workers, TFWs), healthcare (close work with cases), high travel, etc. Perhaps these wouldn't be a standard as much as areas that employers need to have added control measures in place but have room for variation and tailoring to the workplace needs.

- I think there needs to be both a general standard, and a recognition that specific standards are required in some cases. For example, in a hospital setting, there are staff who are patient-facing who require one set of rules, lab staff who require a different set, and "office" staff (e.g., IT, HR, administration, etc.) who require a third set. And yet, since they all work in a hospital setting, there are rules that all need to abide by in common spaces.

## Comments from Pre-workshop Poll on Domains that Gave the Most Concern

- Although I can understand the reasoning behind selecting 'Supports for Individual Workers' as a concern, it is my belief that individual workers, for the most part, have the means to opt out of a situation they believe to detrimental to their health during a pandemic. This is contrary to the selection of 'Workplace Organization' which will require that the owners and managers of buildings will take it upon themselves to make physical changes that are meaningful for the welfare of the workers in their workplaces and buildings. It is my belief that most owners and managers will minimize any changes they make during a pandemic, opting to spend as little as possible on engineering controls such as increased ventilation, social distancing and barriers between workers.
- I selected workplace organization because to get a workplace ready to re-open takes a lot of work and thought to make sure safeguards are in place. Once they are in place, it takes consistent work to not only maintain those safeguards but to also assure they have not created new safety concerns, and monitoring and maintaining the actions taken are key. It is human nature to cut corners once things are put in place and in my opinion, this is where the problems arise. Facility owners start to loosen or to not monitor and workers/patrons do not completely follow guidelines put in place. Constant monitoring of the rules and guidelines and strict enforcement is key to open successfully and safely.
- I think workplace organization includes the broadest range of actions that can be (relatively) quickly implemented, and are the most flexible and responsive to be able to address new risks, routes of exposure etc. I also think of this as overlapping with supports for individual workers - particularly the administrative controls that can be developed to provide supports to individual workers, which I think is an extremely important component of the controls - so much so that I would add that I think the supports for individual workers may be one of the most important elements of the control measures, because placing the burden of responsibility or cost on the individual worker is both unfair and ineffective, and I am also wary of a focus on the individual because of this tendency towards shifting the focus of whose responsibility it is to make sure the individual actions are taken. So, for example, while an individual worker may have a responsibility to wear a mask correctly and consistently, they do not do so in a vacuum and cannot be responsible for training, supervision, cost, and equity-related issues for themselves or their coworkers.
- I selected individual workers as giving the most cause for concern. The other 2 options will allow employers to make more 'visible' investments/progress and attest to such. The discussion around workplace culture for many businesses remains less mature; and the individual worker impact, despite administrative and other control efforts, will be vast and subject to much greater variation as a result, from my viewing point.
- While all 3 domains are important to address, I chose Supports for Individual Workers which includes workplace culture (which is not just dependent on workers). In terms of Engineering controls and administrative controls, these can be enforced much more easily than individual actions and workplace culture. Even provision of and training for PPE in the workplace can be assessed and ensured. One factor is the difficulty that Public Health has in determining acquisition events and workplace transmission. This is compounded in situations where the workplace has excellent controls but are only able to require their workers to adhere to Public Health Measures in the workplace, since they have no control over workers outside the workplace (where they are more likely

to not wear PPE and have closer interactions to others (e.g., household contacts, carpooling, etc.). This is more difficult for the industries/sectors with a higher proportion of racialized and vulnerable workers who face added barriers to accessing health care and even Public Health measures (e.g., less ability to drive to work alone in a vehicle vs carpool/public transportation, resources to purchase PPE/hand sanitizer outside the workplace, ability to social distance in the home where higher numbers live in the household). We have found that there are many workplace situations where all the controls are in place and above and beyond what Public Health would expect, but there are still high case numbers in workplaces, which is more related to other demographics less within the employers' control. There are certainly situations where the workplace/employer is negligent or not respecting Public Health measures appropriately (more related to attitudes, workplace culture, employer education), but these workplaces could be enforced through OSH legislation as well as Public Health legislation. I think more work needs to be done here, even though it is not strictly under the employers' control, but the employers could have influence and provide resources.

- This is a bit of a complicated one to answer, as all three have their own layers of complexities and difficulties. My opinion is split between that of Domain 3 (supports for individual workers), and Domain 1 (Building Systems). Often, supports for individual workers is an issue that isn't properly addressed; these supports must cover the spectrum from early pandemic opening, all the way through a transition from pandemic to endemic. People may not always believe that the pandemic is real or important, and politics often sways decisions from a pure public health or OH&S perspective. In the end, however, I believe 'building systems' is an area of large concern. Some buildings contain little to no HVAC infrastructure, and are easily susceptible to water-borne and airborne illness. These systems are not easily understood by many without background in these fields and are often major capital expenditures that can take years to retrofit. While items in Domains 2 and 3 can be implemented quickly (although an extremely valid argument about the amount of time it takes to change a safety culture can be made), the sheer amount of time and money it takes to install or retrofit deficient building systems means we must prioritize this area as a long-term priority. Installing modern ventilation and filtration systems can help to prepare our buildings for pandemics and other disasters that are yet to come.
- Building systems and workplace organization are important, but not every employer owns the space in which it sits, and thus the physical plant and physical modifications are not always up to the business. Additionally, it remains distinctly possible that large fraction of the workforce may be virtual or remote or blended. The area of greatest concern, and potentially the area of greatest impact is domain 3, supports for individual workers. This is also the space where we need to think about universal design and human interactions - and where the above comment about workplace culture is spot on.

# Appendix E

## Workshop Agenda

| DAY 1: Apr 7, 10 am to 1 pm EDT |   |
|---------------------------------|---|
| Time                            | Description   |
| 9:45 am                         | <b>Participants Gather/Log in</b>   |
| 10:00 am                        | <b>Welcome and Introductions</b><br>Joy Weismiller, Juniper Consulting (Moderator)<br>Andrea Holbeche, CSA Group<br>Brendan McManus, Standards Council of Canada<br>Stewart Cramer, Next Generation Manufacturing Canada  |
| 10:30 am                        | <b>Presentation: Setting the Stage</b><br>Dr. Victoria Arrandale, University of Toronto <ul style="list-style-type: none"> <li>Key Findings from the CSA Research Report</li> </ul>   |
| 10:50 am                        | <b>Presentation: Polling Insights</b><br>Anya Keefe, Anya Keefe Consulting <ul style="list-style-type: none"> <li>What was learned via webinar and pre-workshop polls</li> </ul>  |
| 10:55 am                        | <b>BREAK</b> (approximate time)   |
| 11:00 am                        | <b>Workshop Plenary</b> <ul style="list-style-type: none"> <li>What is a standard?</li> <li>Poll #1</li> <li>Brief discussion of results</li> </ul>   |
| 11:20 am                        | <b>Breakout Session #1: Areas of guidance and practice for future disease pandemics</b> <ul style="list-style-type: none"> <li>What to expect in the breakout session</li> <li>Discussion Question: Do you think the areas of guidance and practice identified in Part B of the CSA Report would hold for a future pandemic?</li> </ul> |
| 11:45 am                        | <b>Workshop Plenary</b> <ul style="list-style-type: none"> <li>Reporting back from Breakout Session #1</li> </ul>   |
| 12:05 pm                        | <b>BREAK</b> (approximate time)   |
| 12:10 pm                        | <b>Workshop Plenary</b> <ul style="list-style-type: none"> <li>Discussion of Breakout Session #1</li> </ul>   |
| 12:30 pm                        | <b>Workshop Plenary</b> <ul style="list-style-type: none"> <li>Parking lot update</li> <li>Poll #2</li> <li>Wrap up and looking ahead to Day 2</li> </ul>   |
| 1:00 pm                         | <b>Adjournment</b>  |

| <b>DAY 2: Apr 9, 10 am to noon EDT</b> |  |
|--|--|
| <b>Time</b>                            | <b>Description</b>   |
| 9:45 am                                | <b>Participants Gather/Log in</b>  |
| 10:00 am                               | <b>Welcome and Recap of Day 1</b><br>Joy Weismiller, Juniper Consulting (Moderator)  |
| 10:15 am                               | <b>Workshop Plenary</b><br><ul style="list-style-type: none"> <li>▪ Introduction to breakout topics and how sessions will work</li> </ul>  |
| 10:20 am                               | <b>Breakout Sessions:</b><br>A. Barriers and facilitators to uptake of a standards-based solution<br>B. Areas where future discussion and/or more specific guidance may be needed<br>C. Highest priorities for specific guidance<br>D. Guidance/information required for workplaces to operate as safely as possible during a pandemic |
| 11:25 am                               | <b>BREAK</b> (approximate time)  |
| 11:30 am                               | <b>Workshop Plenary</b><br><ul style="list-style-type: none"> <li>▪ Reporting back from the breakout sessions</li> <li>▪ Closing comments and next steps</li> </ul>  |
| 12:00 pm                               | <b>Adjournment</b>   |

# Appendix F

## Additional Prompts Provided to Moderators on Day 2

### Breakout Session A: Ongoing Pandemic Preparedness

#### Part B vs. ISO/PAS 45005:2020

| Part B   | ISO/PAS 45005:2020                       |
|--|--|
| <b>Workplace programs</b>  | Planning and assessment of risk          |
| Employer and employee responsibilities   | Suspected or confirmed cases of COVID-19 |
| <b>Program elements</b>  | Psychological health and wellbeing       |
| Hazard identification and risk control   | Inclusivity                              |
| Communication  | Resources                                |
| Domain I: Building systems (HVAC, cooling towers, water systems, washrooms, other building considerations)   | Communication                            |
| Domain II: Workplace organization (physical distancing, scheduling, workplace design, elevators, workplace cleaning/disinfection, PPE, respirators, face coverings, hand hygiene & gloves)   | Hygiene                                  |
| Domain III: Supporting workers (case monitoring in workplace, accessibility, training and education, transportation, OHS in new work environments, psychological health, financial supports) | Use of masks, PPE and face coverings     |
|  | Operations                               |
|  | Performance evaluation                   |
|  | Improvement                              |

### Breakout Session B: Intersection Between Public Health & OHS

- Public health measures include:
  - Stay home and away from others if you feel sick
  - Maintain good hand and respiratory hygiene
  - Clean and disinfect high-touch surfaces
  - Maintain a physical distance of 2 metres from people outside of your household
  - Wear a non-medical mask when in a shared space and when advised by local public health authority
  - Ensure good indoor ventilation
  - Keep the number of people you have prolonged contact with as small as possible
  - Stick to a small and consistent social circle and avoid gathering in large groups
  - Talk to your employer about working at home if possible
  - Avoid/limit: exposure with people outside of your immediate household; closed spaces (with poor ventilation), crowded places, close contact settings and close-range conversation; nonessential travel; contact with those at risk of more severe illness
- The messages are simple, but implementation can be challenging – especially for workplaces.

## Breakout Session C: Changes to Existing Documents

- The following are examples of existing standards that might include criteria relevant to a future pandemic.

| Standard No.                            | Standard Title  |
|---|---|
| CSA Z45001:19                           | Occupational health and safety management systems — requirements with guidance for use                          |
| CSA Z1001-18                            | Occupational health and safety training   |
| CSA Z1002-12                            | Occupational health and safety — hazard identification and elimination and risk assessment and control          |
| CAN/CSA-Z10003-13/<br>BNQ 9700-803/2013 | Psychological health and safety in the workplace — prevention, promotion, and guidance to staged implementation |
| CSA Z204-94                             | Guideline for managing indoor air quality in office buildings   |
| CSA Z317.1-16                           | Special requirements for plumbing installations in health care facilities                                       |
| CSA Z320-11                             | Building commissioning  |
| CSA Z317.12:20                          | Cleaning and disinfection of health care facilities   |
| CSA Z317.2:19                           | Special requirements for heating, ventilation, and air-conditioning (HVAC) systems in health care facilities    |
| CAN/CSA-Z94.4-18                        | Selection, use, and care of respirators   |
| CSA Z1011:20                            | Work disability management system   |
| CAN/CSA-Z314-18                         | Canadian medical device reprocessing  |
| CSA Z8002-19                            | Operation and maintenance of health care facilities   |

## Breakout Session D: Managing the Human Element

- OHS Management system standards include requirements for: communication, education, training for workers and supervisors. Are there specific requirements for ongoing pandemic operations, reopening and preparedness that should be considered for these topics?
- Are there specific supports for workers (e.g. mental health supports, EAP) that need to be considered?
- What about secondary hazards such as psychological health and safety, workplace impairment that might be introduced due to an ongoing pandemic?
- From Day 1: The issue of worker perceptions of safety and exposure was noted, that is that the perception of risk does not always align with the lockdown levels. How do we address worker comfort and confidence in those instances? What about “COVID fatigue” (e.g., complacency in applying certain controls such as screening tools, adhering to public health guidelines, etc.)?



## CSA Group

---

CSA Group is a global organization dedicated to safety, social good and sustainability. We are a leader in Standards Development and in Testing, Inspection and Certification around the world including Canada, the U.S., Europe and Asia. Our mandate is to hold the future to a higher standard.