

## Concern with Sanctuary Singing & Gathering for Fenton UMC

### PASTOR PORCH'S SUMMARY (May 13 and updated May 24, 2020)

*First, it needs to be said that there are no scientific studies on the transmission of the COVID-19 virus in a church setting where people sing with social distancing (6 ft. between each other). So everything we are being told is either where there was not social distancing, or a lab test that was not specifically about singing, or taking different unrelated tests and drawing conclusions which may or may not correspond to reality.*

*Second, below are several articles on Sanctuary Singing as it relates to the COVID-19. The first article is the original article that appeared in the Los Angeles Times. I have read dozens of articles about the risk associated with choir singing or church singing. All of them are ultimately based upon this article. So you might as well get the original source. **Keep in mind, they were inches apart, moved around, did not wear masks, car pooled, did not hug or shake hands, and spent 2.5 hours together.** The second article is the typical analysis based on things we are told from different sources and then they paste them together to draw conclusions that may or may not correspond to real life situations.*

*At the very end is an actual report by the CDC about a Church in Arkansas that had multiple church gatherings from March 6-11, where no one wore masks, and they were in close daily contact, including touching, talking, singing, etc. next to each other. Folks who felt ill or were living with ill persons attended the events. **Remember all this happened before social distancing guidelines existed.** They did not follow State or County guidelines for gathering, because those guidelines did not exist at that time.*

*Third, based upon the World Health Organization (WHO) and Center for Disease Control (CDC) information and guidelines, there are no limitations on singing. For people keeping social distance and/or wearing a mask, the transmission level is very low. Remember in typical day to day conditions, masks do not protect the wearer, the masks protect others from the wearer. I know this is counter intuitive, but there are several scientific studies to back this up. The exception is in unusual situations like hospitals and care centers, etc. and the masks are N95, etc. **So, information will change, and when it does we will adapt to it.***

*The articles (sources and dates listed):*

### A choir decided to go ahead with rehearsal.

### Now dozens of members have COVID-19 and two are dead

By RICHARD READ SEATTLE BUREAU CHIEF  
Wash. —

MARCH 29, 2020 MOUNT VERNON,

With the coronavirus quickly spreading in Washington state in early March, leaders of the Skagit Valley Chorale debated whether to go ahead with weekly rehearsal. The virus was already killing people in the Seattle area, about an hour's drive to the south. But Skagit County hadn't reported any cases, schools and businesses remained open, and prohibitions on large gatherings had yet to be announced.

On March 6, Adam Burdick, the choir's conductor, informed the 121 members in an email that amid the "stress and strain of concerns about the virus," practice would proceed as scheduled at Mount Vernon Presbyterian Church. "I'm planning on being there this Tuesday March 10, and hoping many of you will be, too," he wrote. Sixty singers showed up. A greeter offered hand sanitizer at the door, and members refrained from the usual hugs and handshakes. "It seemed like a normal rehearsal, except that choirs are huggy places," Burdick recalled. "We were making music and trying to keep a certain distance between each other." After 2½ hours, the singers parted ways at 9 p.m. Nearly three weeks later, 45 have been diagnosed with COVID-19 or ill with the symptoms, at least three have been hospitalized, and two are dead.

The outbreak has stunned county health officials, who have concluded that the virus was almost certainly transmitted through the air from one or more people without symptoms. “That’s all we can think of right now,” said Polly Dubbel, a county communicable disease and environmental health manager. In interviews with the Los Angeles Times, eight people who were at the rehearsal said that nobody there was coughing or sneezing or appeared ill. Everybody came with their own sheet music and avoided direct physical contact. Some members helped set up or remove folding chairs. A few helped themselves to mandarins that had been put out on a table in back. Experts said the choir outbreak is consistent with a growing body of evidence that the virus can be transmitted through aerosols — particles smaller than 5 micrometers that can float in the air for minutes or longer. The World Health Organization has downplayed the possibility of transmission in aerosols, stressing that the virus is spread through much larger “respiratory droplets,” which are emitted when an infected person coughs or sneezes and quickly fall to a surface.

But a study published March 17 in the New England Journal of Medicine found that when the virus was suspended in a mist under laboratory conditions it remained “viable and infectious” for three hours — though researchers have said that time period would probably be no more than a half-hour in real-world conditions. One of the authors of that study, Jamie Lloyd-Smith, a UCLA infectious disease researcher, said it’s possible that the forceful breathing action of singing dispersed viral particles in the church room that were widely inhaled. “One could imagine that really trying to project your voice would also project more droplets and aerosols,” he said.

With three-quarters of the choir members testing positive for the virus or showing symptoms of infection, the outbreak would be considered a “super-spreading event,” he said. Linsey Marr, an environmental engineer at Virginia Tech and an expert on airborne transmission of viruses, said some people happen to be especially good at exhaling fine material, producing 1,000 times more than others. Marr said that the choir outbreak should be seen as a powerful warning to the public. “This may help people realize that, hey, we really need to be careful,” she said.

The Skagit Valley Chorale draws its members from across northwest Washington and often sells out its winter and spring concerts at the 650-seat McIntyre Hall in Mount Vernon. Amateur singers interested in choral music tend to be older, but the group includes some young adults. Last year, Burdick worked some hip-hop into one number. The next big performance on the group’s schedule was in late April, peak tourist season, when the annual Skagit Valley Tulip Festival attracts more than a million people to view brilliant hues in meadows surrounding Mount Vernon. The festival would soon be canceled, but nothing had been announced yet and the choir was continuing to prepare.

Carolynn Comstock and her husband, Jim Owen, carpoled to the March 10 practice from the nearby city of Anacortes with their friends Ruth and Mark Backlund. Carolynn and Jim, who ran a home remodeling business together, had been singing with the choir for 15 years and thought of it as a centering force in their lives. They had introduced the Backlunds to the choir. The two couples entered the rented church hall — roughly the size of a volleyball court — and offered their hands for the disinfectant. Cushioned metal chairs extended in six rows of 20, with about a foot between chairs and one aisle down the center. There were twice as many seats as people. Comstock, a soprano, and Owen, a tenor, took their usual seats beside each other in the third row. The rows toward the front and center filled up around them. Burdick, 49, stood facing his choir, with an accompanist to his right seated at a grand piano.

Given the anxiety over the coronavirus, the conductor decided to lead off with a piece called “Sing On.” The singers inhaled deeply, and sang the chorus with gusto: “Sing on! Whatever comes your way, sing on! Sing on!” The choir moved on to other numbers, including a popular spiritual piece written by gospel legend Thomas A. Dorsey: “If we ever needed the Lord before, we sure do need Him now.” At one point the members broke into two groups, each standing around separate pianos to sing. When it was time to leave, Burdick’s wife, Lorraine, a contralto who also sang professionally, refrained from her custom of embracing friends. Instead, she curtsied her goodbyes.

Three days later, Comstock felt chills. A sweater didn’t help. She took her temperature: 99.3. She and Owen canceled their plans for dinner that night at the Backlunds’ house. At 9 p.m., she got a text from Ruth Backlund. Ruth, 72, and Mark, 73, had fevers. Burdick woke up the next day, March 14, with a fever. As his

temperature rose to 103, he began hearing from other choir singers. They felt fatigued and achy. Some had fevers, coughs and shortness of breath they had heard were telltale symptoms of COVID-19. Some had nausea and diarrhea. On March 15, Comstock, 62, noticed something odd when she made pasta. She couldn't taste the sauce, a spicy Italian sausage. She would soon learn that loss of taste and smell was a common symptom too. When Owen, 66, first felt sick that day, he found that his temperature was below normal, a symptom that continued. The same day, the Backlunds tested negative for influenza. Their clinic sent out their samples for coronavirus tests, which would come back four days later showing they both had COVID-19. On March 17, a choir member alerted Skagit County Public Health about the outbreak.

Working from the choir's membership roster, a dozen health officers scrambled for three days to contain the outbreak. They called every member, determining who had attended the rehearsal. They asked each person with symptoms to list their close contacts during the 24 hours before illness set in. Then they called those people, telling anyone who felt sick to quarantine themselves. "We think it was just a really super-unfortunate, high-risk occurrence," said Dubbel, the county health official.

Mark Backlund felt himself slipping, but not as badly as a friend a decade younger, a runner, who was rushed to the hospital with pneumonia. Both men would ultimately recover. On March 18, Burdick received a message from Nancy "Nicki" Hamilton, an 83-year-old soprano, known for her political activism and tales of international travel. She was worried about a fellow member. Three days later, he received another call. Hamilton had been rushed to the hospital soon after he had talked with her and now she was dead. Word quickly spread among the choir members, many of them sick and left to grieve alone in their homes. Health officials said all 28 choir members who were tested for COVID-19 were found to be infected. The other 17 with symptoms never got tested, either because tests were not available or — like Comstock and Owen — the singers were under the impression that only people in dire condition were eligible.

The youngest of those sickened was 31, but they averaged 67, according to the health department. In their split-level home, Burdick and his wife kept distance between themselves for a week. But Lorraine got sick anyway. The Burdicks had been heartened to hear that another woman in the hospital — an alto in her 80s — seemed to be getting better. But this past Friday, the conductor got another call. She had died. And another woman, a tenor, had been rushed to the hospital. Others felt the disease waning. Fifteen days after the rehearsal, Comstock squirted shampoo into her hand and experienced an odd and pleasing sensation. It smelled. Like coconut.

Marr, the Virginia Tech researcher, said that the choir outbreak reminded her of a classic case study in the spread of infectious disease. In 1977, an Alaska Airlines flight returned to Homer, Alaska, after experiencing engine trouble and sat on the tarmac there for four hours with the ventilation system off. Of the 49 passengers on board, 35 developed flu symptoms and five were hospitalized. Researchers ultimately traced the outbreak to a woman who felt fine when she boarded but later became ill. The case jolted epidemiologists into the realization that influenza could spread through the air. Research has already shown that the coronavirus is nearly twice as contagious as influenza and far more deadly. There is still much to learn about the choir outbreak, starting with the original source of the virus. Dubbel, the county official, said she hoped that a study would be conducted someday to determine how the infection spread. But for now, her team is swamped trying to contain additional outbreaks. Marr said that researchers will have lots of questions for choir members. Did the singers sit in customary seats, allowing them to recall their locations that evening and help reconstruct the layout of the room and its occupants? Might the 15 people who did not get sick have sat together?

By Sunday, 99 people had tested positive in Skagit County. It could be months before the choir meets again. The Backlunds, though, have started singing again — an alto and a bass together in their living room. The couple, and Comstock and Owen, would like to know if they have antibodies against the virus, so it would be safe for them to deliver meals and find other ways to help as the infection spreads. Comstock marveled at the randomness of it all. "It's just normal random people doing things that they love to do, and all of a sudden some people are dead," she said. "It's very sobering."

**From the Business Insider...**

by Shira Feder, April 8, 2020

## **Speech and singing might spray the coronavirus further than 6 feet. Here's what that means for loud talkers.**

In March, 60 members of a choir group in Washington, by then already an epicenter of coronavirus in the US, tentatively went ahead with a rehearsal. They kept their distance and used hand sanitizer.

Three weeks later, [the LA Times](#) reported, 45 members were diagnosed with COVID-19, three were hospitalized, and two died.

That one case adds weight to evidence that droplets can travel further than six feet if they are ejected by people speaking loudly or singing.

A not-yet-peer-reviewed [study](#) by the National Institutes of Health, released on Monday and first reported by [the Guardian](#), used laser imagery and video to show that, when people speak, thousands of fine droplets can be spewed into the air — up to 360 droplets in 17 milliseconds — a finding, they said, which could hold lessons for the public during the novel coronavirus pandemic. It's something scientists have been warning about for weeks. "While the current specific research is limited, the results of available studies are consistent with aerosolization of virus from normal breathing," Dr. Harvey Fineberg, chairman of the National Academy of Sciences Standing Committee on Emerging Infectious Diseases and 21st Century Health Threats, wrote in a [letter](#) to the White House.

### **The coronavirus is heavier than other viruses, so it typically falls to the ground**

Some viruses move in droplets, and some in aerosols. Droplets are heavier, so they tend not to linger in the air, falling instead on surfaces or coughed-on hands. Aerosols are tiny particles, smaller than five micrometers, that can float in the air.

The World Health Organization has taken pains to emphasize that the coronavirus is primarily spread through respiratory droplets, unlike, for example, measles, which is transmitted in aerosols and can linger for hours in the air.

We know that the virus can be aerosolized in certain hospital settings — the most common example being when a patient is intubated, and oxygen from the machine converts infectious cough droplets into a fine spray.

In most settings, droplets cannot travel further than a three to six feet. Though some studies of the coronavirus have found it could linger in the air in a lab, they were not representative of real-world conditions, and experts say it's unlikely the coronavirus could linger like measles or chickenpox.

Projecting your voice could send droplets further — but it's unclear how infectious they are at the end of their journey

William Schaffner, professor of infectious diseases at Vanderbilt University Medical Center, told Business Insider that, no matter how far coronavirus droplets travel, they are not, technically, "airborne," an academic term that is causing some controversy in medical circles.

"By airborne, we mean that the virus can linger in the air for substantial periods of time, and might even infect someone who walks into the room an hour later," Schaffner said. "Could it happen occasionally? Sure. It happens occasionally with influenza, too, but it's pretty darn unusual for the most part."

Still, projecting your voice could send droplets further afield.

"These droplets are usually transmitted within three to six feet, but these droplets can be pushed farther out, sometimes even beyond six feet, if you give the exhalation more energy, with a cough or a sneeze or even singing," Schaffner said.

Lydia Bourouiba, an associate professor at MIT whose lab explores the effects of exhalations like coughs or sneezes, is another scientist who believes the virus can travel far further than previously appreciated. In an article for JAMA, Bourouiba wrote that "peak exhalation speeds can reach up to 33 to 100 feet per second, creating a cloud that can span approximately 23 to 27 feet," and called for revised CDC and WHO guidelines. But despite studies picking up traces of the virus far from its source, none have yet detected *infectious* particles floating in the air more than six feet from where it started its journey.

What should you do if you're a loud talker or you like to sing in public?

After analyzing all of the aerosol studies on coronavirus so far published, the WHO concluded on March 20 that its recommendations remain unchanged: medics need personal protective equipment and to use airborne precautions when intubating patients, and the general public should stay home.

"From the available studies that we have seen, we are confident that the guidance we have is appropriate," WHO representative Maria Van Kerkhove said in a press conference. The general consensus among virologists is that's right: the coronavirus probably won't travel further than six feet.

The authors of the newly-released NIH study on loud speech said that a damp homemade cloth mask could help to catch the amount of droplets produced when talking, adding their findings to the growing pile of evidence declaring homemade masks a necessary part of fighting off a virus.

But masks do not make up for what the WHO and the CDC and all the public health experts agree is the gold standard of virus-fighting; social distancing, which they maintain remains the best approach.

Schaffner agrees with the WHO: Stay home and skip any in-person group singing.

"And at this juncture, we don't want people doing voice lessons, even standing eight-and-a-half feet apart," Schaffner said.

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The full May 22, 2020 CDC article is at: <https://www.cdc.gov/mmwr/volumes/69/wr/mm6920e2.htm>

Summary & Discussion Portions:

## Summary

### What is already known about this topic?

Large gatherings pose a risk for SARS-CoV-2 transmission.

### What is added by this report?

Among 92 attendees at a rural Arkansas church during March 6–11, 35 (38%) developed laboratory-confirmed COVID-19, and three persons died. Highest attack rates were in persons aged 19–64 years (59%) and  $\geq 65$  years (50%). An additional 26 cases linked to the church occurred in the community, including one death.

### What are the implications for public health practice?

Faith-based organizations should work with local health officials to determine how to implement the U.S. Government guidelines for modifying activities during the COVID-19 pandemic to prevent transmission of the virus to their members and their communities.

## Discussion

This investigation identified 35 confirmed COVID-19 cases among 92 attendees at church A events during March 6–11; estimated attack rates ranged from 38% to 78%. Despite canceling in-person church activities and closing the church as soon as it was recognized that several members of the congregation had become ill, widespread transmission within church A and

within the surrounding community occurred. The primary patients had no known COVID-19 exposures in the 14 days preceding their symptom onset dates, suggesting that local transmission was occurring before case detection.

Children represented 35% of all church A attendees but accounted for only 18% of persons who received testing and 6% of confirmed cases. These findings are consistent with those from other reports suggesting that many children with COVID-19 experience more asymptomatic infections or milder symptoms and have lower hospitalization rates than do adults (4,5). The role of asymptomatic or mildly symptomatic children in SARS-CoV-2 transmission remains unknown and represents a critical knowledge gap as officials consider reopening public places.

The risk for symptomatic infection among adults aged  $\geq 65$  years was not higher than that among adults aged 19–64 years. However, six of the seven hospitalized persons and all three deaths occurred in persons aged  $\geq 65$  years, consistent with other U.S. data indicating a higher risk for COVID-19-associated hospitalization and death among persons aged  $\geq 65$  years (6).

The findings in this report are subject to at least four limitations. First, some infected persons might have been missed because they did not seek testing, were ineligible for testing based on criteria at the time, or were unable to access testing. Second, although no previous cases had been reported from this county, undetected low-level community transmission was likely, and some patients in this cluster might have had exposures outside the church. Third, risk of exposure likely varied among attendees but could not be characterized because data regarding individual behaviors (e.g., shaking hands or hugging) were not collected. Finally, the number of cases beyond the cohort of church attendees likely is undercounted because tracking out-of-state transmission was not possible, and patients might not have identified church members as their source of exposure.

High transmission rates of SARS-CoV-2 have been reported from hospitals (7), long-term care facilities (8), family gatherings (9), a choir practice (10), and, in this report, church events. Faith-based organizations that are operating or planning to resume in-person operations, including regular services, funerals, or other events, should be aware of the potential for high rates of transmission of SARS-CoV-2. These organizations should work with local health officials to determine how to implement the U.S. Government's guidelines for modifying activities during the COVID-19 pandemic to prevent transmission of the virus to their members and their communities (2).

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