

April 2, 2020

Dear Director Washington,

We realize that the department is trying its best in a very difficult situation. We understand that for a unit on quarantine, “yard” might not seem like an essential part of the process. However, highly ventilated and clean air, coupled with the ability to distance oneself as a preventative measure, is something unavailable to people in prison. And, it may make all the difference in the spread of COVID-19.

Of the reports that we’ve received from places on quarantine (namely several calls and Jpays from MRF and WHV), **one of the most frequent and concerning complaints is that there is not enough ventilated air cycling into these units.** Physiologically, the effect is recirculated air that likely contains pathogens. Psychologically, the effect is that these units are pressure cookers. The people inside—staff and prisoners—are breathing in stale, recirculated hot air, and are fearful of the virus’s spread as news about its capacity to transmit through air is verified daily. They are also locked down, agitated, and have no information so rumors are rampant.

Medically, there are several concerns with the lack of ventilation. Here is a quote from the Kansas Department of Corrections Guidelines on Coronavirus containment:

Unsuspected and undiagnosed cases of COVID-19 contribute substantially to disease transmission within correctional facilities. When attempting to control this type of transmission, source control is not a feasible option. Instead, general ventilation and air cleaning should be relied on for environmental control. General ventilation can be used to dilute the air and remove air contaminants and to control airflow patterns in all rooms or other correctional facility settings. Air-cleaning technologies include mechanical air filtration to reduce the concentration of COVID-19 droplets and UVGI to kill or inactivate microorganisms, so they no longer pose a risk for infection.

When risk analysis reveals an enhanced potential for undiagnosed cases of COVID-19, facility designers and owners may consider using higher supply rates of outdoor air (e.g., those recommended for areas within health-care facilities anticipated to contain infectious patients).¹

The CDC’s website also offers guidance for correctional and detention facilities. In the section *Prevention Practices for Incarcerated/ Detained Persons*, the CDC recommends that correctional facilities “Consider alternatives to existing group activities, **in outdoor areas where individuals can spread out.**”²

¹ http://www.kdheks.gov/coronavirus/toolkit/Interim_Guidance_for_Correctional_Facilities.pdf

² Guidance on Management of Coronavirus Disease 2019 (COVID-19) in Correctional and Detention Facilities.” Centers for Disease Control and Prevention. Centers for Disease Control and Prevention, March 23, 2020. <https://www.cdc.gov/coronavirus/2019-ncov/community/correction-detention/guidance-correctional-detention.html>.

Additionally, we've found that it's untrue that no medical sources encourage outside air, airflow and natural ventilation during the course of an airborne pandemic*. Featured in this literature review are several medical sources focused on lung health during this pandemic, and the following recommendations are made:

*Keep windows open where temperatures allow. It is best for airflows to be outward, and surely not to allow airflow from an infected individual toward spaces where uninfected individuals are present. This has two benefits: (1) allowing any viral particles present in the air to exit the room, rather than you (or someone else) breathing them back in; (2) bringing more oxygen into the room—helpful for the lungs and all-around health. If the weather in your region is cold, consider opening the window at least a small amount while also running a heater. Air purifiers may also be helpful. Spend time outdoors (without approaching others within 6 ft.). Balconies, back yards or patios, are good locations to be, as well as walks while avoiding proximity to others. This has the same benefits as keeping windows open—ensuring exhaled viral particles don't get re-inhaled.*³

We understand that continuing with regular yard, or installing massive ventilation systems or UVGI machines at this time is not feasible. But general ventilation is. We cross-referenced studies which provide recommendations on airborne pathogen control in low-resource areas (two are in reference to Tuberculosis specifically; the other is general about airborne pathogens). These studies (attached to this email and referenced here), each recommend that in settings **where crowding and unknown carriers are prevalent, outdoor ventilation is crucial to mitigate spread.**

At very low average concentrations, large amounts of ventilation are required for effective dilution and removal, and the difficulty only gets worse (and more expensive) as concentrations of infectious droplet nuclei fall further, but never reaching zero ...Buildings designed for effective natural ventilation and patient flow (reduced crowding) can greatly reduce transmission—as long as the windows are open and outside conditions are conducive.”⁴

Opening windows and doors maximises natural ventilation so that the risk of airborne contagion is much lower than with costly, maintenance-requiring mechanical ventilation systems ...Natural ventilation costs little and is maintenance free, and is particularly suited to limited-resource settings.⁵

* While not yet officially classified as an airborne pathogen, CDC recommends following all airborne pathogen protocol.

³ Blake Elias, Chen Shen and Yaneer Bar-Yam, Respiratory health for better COVID-19 outcomes, *New England Complex Systems Institute* (March 16, 2020)

⁴ Nardell, E. A. “Indoor Environmental Control of Tuberculosis and Other Airborne Infections.” *Indoor Air* 26, no. 1 (July 2015): 79–87. <https://doi.org/10.1111/ina.12232>.

⁵ Escombe, A. Roderick, Clarissa C Oeser, Robert H Gilman, Marcos Navincopa, Eduardo Ticona, William Pan, Carlos Martínez, et al. “Natural Ventilation for the Prevention of Airborne Contagion.” *PLoS Medicine* 4, no. 2 (2007). <https://doi.org/10.1371/journal.pmed.0040068>.

This study has demonstrated that simple, low cost modifications to existing infrastructure can greatly improve natural ventilation in healthcare settings... Such rooms are likely to contain infectious TB patients and the increased ventilation considerably reduced TB transmission risk to staff and other patients calculated using a standard airborne infection model.⁶

For staff and incarcerated people alike, air flow is extremely important. Everyone who enters these quarantine or locked-down units is at risk of breathing in highly contaminated air, even with a mask (especially since theirs are not N-95 and we have no proof of the efficacy). Natural ventilation, pulling air through the units, is absolutely necessary not just to contain the spread of this pathogen, but to provide humane conditions which do not psychologically exacerbate an already very tense and difficult situation. People need to breathe fresh air, every day. A two-week lockdown without proper ventilation is going to create far more problems than it contains.

In conclusion, we reiterate that in all MDOC facilities— but especially where the Coronavirus has already taken a strong foothold and is rapidly spreading—ventilation, air flow, and outside time when feasible, be monitored and ***exponentially increased*** in order to reduce the airborne transmission of the pathogens, and provide relief for the men and women locked in these units with very little time outside of their cells. While we understand this is an unprecedented event and the department has taken several steps to address and contain the virus, the lack of focus on fresh air and ventilation is beyond concerning. People who work and live within the MDOC correctional facilities have a right to breathe clean air, especially when it could save their lives.

⁶ Escombe, A. Roderick, Eduardo Ticona, Víctor Chávez-Pérez, Manuel Espinoza, and David A. J. Moore. “Improving Natural Ventilation in Hospital Waiting and Consulting Rooms to Reduce Nosocomial Tuberculosis Transmission Risk in a Low Resource Setting.” *BMC Infectious Diseases* 19, no. 1 (2019). <https://doi.org/10.1186/s12879-019-3717-9>.