

9/8/20

re: Zoning Application
Zoning Case Number Z-20-00281

To Whom It May Concern:

We are the owners and occupiers at 129 Hammon Ave Unit 1 for more than 8 years. We are once again writing to unequivocally oppose and object to the special exception proposed by the Colony Hotel to the East Garden. Unfortunately we have been unable to personally witness the construction on site since we are front line essential medical workers and unable to travel due to NY Governor travel order. We have however, relied on our on- site live cameras, microphones, neighbors and association to keep us apprised. We will attempt to participate in the zoom town meeting on 9/9 as work responsibility permits.

To be clear we in no way are looking to limit or thwart efforts by the Colony to continue to run a successful thriving business. This remains in all of our best interests. We have in fact discussed proposed compromises and modifications to their request. We have to date considered the Colony to be approachable and neighborly establishment and fully respectful of the residential nature of Hammon Avenue while hosting many large events on the West Side and indoor locations of the hotel.

In a nutshell, we were presented on or about a year ago, both in person and via formal town of Palm Beach correspondence, with a planned renovation and modification of the East Garden of the hotel. It was crystal clear and unequivocal, that this project was for beautification only and would serve as a "botanical garden" for guests to enjoy. We of course, had no objection.

The current special exception seems like nothing more than a "bait and switch" and quite frankly came as a complete and total surprise to us. Even more surprising, is that this outdoor "garden" has already been used for large gatherings and outfitted with an amplified speaker system despite an ungranted and unapproved special assessment to date. Needless to say, we have multiple serious concerns.

1. Excessive noise (speech and music) above and beyond acceptable in a residential area perhaps even daily or multiple times daily and in perpetuity.
2. Safety concerns are overwhelming. With large crowds anticipated, concerns including but not limited to smoking and cigarette butt litter, trash and vermin, increased traffic, theft, congregating outside our unit in particular, public drunkenness and potential drug use.
3. Anticipated large crowds pose risk of COVID 19, literally at our front door. This airborne illness is primarily transmitted via particles that can remain stagnant and suspended in air and infiltrate waste water supply. As owners of ground level unit 1 directly next door and within less than 10 feet from the East Garden, we are gravely concerned. (see attached medical literature)
4. **We are less than 10 feet from anticipated gatherings of more than 10 people during a pandemic. This poses unacceptable risk to all.**

We respectfully request that **any and all outdoor social/planned events continue to be conducted on the West Side of the hotel.** Any/all outdoor music/speeches should not be amplified.

We fear for our health, well-being and safety, and feel our property values will be diminished significantly as a result of

granting this special exception. Past precedent has already been set as noted with the "Four Arts" special assessment request and denial.

Despite remediation measures we have discussed with the owners, we find the nuisance this will cause on a perpetual and enduring basis is unacceptable. Our rights and deserved quality of life as Palm Beach residential property owners and tax payers and are at stake.

Thank you in advance for your consideration.

Respectfully Submitted,

Alyssa Dweck MD and Evan Krakovitz MD
129 Hammon Ave Unit #1

VIEWPOINT

Airborne Transmission of SARS-CoV-2

Theoretical Considerations and Available Evidence

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Author Audio Interview

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The coronavirus disease 2019 (COVID-19) pandemic has reawakened the long-standing debate about the extent to which common respiratory viruses, including the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), are transmitted via respiratory droplets vs aerosols. Droplets are classically described as larger entities ($>5\ \mu\text{m}$) that rapidly drop to the ground by force of gravity, typically within 3 to 6 feet of the source person. Aerosols are smaller particles ($\leq 5\ \mu\text{m}$) that rapidly evaporate in the air, leaving behind droplet nuclei that are small enough and light enough to remain suspended in the air for hours (analogous to pollen).

Determining whether droplets or aerosols predominate in the transmission of SARS-CoV-2 has critical implications. If SARS-CoV-2 is primarily spread by respiratory droplets, wearing a medical mask, face shield, or keeping 6 feet apart from other individuals should be adequate to prevent transmission. If, however, SARS-CoV-2 is carried by aerosols that can remain suspended in the air for prolonged periods, medical masks would be inadequate (because aerosols can both penetrate and circumnavigate masks), face shields would provide only partial protection (because there are open gaps between the

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shield and the wearer's face), and 6 feet of separation would not provide protection from aerosols that remain suspended in the air or are carried by currents.

Experimental data support the possibility that SARS-CoV-2 may be transmitted by aerosols (so-called airborne transmission) even in the absence of aerosol-generating procedures (such as intubation or noninvasive positive pressure ventilation). Investigators have demonstrated that speaking and coughing produce a mixture of both droplets and aerosols in a range of sizes, that these secretions can travel together for up to 27 feet, that it is feasible for SARS-CoV-2 to remain suspended in the air and viable for hours, that SARS-CoV-2 RNA can be recovered from air samples in hospitals, and that poor ventilation prolongs the amount of time that aerosols remain airborne.¹

Many of these same characteristics have previously been demonstrated for influenza and other common respiratory viruses. These data provide a useful theoretical framework for possible aerosol-based transmission for

SARS-CoV-2, but what is less clear is the extent to which these characteristics lead to infections. Demonstrating that speaking and coughing can generate aerosols or that it is possible to recover viral RNA from air does not prove aerosol-based transmission; infection depends as well on the route of exposure, the size of inoculum, the duration of exposure, and host defenses.

Notwithstanding the experimental data suggesting the possibility of aerosol-based transmission, the data on infection rates and transmissions in populations during normal daily life are difficult to reconcile with long-range aerosol-based transmission. First, the reproduction number for COVID-19 before measures were taken to mitigate its spread was estimated to be about 2.5, meaning that each person with COVID-19 infected an average of 2 to 3 other people. This reproduction number is similar to influenza and quite different from that of viruses that are well known to spread via aerosols such as measles, which has a reproduction number closer to 18. Considering that most people with COVID-19 are contagious for about 1 week, a reproduction number of 2 to 3 is quite small given the large number of interactions, crowds, and personal contacts that most people have under normal circumstances within a 7-day period.

Either the amount of SARS-CoV-2 required to cause infection is much larger than measles or aerosols are not the dominant mode of transmission.

Similarly, the secondary attack rate for SARS-CoV-2 is low. Case series that have evaluated close contacts of patients with confirmed COVID-19 have reported that only about 5% of contacts become infected. However, even this low attack rate is not spread evenly among close contacts but varies depending on the duration and intensity of contact. The risk is highest among household members, in whom transmission rates range between 10% and 40%.²⁻⁴ Close but less sustained contact such as sharing a meal is associated with a secondary attack rate of about 7%, whereas passing interactions among people shopping is associated with a secondary attack rate of 0.6%.⁴

The secondary attack rate among health care workers who unknowingly care for a patient with COVID-19 while wearing face masks alone or not using any personal protective equipment is also low; transmission studies suggest less than 3% (and the few health care worker infections that were documented in these transmission studies were associated with aerosol-generating procedures or prolonged exposures with inconsistent use of face masks).^{5,6} People infected with SARS-CoV-2 may be producing both droplets and aerosols on a constant basis but most of these emissions are not infecting other

people. This pattern seems more consistent with secretions that fall rapidly to the ground within a narrow radius of the infected person rather than with virus-laden aerosols that remain suspended in the air at face level for hours where they can be inhaled by anyone in the vicinity. An exception may be prolonged exposure to an infected person in a poorly ventilated space that allows otherwise insignificant amounts of virus-laden aerosols to accumulate.

Proponents of aerosol-based transmission cite well-documented clusters of infections among choir participants, restaurant patrons, and office workers sharing closed indoor spaces. However, based on the reproduction number for SARS-CoV-2, these events appear to be the exception rather than the rule. Furthermore, it is difficult to determine in retrospect all the potential person-to-person interactions that may have happened before, during, and immediately following these events. The potential capacity of viruses to spread widely and rapidly among tightly packed groups within closed environments via multiple mechanisms should not be underestimated. Experiments using labeled phages show that viruses can spread from a single contaminated door handle or the hands of 1 infected person to people and equipment throughout an office building within hours.⁷ These caveats are also speculative and do not exclude the possibility of aerosol-based transmission, particularly in crowded poorly ventilated spaces, but do provide potential alternative explanations for these clusters.

Perhaps the most practical gauge of the relative importance of aerosols vs droplets are studies on the relative effectiveness of respiratory protection targeting aerosols vs droplets. If respiratory viruses are predominantly spread via aerosols, N95 respirators and their equivalents would be more protective than medical masks alone. A recent meta-analysis made this claim.⁸ However, the meta-analysis was not based on direct comparisons of N95 respirators vs medical masks but rather on a post hoc bayesian analysis of 2 independent analyses, one on N95 respirators vs no masks and the other on medical masks vs no masks.

Both N95 respirators and medical masks were protective compared with no masks; however, the validity of then compar-

ing these 2 analyses is questionable given the highly divergent source studies for each comparison. The included studies were small, heterogeneous case-control studies that variably adjusted for possible confounders, had disparate results, and wide confidence intervals.

Moreover, 9 of the 10 studies in this meta-analysis⁸ involved SARS coronavirus 1 and Middle East respiratory syndrome virus rather than SARS-CoV-2. To extrapolate about the effectiveness of respiratory protection for SARS-CoV-2 from other viruses, it would make more sense to extrapolate from the 4 randomized trials that have directly compared N95 respirators vs medical masks and found no difference between them in the rates of confirmed non-SARS coronavirus infections and influenza infections among health care workers.⁹

All told, current understanding about SARS-CoV-2 transmission is still limited. There are no perfect experimental data proving or disproving droplet vs aerosol-based transmission of SARS-CoV-2. The balance of evidence, however, seems inconsistent with aerosol-based transmission of SARS-CoV-2 particularly in well-ventilated spaces. What this means in practice is that keeping 6-feet apart from other people and wearing medical masks, high-quality cloth masks, or face shields when it is not possible to be 6-feet apart (for both source control and respiratory protection) should be adequate to minimize the spread of SARS-CoV-2 (in addition to frequent hand hygiene, environmental cleaning, and optimizing indoor ventilation).

To be sure, there are rarely absolutes in biological systems, people produce both droplets and aerosols, transmission may take place along a spectrum, and even medical masks likely provide some protection against aerosols.^{6,10} It is impossible to conclude that aerosol-based transmission never occurs and it is perfectly understandable that many prefer to err on the side of caution, particularly in health care settings when caring for patients with suspected or confirmed COVID-19. However, the balance of currently available evidence suggests that long-range aerosol-based transmission is not the dominant mode of SARS-CoV-2 transmission.

ARTICLE INFORMATION

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