Introduction

As the COVID-19 pandemic continues to ravage communities around the world, and businesses, schools, government buildings, airports, and other spaces begin to open for public use, it is important to consider how to maintain lactation rooms for public use. These spaces are unique in that, unlike restrooms, they serve a particular clientele with the purpose of feeding an infant or expressing a body fluid that has not been found to transmit the virus [1]. They are also not as heavily trafficked as restrooms. However, like restrooms, they have certain high-touch surfaces which may include doorknobs, light switches, sink handles, countertops, chairs, tables, and multi-user pumps, and may not be well ventilated. They may be designed to serve single or multiple users and they may not be cleaned between use according to typical maintenance schedules. In preparing to support the re-opening and maintenance of lactation rooms at our institution, we recognized the need for evidence-based guidance to support human milk expression in public spaces during the pandemic. Although evidence is emerging quickly and is of varying quality, we offer these recommendations and considerations using available information and recognizing that they should be updated as more evidence emerges [2]. We have categorized considerations into these areas: air quality and flow, cleaning of the space,
equipment in the room, and behavior in the room. We have provided evidence where available and noted where evidence is needed.

**Air Quality and Flow**

The dominant feature of coronavirus transmission currently is a higher risk in enclosed spaces with infected people [3]. The virus can linger in the air for up to three hours [4]. Evidence suggests that most transmission occurs in a space occupied by an infected person [5]; however, limited evidence suggests that aerosol transmission is possible in a space shortly after an infected person has left [6]. It is reasonable to take precautions if viruses are present in the room and WHO recommends “fresh, clean air in all workplaces” [7]. So how can facility managers address the issue of air flow?

Some options to consider include:

- Create private, protected outdoor spaces for lactation. These spaces could require only normal cleaning and not disinfection. [8]
- Upgrade the air filtration system. [9]
- Open windows. [9]
- Space out usage so that there are breaks between users, which allows the virus to die over time in the empty space. Restrict usage to one person (plus nursing infant, if applicable) at a time. [5]
  - This can be accomplished with electronic booking systems that pre-specify usage and non-usage times.
  - If a reservation system is not feasible, there are other options:
    - Rooms with mediated access (user must check out key or interact with a moderator for every room use). The person providing room access records time of departure and ensures breaks between users.
    - Unmediated access (user enters the room without going through another person/process). The user could mark departure time on a whiteboard on the outside of the door.
- Ask users to wear a mask while in the room. [10]

**Cleaning**

Coronavirus can be transmitted if a person touches a contaminated surface and then touches their eyes, nose, or mouth [11]. However, the accumulation of evidence suggests that surfaces are not a major route of transmission [12]. While a clean and sanitary space is recommended
for human milk expression, extra precautions to disinfect against COVID-19 transmission do not seem necessary. The virus can be killed by simple cleaning procedures with soap and water or other cleaning products [13]. Facility managers can:

- Regularly inspect the unoccupied space to ensure that it is tidy and clean.
- Provide supplies in the room: hand sanitizer (at least 60% alcohol) and cleaning wipes. If there is a sink, provide paper towels and soap.
  - Advise users to wipe down high-touch surfaces before use with an antiseptic wipe [11, 13], and to wash their hands before and after expressing milk [7].
- Provide tissues for personal use.
- Provide a trash receptacle for used tissues, paper towels, and wipes.

**Equipment in the room**

Keep the room as user-friendly as possible while eliminating anything extraneous. Provide places to set personal equipment e.g., shelves or tables.

- There is no need to remove or switch out chairs, pumps (designed for multiple users), signs, or informational posters.
  - Surface contamination is not a major route of infection transmission [12].

**Behavior in the room**

To assist lactation room users to minimize their risk of exposure in the room and to avoid contaminating the space themselves, consider advising the following, through posted signs and room use agreements:

- Wash hands before and after pumping. [7]
- Avoid touching your face. [11]
- Wear a mask while in the room. [10]
- Restrict usage to one person at a time. [5]
- Use the electronic booking system or other arrangement to reserve time in the room.
- Bring your own pillows (if needed), pen (for filling out user form, if needed), cleaning supplies for cleaning their personal pump parts (i.e., a brush, sponge, or other implements).

**What to do if a lactation room client has suspected or confirmed illness**

Following standard quarantine precautions, if someone who used the lactation room within the past two weeks reports suspected (showing symptoms) or confirmed infection, then that
person should refrain from using the room for at least 10 days from when symptoms first appeared [timing varies depending on conditions, see reference 14]. In addition, the CDC recommends that anyone exposed to someone with COVID-19 should quarantine following the recommendations of their local public health department. [15]

Evidence gap

A major evidence gap for the use of indoor space is the amount of time needed for airborne virus to die or disappear under different conditions, including an empty space.

Endnotes


2. Given the novelty of the virus and the fast proliferation of research, most research would not be graded “high-quality” using conventional standards at this point (Alexander PE et al. 2020. Available at https://pubmed.ncbi.nlm.nih.gov/32330521/). As time passes, the quality of research will improve and this guidance will be updated.

3. WBUR reports that University of Maryland Environmental Health professor Donald Milton says that outbreaks are more likely to occur in indoor, poorly ventilated environments. Available at: https://www.wbur.org/hereandnow/2020/05/19/air-conditioning-coronavirus; More evidence accumulates: National Public Radio, December 26, 2020. “For scientists who study virus transmission, 2020 was a watershed year.” Available at https://www.npr.org/sections/health-shots/2020/12/26/946901965/for-scientists-who-study-virus-transmission-2020-was-a-watershed-year

4. “A study done by the National Institute of Allergy and Infectious Diseases' Laboratory of Virology in the Division of Intramural Research in Hamilton, Montana helps to answer this question. The researchers used a nebulizer to blow coronaviruses into the air. They found that infectious viruses could remain in the air for up to three hours. The results of the study were published in the New England Journal of Medicine on March 17, 2020.” Source: https://www.health.harvard.edu/diseases-and-conditions/covid-19-basics


11. “Coronavirus can also spread from contact with infected surfaces or objects. For example, a person can get COVID-19 by touching a surface or object that has the virus on it and then touching their own mouth, nose, or possibly their eyes.” Source: https://www.health.harvard.edu/diseases-and-conditions/covid-19-basics, December, 2020.


