

Singing: A Review of Where We Are

Everyone is fed up with the consequences of this pandemic, but the aim of current measures is to make rational decisions to mitigate risk until it is over. The current measures reflect judgments of risk versus benefit based on admittedly incomplete data.

The Lingering Risk

The risk is significant, and it is not over. COVID-19 infection represents a serious illness with not just risk of hospitalization and death but also long-term illness including fatigue, shortness of breath, and other serious long-term symptoms. Getting COVID-19 may be a life-altering if not life-threatening event; consider that for a singer, it may mean permanent inability to sing.

Regarding mitigation measures, the risk of getting it wrong is considerable. Once exposed, some people develop infection more than others, and it has been estimated that 10% of infected people lead to 80% of viral transmission. A large fraction of congregations and choirs are people vulnerable because of age or medical conditions.

During the pandemic, viral variants have emerged that are more infectious and more deadly than the original COVID-19 virus, and the variants are rapidly expanding in the US. Some variants appear to dodge immunity from prior infections or vaccinations or even the limited treatments available. This pandemic is not over.

State of the Research

Some lab-based research has been done to address aerosol production from singing and reducing aerosols partially by mitigation measures, but that is not an adequate stand-in for not transmitting infection in the real world. What we truly need is guidance from public health authorities about what measures prevent viral transmission in the context of singing, but little guidance has been provided by national or state public health agencies. The Return to In-Person Worship Work Group has been largely left to its own resources to weigh risks and benefits of adopting measures to mitigate risk of viral transmission and has aimed to make rational decisions based on limited research.

Making decisions has been based on three principles:

- taking all evidence together in a summary (and not just anecdotes or cherry-picked studies that fit what we want most),
- recognizing that not all evidence is of the same quality, and
- factoring in our values and preferences.

The highest level of evidence would be guidelines developed by public health experts based on a systematic summary of rigorous peer-reviewed research, but next would be a summary of peer-reviewed research, then peer-reviewed research, and expert opinion would be at the bottom.

What peer-reviewed research is available for singing is not much. This Naunheim summary, [“Safer Singing During the SARS-CoV-2 Pandemic: What We Know and What We Don’t,”](#) is

the best we have, and it indicates ensemble singing during worship and congregational singing confer longer exposure and higher viral load (meaning higher risk of transmitting infection).¹

Observations

Over the pandemic, several other observations have developed to influence the work group's judgments about singing. The first is that COVID-19 outbreaks have occurred in numerous clusters related to choral groups, with dozens of hospitalizations and a substantial number of deaths. Some countries totally ceased any choral singing (Germany and the Netherlands), and the United Kingdom, where choral singing is central to its culture, has greatly restricted singing such that nonprofessional performing arts is not currently allowed and professional singing is only for rehearsal and recording.

The CDC has shied away from specific recommendations but does note singing as a risk: “Behavior of attendees during an event— Events where people engage in behaviors such as interacting with others from outside their own household, **singing**, shouting, not maintaining physical distancing, or not wearing masks consistently and correctly, can increase risk.”

A substantial fraction of infected people have no symptoms and may spread infection. The larger the number of households represented, the higher the risk of having an asymptomatic infected person at a gathering. That is the basis for restricting numbers of singers--it's a judgment of risk of transmitting infection from someone who does not know that he or she is infected, versus benefit for our values and preferences.

Secondly, over time, aerosol transmission has become increasingly recognized as an important route of COVID-19 transmission, and that talking and especially shouting and singing produce aerosols that may be infectious. This reference, “Two meters or one: what is the evidence for physical distancing in covid-19?” developed a risk model that includes singing as a high-risk activity.

Adapting an NFL Protocol

And finally, the National Football League developed a largely successful protocol to mitigate COVID-19 transmission based on risk factors. We attempted to adapt this protocol to a worship setting:

- Wear masks.
- Avoid crowding--maintain physical distance of six feet or more (the revised CDC guidance for schools still includes six feet for adults).
- Adequate ventilation.
- Use outdoor settings more than indoor settings, and large rooms more than small rooms.
- Stay at home when possible.
- Limit duration of exposure. Even five minutes in an indoor poorly ventilated setting may result in spread.

To this, we added:

- Avoid singing, shouting, or loud talking.

¹ Naunheim MR, Bock J, Doucette PA et al Safer Singing During the SARS-CoV-2 Pandemic: What We Know and What We Don't. J Voice. 2020 Jul 2:S0892-1997(20)30245-9. PMID: 32753296

The NFL protocol was based on the premise that omitting two or more measures--like taking off a mask for a prolonged period indoors--means a much higher risk of spreading infection. Therefore, to reduce spread, the work group judged that we should use all measures if possible and omit no more than one measure in any situation.

I hope this will help concerned members and clergy to understand the rationale for current measures while we eagerly await the pandemic's end.

—*Dr. George Moxley for the Return to In-Person Worship Work Group*