

## FOCUS ON

# Environmental and Occupational Health Considerations for Supervised Smoking Facilities



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## Key Findings

- The potential for exposure to second-hand and third-hand substances generated by smoking unregulated drugs should be considered when establishing a Supervised Smoking Facility (SSF). However, the evidence for adverse health effects from these exposures is limited and generally based on household scenarios where exposures may be uncontrolled and compound over time.
- Employers have a general duty to take all precautions reasonable in the circumstances to protect the health and safety of workers.

- There are no defined heating, ventilation and air conditioning (HVAC) standards for a SSF. Although they are not designed to protect workers in SSFs, ventilation guidance in existing legislation and standards can help inform HVAC designs that are more efficient and powerful for SSFs.
- In a SSF, potential exposures can be assessed, and a control program implemented to mitigate the risk from second-hand and third-hand exposures using an occupational risk assessment approach:
  - Engineering controls can be used to reduce exposures to non-client visitors and workers, by controlling airflow and local exhaust. Ventilation requires time to remove air contaminants, and will be design-dependent. Increased ventilation, negative pressure, and emergency air evacuation are frequently cited design considerations for indoor SSF facilities.
  - Administrative and facility procedures can be used for routine (such as cleaning) and emergency situations (i.e., overdose) to support client needs.
  - Personal protective equipment can address exposures for workers responding to overdose events and limit second-hand and third-hand exposures.
- In addition to worker safety, designing and operating SSFs with attention to client preferences about the smoking environment may help facilitate uptake and use of the facility.

## Background

Addressing overdose risks associated with inhalation or smoking and supporting people who smoke drugs is increasingly important in Ontario. Recent coroner's data suggest an increase in the number of opioid-related deaths from smoking, rising from 22.5 % in 2019 to 33.7 % in 2020.<sup>1</sup> In the context of a recent review of evidence on harm reduction services for people who smoke or inhale drugs undertaken by Public Health Ontario and Community Opioid/Overdose Capacity Building (COM-CAP)<sup>1</sup>, questions were raised by the working group about the safe operation of supervised smoking facilities (SSF). The aim of this document is to address potential exposures, health effects, and technical and administrative controls to reduce exposures when designing and implementing SSFs for harm reduction. This document includes general information based on questions from field practitioners and is not a substitute for an occupational health risk assessment conducted on site.

Fumes from smoking/inhaling unregulated substances like opioids, crack cocaine, crystal methamphetamine will contain a complex mixture of the combustion byproducts and a mixture of aerosol particles and gas compounds. A portion of the smoke will also contain the parent compound.<sup>2</sup> The exact mixture depends heavily on the substance being consumed.

Second-hand exposures refer to bystander exposure to contaminants from smoking activities, which could potentially pose both acute (in addition to chronic) adverse health risks. Third-hand exposures refer to residual contaminants that remain on surfaces and in dust after smoking activities, some of which could be absorbed/ingested from direct contact, or inhaled from disturbed re-aerosolized particles.

In addressing the questions, some assumptions were made about the different groups who may be present in SSFs, and about the substances used in the facilities:

- Clients - individuals consuming drugs at a SSF. This group will have exposure to contaminants from smoking drugs, as well as potential exposure to second-hand or third-hand exposures from other clients. In addition to exposure concerns, other factors such as physical or social safety and comfort are important considerations for this group.
- Attending personnel – Could include SSF staff (e.g., program, cleaning, security), accompanying community members or staff from other agencies supporting clients. In this group, the avoidance of second-hand and third-hand exposures to contaminants in air or on surfaces from smoking drugs is a priority. Staff exposure scenarios will vary depending on the facility, but are expected to include general supervision of smoking activities, environmental cleaning, and rapid response to overdose events.
- SSFs are intended for the use of unregulated substances as a way to prevent, respond to, and/or reverse overdoses, and is therefore not for smoking or vaping tobacco/nicotine or cannabis.

## Methods

A rapid review was conducted on May 23, 2023 using MEDLINE with the search terms (smoke OR smoking OR inhalation) AND (amphetamine OR methamphetamine OR crystal meth OR cocaine OR crack OR speed OR fentanyl OR opioids OR “k2” OR “spice” OR “illicit drugs”) AND (“environmental exposure” OR “passive exposure” OR “second-hand” OR “secondhand” OR “third-hand” OR “thirdhand” OR “inhalation exposure” OR “low-level exposure”). A grey literature search was also conducted using similar search terms and the first 10 pages of results from Google Scholar.

Resources were also provided by Island Health Authority in British Columbia, based on their experience operating a SSF in Victoria.

## Potential Adverse Health Effects Following Passive Exposures to Smoke

The studies which have attempted to quantify the potential for adverse human health effects from passive exposure to smoke from unregulated drugs are discussed below.

- In a study by Cone et al. (1995), six healthy male volunteers passively exposed to “crack” smoke (vapor of 100 and 200 mg freebase cocaine heated to a temperature of 200°C in an unventilated room for a period of 1 h) were observed to have no pharmacological effects and low urine levels of cocaine metabolite (22 to 123 ng/mL).<sup>3</sup> The observed levels of cocaine metabolite in urine were below the United States of Department of Health and Human Services (HHS) cut-offs (levels which would not indicate a safety risk to the individual, their fellow workers, and/or the workplace).<sup>3</sup> In a second passive inhalation study by the same authors, research staff were passively exposed to cocaine smoke by remaining in close vicinity while people who smoke “crack” smoked three doses of freebase cocaine (12.5, 25, and 50 mg) over a period of 4 hours, which resulted in very low urine specimens from the staff members (a maximum of 6 ng/mL) which were below HHS risk cut-off.<sup>3</sup>
- Prolonged daily passive opioid exposure has been identified as a potential risk factor for stroke and metabolic diseases. Jalail *et al.* (2022) found, after adjusting for age, education years, and

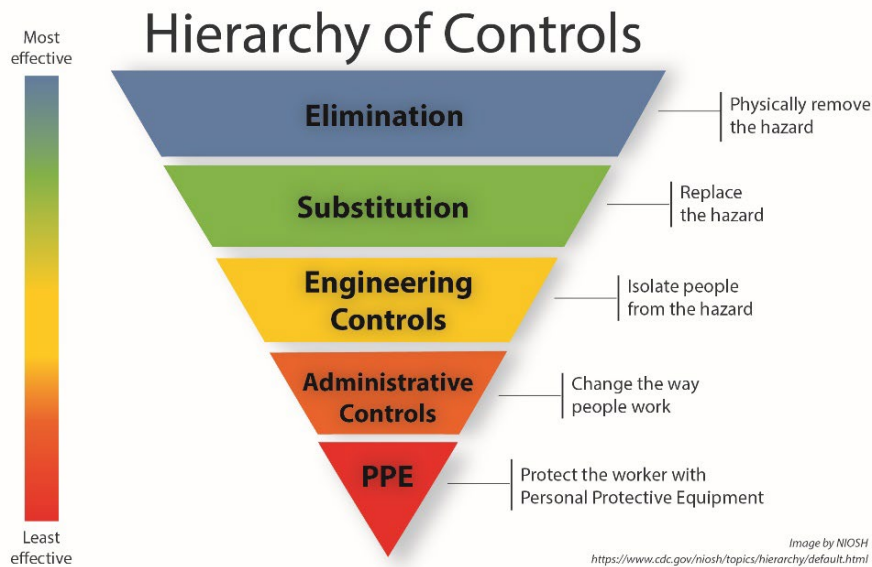
first-degree family history of the relevant diseases, an increased risk of stroke, high low-density lipoprotein (LDL) and high fasting blood sugar associated with passive opioid smoke exposure among women who never smoked but whose husbands started smoking opioids after marriage.<sup>3</sup> compared to women without passive opioid exposure.<sup>4</sup> They also observed a dose-dependent association between the risks of stroke, high LDL, and chronic headache with >10 years of passive opioid smoke exposure compared to women who were exposed for less time (1-10 years).<sup>3</sup> Another study suggested paternal opioid use (both ingested and inhaled) may effect offspring metabolism resulting in increased rates of overweight/obesity.<sup>5</sup>

- A review from the Department of Health of Western Australia on the potential public health risk of passive exposure to methamphetamine smoke modeled adults living in a home with regular use that would have surface contamination (>30 µg/100cm<sup>2</sup>) and air contamination (3 µg/m<sup>3</sup>). Adults living in this home were predicted to have plasma concentrations (1.35 ng/mL) below the lowest levels (1.92 ng/mL) where an adverse health effect (e.g., overstimulation or acute toxicity) could be expected based on the California Environmental Protection Agency calculated reference dose.<sup>6</sup>

In summary, potential adverse health effects have been identified, in particular with respect to opioid smoke, but this has been mostly observed in household contexts and chronic exposures. In general, these effects assume the maximum potential passive effect (prolonged exposure, with no barrier), which would have limited applicability when compared to the potential for exposure in a controlled SSF.

## Managing Hazards and Risks Through Occupational Risk Assessment

An integral part of planning a SSF would include the development of a blueprint to guide health and safety practices in the facility. A best practice is to use an occupational risk assessment led by a qualified professional. This is a systematic approach to identifying and controlling hazards in a given workplace. In a risk assessment approach, hazard(s) and the adverse health effects they could cause are identified; risks for exposure for workers in a given workplace are estimated; and the potential for the exposure(s) and risk to workers are characterized. The Hierarchy of Controls is applied to minimize the risks identified, and is reflected in Standard Operating Procedures (SOPs) that are developed.<sup>7</sup>



Potential hazards in the context of a SSF may involve unregulated drugs used in solid, liquid, or powder forms, and may include:

- The drugs themselves – e.g., opioids, cocaine, methamphetamines
- The additives in the drugs – e.g., volatile organic compounds, highly toxic opioids, other chemicals
- Combustion by-products – e.g., drugs and parent molecules, novel mixtures, particulate matter, gases
- The use of open flames

Use of these substances in a given space means that there could be worker exposure to solids, liquids, and gases, and this should inform the risk assessment and health and safety planning.

A SOP may also consider a typical workflow for worker roles in a SSF, which may include procedures for room setup, entry and exit, and environmental cleaning. Additional considerations for a SSF is the potential for unanticipated exposures for workers. This could include medical emergencies (such as a worker attending to a medical emergency in the context of uncleared air) or spills. A SOP should also outline plans for such situations.

## Engineering Controls

**For smoking rooms, what are the relevant technical ventilation and room design considerations for client and worker health?**

Facility heating, ventilation, and air conditioning (HVAC) designs in SSFs should consider the needs of both the clients and attending personnel with respect to exposure control, bearing in mind that

legislation requires that every precaution reasonable in the circumstance be taken for the protection of a worker. In Canada, there are no specific guidelines or standards for acceptable occupational exposure concentrations for the potential contaminants of interest, such as opioids, crack or methamphetamine. Instead, existing facilities have been designed to minimize exposures for attending personnel while (1) supervising smoking activities, and (2) attending to overdose events. Ventilation and room design will serve as an important aspect of exposure control, but other opportunities, such as administrative controls within the facility for staff and for clients, can also help control unintentional exposures.

The volume and potential potency of contaminant produced during a smoking event is an important piece of information in considering control opportunities. For SSFs, this information will be unknown in most cases. Bystanders could be exposed to smoke from second-hand or third-hand exposures, either via inhalation and/or skin contact. Previous work assessing supervised consumption sites in British Columbia (for injection facilities, not for inhalation sites) have used interim exposure limits for fentanyl borrowed from the pharmaceutical industry.<sup>8</sup> These assessments used a limit of 0.1 µg/m<sup>3</sup> for inhalation exposures and 1 µg/100cm<sup>2</sup> for surface contacts. When considering controls, it will be important to keep both air and surface exposures as low as reasonably achievable by using a combination of exposure control strategies, including ventilation.

Some SSFs will be situated in crowded urban settings, and additional filtration of exhaust air to the outdoors may need to be considered as part of the ventilation design.

An inhalation room prototype design report has previously been published by the British Columbia Community Action Initiative (BCCAI). This report outlines a number of design considerations, including architecture and ventilation design, cleaning and monitoring considerations, as well as cost estimates and staffing models.<sup>9</sup>

## **ROOM SIZE AND FACILITY DESIGN CONSIDERATIONS**

Rooms should ideally be sized based on the desired air changes, planned activities, and number of occupants, which will vary depending on the facility. Ventilation would then be calculated based on operational needs. For an indoor facility this could include ventilation during smoking activities, and more powerful emergency ventilation to limit worker exposures when responding to emergencies within the smoking facility. Workers would also be expected to have clean areas within a facility where they would not be at risk of exposure to contaminants from smoking activities. Guidance on general ventilation requirements based on room size, and other design requirements can be found in existing standards intended for general use (not specific to SSFs).<sup>10</sup>

Client social or cultural preferences may also need to be considered in facility design. Powerful ventilation systems can be very noisy and affect occupant comfort, and can make it more difficult to maintain thermal comfort indoors. Previous reports on SSFs have highlighted the importance of considering client needs in the design process in order to encourage facility use. For example, past SSF have incorporated after consultation with clients in their context, separate smoking rooms depending on substance or smoking rooms built to accommodate multiple clients.<sup>11</sup>

## **AIR EXCHANGE TIME BETWEEN CLIENTS**

The time required to have a complete air change of a room will depend on the performance and ventilation rate of the HVAC system, typically calculated with air changes per hour (ACH, the volume of air supplied to and removed from a space from any source or exit, per unit of time divided by the volume of the space<sup>12</sup>). To establish wait times for contaminant removal, the acceptable exposure levels

need to be established by the facility. Acceptable exposures will be different for clients and attending personnel, given the nature of facility use.

- Air change times could be considered in the development of administrative controls for attending personnel, for example to establish clearance times before cleaning staff enter the room. An important caveat is that it would be difficult to predict what remaining concentration could be considered “safe.” Nonetheless, the United States Centers for Disease Control and Prevention (CDC)<sup>13</sup> estimates airborne contaminant removal times based on various air change rates. With a ventilation rate of 15 air changes per hour the estimated contaminant clearance by time, assuming contaminant production has ceased:
  - After 30 seconds, 88 per cent of the original contaminant would remain.
  - After 2 minutes, 61 per cent of the original contaminant would remain.
  - After 18 minutes, 1 per cent of the original contaminant would remain.
  - After 28 minutes, 0.1 per cent of the original contaminant would remain.

## **PREVENTING MOVEMENT OF CONTAMINATED AIR INTO FACILITY**

To ensure minimal air exposure while supervising smoking activities, smoking rooms would need to be under negative pressure relative to the surrounding facility, meaning that air will enter (but not leave) the room when the smoking room door is opened.<sup>11</sup> Location of consumption within the room will also need to be considered - consumption distance from the door and pressure gradient also needs to be factored in for every time a door is opened and for the duration the door stays open. A door that stays open for too long could result in pressure equalization and turbulence.

## **HVAC SYSTEM – GENERAL DESIGN CONSIDERATIONS**

In identified guidelines where SSF design parameters are provided, the advice on HVAC system type is not specific. For example, in the Vancouver Coastal Health (VCH) Overdose Prevention Manual, it is recommended that indoor SSF have ample air exchange in the space by installing a HVAC system that complies with local indoor smoking bylaws.<sup>14</sup>

Only one study<sup>11</sup> by Bourque et al. identified specific ventilation features for SSF, which include:

- 6 air changes per hour in the facility and 15 air changes per hour in the smoking rooms
- Smoking rooms kept under negative pressure, and smoking room air filtered and discharged to outside via a rooftop vent (not recirculated)
- Emergency smoke evacuation designed to clear smoke rapidly

The above example cited American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Standard 62.1-2016, *Ventilation for Acceptable Indoor Air Quality* as a starting point for the facility ventilation design in consultation with local health and safety and engineering experts. Notably, the ventilation rates used by Bourque et al. fall within ranges for room types already specified in health care settings, which are outlined in Canadian Standards Association (CSA) standard Z317.2:19: Special requirements for heating, ventilation, and air-conditioning (HVAC) systems in health care facilities.<sup>15</sup> For example, decontamination rooms in hospital emergency rooms are required to have 10 air

changes/hour (ACH); with 3 ACH coming from outdoor air; negative pressure; and exhaust without recirculation.

The prototype design for smoking facilities proposed by the BCCAI included similar key features to those identified in Bourque et al., but went further in the design specifications to include a canopy fume hood located over a table intended for drug consumption, since hazardous airborne particulate and vapours are best captured as close to source as possible.<sup>9</sup> The prototype design also outlines an exhaust system with variable air volume operation, with the following features:

- A standby/low velocity operation mode that continually exhausts air and operates quietly
- A high exhaust mode operated by staff outside the room, which provides higher exhaust when needed
- An emergency purge mode that allows for complete air change within 10 seconds
- Makeup air that is climate controlled, possibly using a heat recovery ventilator to draw heat from exhaust air

The Smoke-Free Ontario Act (SFOA) is another example that could be referenced to inform decision making around ventilation design. The SFOA specifies certain key elements for a “controlled area” including minimum ventilation rate of 30 litres per second per person, with a pressure differential of 5-7 Pascal below adjoining areas.<sup>16</sup>

In summary, there are no defined HVAC standards for a SSF but the SFOA, ASHRAE, and CSA are examples that could be consulted, with the caveat that they are not designed to protect workers in this context. The VCH Overdose Prevention Manual also recommends that consultation with the provincial health and safety authority is needed to ensure a safe workspace for staff.<sup>14</sup> Consultation with an engineer and a relevant health and safety authority will be important to determine what ventilation parameters would be recommended and possible. Older buildings or residential buildings may require additional checks for seal and leakage issues, in addition to any ventilation retrofits.<sup>17</sup> Ongoing monitoring and testing to evaluate the effectiveness of such a system would be helpful to ensure it is functioning as intended.

## **EMERGENCY AIR EVACUATION**

Emergency air evacuation to ensure occupational safety if a client requires emergency assistance has been implemented in some facilities. However, even a very highly powered air evacuation would take time to remove all contaminants: for a system with 50 ACH the CDC estimates a time of 6 minutes for removal with 99% efficiency, and 8 minutes for 99.9 % efficiency.<sup>13</sup> In an emergency response situation, given the unknown nature of the substances smoked at the site, airborne exposures to smoke by-products would be a potential risk for staff responding to overdose events, given the rapid response typically required. Respiratory protection requirements will need to be considered in addition to ventilation.

## **CONSIDERATIONS FOR OUTDOOR FACILITIES**

Outdoor facilities are another option for SSFs, often considered in situations intended to be temporary or when a budget is inadequate for an indoor facility. While lower residual exposures would typically be expected in an outdoor facility, the absence of engineering controls would result in some uncertainty. For this reason, outdoor facilities would still need to consider administrative controls and personal



protective equipment requirements similar to an indoor facility to limit or eliminate exposures for workers during client smoking activities.

The VCH overdose prevention manual<sup>14</sup> provides guidelines for designing outdoor smoking areas, which refer to a tent, gazebo, or a permanent structure that provides open air space to smoke:

- A large covered area to control fumes from affecting those nearby, protect from weather, and provide privacy.
- Clear, flame-retardant walls on at least 2 sides to promote visibility of participants.
- One entire side must remain open to air for ventilation.
- Stay 6 metres from any door, or window of a neighboring building.
- Sandbags or rope ties to secure tent in cases of high wind.
- Use of stations spaced to promote distancing and allow participants to:
  - Sit (if desired)
  - Prepare drugs on a clean surface
  - Use drugs
- Hand washing/sanitizing area at entrance and exit
- Biohazard containers

## **POTENTIAL FOR RESIDUAL EXPOSURES**

### ***Residual surface exposures***

Deposition of smoked materials (e.g., active ingredients, contaminants, combustion by-products) on surfaces after smoking is common, and constituents and subsequent risk will depend on many variables, first of which is the substance being smoked.<sup>2</sup> Small quantities of unconsumed substance may also remain residually on surfaces where drugs are prepared for smoking.

### ***Residual air exposures***

As described above, even highly ventilated spaces will take time to evacuate contaminants over time, assuming they are operating as intended. Any ventilation system should be tested during operation to ensure it is performing as designed, including features such as negative pressure and air change rates. Facilities could also consider air and surface sampling early in their operation, and periodically afterwards:

- to establish whether controls are working as designed; and
- to ensure that administrative controls are successful in reducing or eliminating exposure risks for attending staff.

## DISPOSAL DESIGN

Disposal units used for sharps and discarded materials related to drug use should be tamperproof, to prevent reaching back into disposal units.

## Administrative Controls

Administrative controls, generally defined as controls that use worker behaviours and practices as a means to reduce potential exposure to hazards in a workplace, are also important controls to reduce exposures to workers and visitors. Facility procedures should be clearly communicated and enforced. Examples of administrative controls could include appropriate health and safety training, protocols for worker movement (routine, emergency, etc.), regular handwashing, alarm system for doors and ventilation equipment, signage, job rotation, etc.

### Would it be necessary to remove an occupant from the smoking room to respond to an overdose?

Given the time-sensitive nature of an overdose response, facility design and procedures should consider whether providing care in place (i.e., in-room) should be prioritized, or if removal from the area might be preferable for worker health and safety. Due to the speed of response and the time for contaminant removal of an in-room ventilation system, PPE, including some form of respiratory protection may be required for workers.

### Additional procedural considerations

The following practice considerations may also be important in creating safer and healthier conditions for attending personnel and for clients:

## ENVIRONMENTAL CLEANING

Surfaces should be easily cleanable (e.g., non-porous, resilient to repeat cleaning/disinfection) to avoid unnecessary exposures during cleaning activities.

## HAND HYGIENE

Regular handwashing (an example of an administrative control, as noted above) for attending personnel, including after cleaning activities or entry into smoking facility for any reason, should be a site practice for attending personnel.

## Personal Protective Equipment (PPE)

### What PPE are recommended/required for workers/peers at SSF?

If engineering controls are working as intended to remove air contaminants between users, then it is expected that workers outside the room would not be exposed, and PPE would not be necessary.

In general, PPE selection is part of the employer's legal responsibility to establish and maintain a safe workplace. This would include performing a specific and comprehensive risk assessment for hazards in a given workplace. Based on this assessment, a determination is made if the potential for exposure may warrant controls, including PPE. This will depend on various elements, including the known health risk

for second-hand and third-hand smoke exposure to various unregulated substances, as well as the impact of other controls (e.g., ventilation, isolation of smoker) on reducing the baseline exposure risk. All workers must be appropriately trained on the use, maintenance, and care of PPE. As PPE is considered to be the least effective form of hazard control, emphasis should be on higher levels of controls where possible (e.g., engineering controls, such as sealed isolation rooms and ventilation).<sup>18</sup>

Hazard-specific standard PPE (specifically respiratory protective equipment, or RPE) cannot be recommended without understanding the nature of any potential hazards, even if they may only be present in small quantities (e.g., substances being smoked, with potential additives, contaminants, and mixtures, and variability in concentrations from client to client). In situations where the specifics of the potential hazard are unknown or impossible to predict, a general approach is to select the RPE that is protective against the “worst case scenario.”

In the event of rapid response to an overdose event, even a highly powered ventilation system would require time to fully clear smoked contaminants from an indoor space. This situation may expose response workers to substances of unknown chemical makeup or concentration. One SSF in Victoria, British Columbia (where there may be up to 10 or 12 simultaneous clients in the smoking room and a high ACH), has addressed unanticipated exposures to staff with the use of fit-tested half-face elastomeric respirators with organic vapour cartridges/HEPA, and has recently started to use similarly outfitted powered air-purifying respirators (PAPRs). For dermal protection, gloves are always required. Additional eye and face protection are used depending on the circumstance (Personal communication with Island Health Authority, 2023; unreferenced).

Other scenarios attending personnel are expected to encounter (e.g., general supervision, environmental cleaning) can also inform PPE considerations, and could also be addressed with administrative controls discussed above.

## PPE requirements outside of the smoking room

Ideally facility design and staff procedures should strive to minimize PPE requirements for attending personnel outside of the smoking room. This may be achieved through engineering controls such as ventilation, or administratively, for example by a greater degree of physical separation using closed circuit television feeds for monitoring of smoking activities. As noted above, the need for PPE will also depend on the potential for direct exposure, as well as efficiency and effectiveness of engineering controls (e.g., ventilation, air exchange rate, door seal), and should be based on the employer’s risk assessment.

## PPE requirements after smoking activities have ceased

Extended operation of the ventilation system will remove most second-hand smoke. As noted previously, ventilation will require time to work, and this time will vary based on the ACH rating. Administrative and PPE requirements would need to consider this time for effective removal. Third-hand smoke by-products will also remain behind, which would likely necessitate some PPE (e.g., skin protection) use to minimize potential exposure.

## PPE differences based on the substances smoked (e.g., crystal meth, crack, fentanyl)

PPE differences based on substances are not likely to be practicable. Though there are likely to be differences between substances from an exposure risk perspective, no evidence-based resources were identified distinguishing between various second-hand smoke exposures from unregulated drugs that could inform PPE selection. Even if different PPE regimens could be considered, there would likely be trade-offs in terms of added complexity that workers would need to manage in the event assistance is needed. Most situations will also involve uncertainty as to the substances that may be present in unregulated drugs.

Instead, where uncertainties exist around concentration and potency, control programs for worker protection are based on limiting exposure to the lowest level that is reasonably achievable.

## Relevant Policy

### What legislation applies to the following aspects of SSF?

#### **OCCUPATIONAL HEALTH AND SAFETY LEGISLATION**

Consulting the Ministry of Labour, Immigration, Training and Skills (MLITSD) may be helpful to clarify what legislation may apply. General health and safety legislation in Ontario will include the Occupational Health and Safety Act (OHSA)<sup>19</sup> and its regulations, which outline roles and responsibilities for employers, including the requirements of a respiratory protection program. Regulation 833 (Control of Exposure to Biological or Chemical Agents)<sup>20</sup> under the OHSA specifies occupational exposure limits, which may be applicable in the circumstances.

#### **AIR QUALITY-RELATED LEGISLATION**

There is no specific legislation for indoor air quality in Ontario. However, Regulation 833 (Control of Exposure to Biological or Chemical Agents) under the OHSA specifies occupational exposure limits, which may be applicable. Additional considerations may include emissions from a SSF and disposal of smoking paraphernalia. A discussion with colleagues at Ministry of the Environment, Conservation, and Parks (MECP) may be helpful to clarify what if any applicable legislation may apply.

As discussed above, the indoor air quality standards available from ASHRAE<sup>10</sup> and CSA<sup>15</sup> are not specific to SSF but could be used to inform acceptable indoor air quality for workers.

#### **ADDITIONAL CONSIDERATIONS IN APPLYING LEGISLATION FOR NON-STAFF VISITORS:**

Given the potential for second-hand smoke and third-hand smoke exposure, consideration for not allowing individuals other than clients to enter the designated space could be made unless consent could be obtained regarding known and unknown elements pertaining to potential health risk. However, if exposures for workers are controlled then there should not be a concern for individuals who are in or adjacent to the facility.

## Conclusions

- Overall, very limited information exists specific to the safe operation of indoor supervised smoking facilities (SSF).
- Occupational health and safety approaches are applicable and can help identify and mitigate risks.
- Considering the goal of harm reduction, client preferences and client behaviours are important in considering how to design and operate SSF, however, worker health and safety must also be prioritized to ensure an optimal environment for all individuals.

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