

# NATS Panel of Experts Lays Out Sobering Future for Singers: "No Vaccine, No Safe Public Singing"

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On May 5th, an expert panel assembled by the National Association of Teachers of Singing (NATS), the American Choral Directors Association (ACDA), Chorus America, the Barbershop Harmony Society, and the Performing Arts Medical Association (PAMA) laid out a sobering vision for the future of public singing in America. The primary goal of the panel, according to NATS Executive Director Dr. Allen Henderson, was "to bring scientists and medical professionals directly to our audience, as those of us who run professional organizations do not have the direct knowledge ourselves of these complex issues."

In a presentation that sent shockwaves through the singing community, Dr. Lucinda Halstead, the president of the Performing Arts Medical Association and the Medical Director of the Department of Otolaryngology at the University of South Carolina, concluded that there is no safe way for singers to rehearse together until there is a COVID-19 vaccine and a 95% effective treatment in place, in her estimates at least 18-24 months away.

Dr. Halstead and Dr. Donald Milton, an infectious bio-aerosol specialist at the University of Maryland, presented at least three critical challenges to safely bring singers together:

1) There is no spacing solution for singing groups that would eliminate risk.

Both Halstead and Milton cite lack of proper ventilation as a cause to spread the aerosolized virus. Even multiple changes of air per hour in the room or an ultraviolet light may not fully eliminate the virus, which can infect people "at the micron level and can travel as far as 16 feet."

Physical distancing on a stage for a choir, according to Halstead, would not be possible: "You would need a football stadium to space apart the Westminster choir".

2) Masks don't provide safe methods of singing

On masks, Halstead states, "there are no barriers currently safe for singing." An N95 mask may provide some measure of safety if fit-tested, but it would be "difficult to breathe," "hot," "decrease the levels of oxygen with rebreathing," "cause headaches with an increase of CO2," and "could injure people with significant health issues, like asthma."

Milton outlines a study of influenza patients who sat in masks for half an hour without coughing and "simply recited the alphabet three times." Even speaking only a few sentences, participants with masks shed influenza virus from their breath in fine particles that escaped their masks.

3) Current standard testing still has 3-5% false negatives, and rapid tests are not sensitive enough for large group testing.

Even if Polymerase Chain Reaction (PCR) testing becomes widely available, Halstead says that testing at her otolaryngology clinic results in false negative results between 3-5% of the time.

There are rapid diagnostic tests in development "similar in ease to a home pregnancy test." However, according to Halstead, current tests "are not as sensitive as the PCR test; you would need to be symptomatic, and it has a higher percentage of false negatives". For these reasons, Halstead does not consider rapid testing safe for testing large groups such as choirs.

Dr. Halstead states that the requirements to reopening "safe group singing and performances" are:

An effective vaccine, which would "probably take 18-24 months"; and drug treatments that are 95% effective with a time range of 6-12 months.

Until both a vaccine and drug treatments are readily available, "social distancing, including masks, gloves, and spacing, is key."

A return to group singing, according to Halstead, must meet the following criteria:

-Acceptance of Risk: Groups would have to accept a level of risk of someone having COVID-19 in a rehearsal or a performance; and

-Testing at Home and Screening at the Door: Singers would need to undergo home PCR tests and symptom screening at the door, checks of temperature as well as oxygen saturation in the blood via pulse oximetry.

Halstead considers screening at the door without testing high risk: "There are a lot of people who spread this disease while asymptomatic. You could pass a screen test and still be highly contagious."

### The Road Ahead for Singers

Reaction from the choral and opera community online ran the gamut, from shock to denial to anger to grief.

One musician questioned the role of performing arts education for singers in a time when they are unable to perform: "Are universities concerned that a significant number of students will just drop out of school for a year if no performances can happen? With tuition as expensive as it is, I imagine it has crossed the minds of many performing arts students to leave school until performing can resume."

A music teacher pointed out the challenge for older choir members who may have chronic conditions such as heart disease: "Even with super accurate rapid testing, would someone with a compromised immune system or health conditions be OK with the risk? I wouldn't."

That music teacher was stunned, but thankful for the information: "It is important to manage expectations with this. We need to know the realities."

Executive Director of NATS Allen Henderson, when asked to comment on the presentation, said, "I appreciate the candor and depth of data Drs. Milton and Halstead brought to bear on our particular industry and how they were able to discuss the particular settings we exist in every day. Our job now is to digest that information, let it sink in, and then plan proactive steps to return."

Some of us are decision makers and truly hold the lives of our colleagues, students, and families in our hands. Others will need to digest this data in order to formulate plans to advocate for their own safety when placed in a potentially compromising environment. I hope that those who listen will use this important information to support and protect our community while also looking forward to our ultimate return to making great music together."

Dr. David Young, an otolaryngologist and singer who studied under Dr. Halstead, and praised her as a "wonderful mentor," agreed with her findings: "It's bleak. The stories of super-spreader events at the churches in Washington State, the U.K., and South Korea are sobering." A vaccine, according to Young, "may be years away or never come- we're still waiting on that HIV vaccine everyone talked about 30 years ago."

Even so, Dr. Young, remains cautiously optimistic: "We have performed and thrived amid terrible infectious diseases before. We performed during the pre-vaccine measles era. We performed during polio. We performed despite tuberculosis lurking out there, a highly contagious disease spread via aerosols that can linger without symptoms for a long time. We've done it before."

The same science telling us it's dangerous to sing together now is also what can help us find a way through this dark time. I don't know the exact form this will take, but I know it's a puzzle with defined pieces and therefore has a solution or many solutions."

Dr. Young outlined three possible solutions to return to public singing:

1) A vaccine "is the holy grail. But it's not necessary to move forward. We have no vaccine against TB for adults and many unvaccinated kids against measles, yet we have kept those from spreading."

2) Ending spread through rigorous social distancing, contact tracing, and public health measures is what Young considers "the most likely scenario: it may have already happened in some countries like New Zealand and South Korea. We need to get to a point where there are no new cases where we can't immediately identify the source and isolate close contacts. We've done this already with TB. No vaccine, no immunity with infection, yet we have almost no community spread in the US outside high risk areas and we do screening tests for those. If a case pops up, the health department aggressively tracks down contacts and traces the infection. They perform mandatory testing and treatment and can even imprison people who refuse. We have lived our entire lives performing amid a highly infectious aerosolized disease that we keep in check mainly by public health measures. One could imagine that somewhere like New Zealand with no new cases in days, no community spread, and travel bans, that people there could probably start singing together soon."

3) Countermeasures mixed with scientific investigation: "Some papers suggest we could reduce risk significantly through masking, ventilation, testing, and pre-rehearsal quarantines. We could start putting singers and instrumentalists in different masks and measuring aerosols. Or study an orchestra with a combination of pre-testing for everyone, filters for brass, and hermetically sealed booths for winds, connected to a powered air purifier with holes for sound covered with P100 filters and a microphone inside the booth. The cost of all that would probably be less than the cost to produce a single concert. Many labs already exist that have this material, it's just a matter of people reaching out to see what is possible. I'd love to see our community start working with medical and engineering colleagues to make some strides toward finding solutions.

There may be more ways than we realize to make this safer."