

EVIDENCE SYNTHESIS BRIEFING NOTE

TOPIC: THE ASSOCIATION BETWEEN SINGING IN A CHOIR AND THE RISK OF ACQUIRING COVID-19

Information finalized as of May 20, 2020.^a

Purpose: There are approximately 3.5 million Canadians singing in 28,000 choirs and advice is needed on how they can safely resume their recreational and social function in the recovery phase of the pandemic. This note provides a summary of the research evidence and jurisdictional experiences on the risk of acquiring COVID-19 when singing in a choir.

Key Findings:

- No direct or high-quality evidence is available on the association between singing in choirs and risk of acquiring COVID-19.
- However, evidence suggests that the COVID-19 virus is spread through both droplet transmission and airborne transmission via aerosols. Some research suggests that aerosol transmission occurs through both normal speech and singing, in addition to the more commonly understood routes of sneezing and coughing. Singing may involve a greater risk than that of normal speech, and singing loudly may involve a greater risk than singing softly.
 - Environmental factors that may influence aerosol transmission include ventilation, humidity, and temperature. Close contact and large gatherings are known to contribute to the spread of the virus and may lead to “super-spreading” or “super emission” events. This underscores the importance of physical distancing, including avoiding gathering in large groups, to control the spread of COVID-19.
 - Personal factors that may influence aerosol transmission include loudness and phonetics. Some individuals may be “super-emitters”.
 - Examples of super-emission cases have been observed with choir singing groups in the US and Germany.
- At this time, guidance from a range of authorities in the US, Germany, Canada, and Alberta recommends against gathering in groups in general or against in-person choir singing in particular.
 - It has been suggested that until effective testing and treatment (e.g., vaccine) protocols are available, avoiding COVID-19 transmission while singing in groups is impractical due to, for example: lack of evidence on the exact safe distance to maintain between singers and others; inability of masks to prevent transmission when singing; false negative rates of standard testing; and low sensitivity of rapid tests for large group testing.

^a This briefing note includes current available evidence as of the noted date. It is not intended to be an exhaustive analysis, and other relevant findings may have been reported since completion.

Supporting Evidence

[Table 1](#) below summarizes the scientific evidence and lessons learned from international and Canadian jurisdictions regarding the association between singing in choirs and the risk of acquiring COVID-19.

Table 1: A Summary of the Scientific Evidence and Lessons Learned from International and Canadian Experiences

Scientific Evidence	<ul style="list-style-type: none"> No direct evidence is available on the association of singing in choirs and risk of acquiring COVID-19. However, research suggests that there is substantial probability that both droplet transmission and airborne transmission via aerosols of infections manifesting in the respiratory tract, including COVID-19, can occur through both normal speech and singing.
International Scan	<ul style="list-style-type: none"> There have been COVID-19 outbreak cases in the community in the US and Germany, where transmission of COVID-19 following choir practice was likely facilitated by the act of singing. Guidance from the choir community in the US states that there is no safe way for singers to rehearse together until there is an effective testing and treatment protocol in place. They note that there is no spacing solution for singing groups that would eliminate risk, and masks do not provide safe methods for singing in groups. <ul style="list-style-type: none"> Moreover, guidance for school administrators from the Centers for Disease Control and Prevention suggests cancelling or modifying choir classes. Germany's public health institute, the Robert Koch Institute, cautioned that droplet transmission of COVID-19 can be emitted particularly far when singing. Germany is to set out guidelines for holding religious services during the pandemic, with a list of strict restrictions expected to include a ban on singing.
Canadian Scan	<ul style="list-style-type: none"> Guidance from Health Canada advises Canadians against gathering in groups to prevent the spread of COVID-19 within communities. While there is no recommendation specific to singing or choirs, the guidance states that the risk for COVID-19 may be increased for certain settings, including gatherings in spiritual and cultural settings, theatres, festivals, and conferences. Guidance from the Public Health Agency of Canada suggests that singing activities could contribute to the spread of COVID-19. The government of Alberta indicates that any gatherings with fewer than 15 people must not include activities that could promote disease transmission. This includes singing, even at religious gatherings, because it may promote the transmission of the virus through respiratory droplets.
Ontario Scan	<ul style="list-style-type: none"> No information identified.

Methods

The COVID-19 Evidence Synthesis Network is comprised of groups specializing in evidence synthesis and knowledge translation. The group has committed to provide their expertise to provide high-quality, relevant, and timely synthesized research evidence about COVID-19 to inform decision makers as the pandemic continues. Through the Strategy for Patient-Oriented Research (SPOR) Evidence Alliance, the following member of the Network provided an evidence synthesis product that was used to develop this Evidence Synthesis Briefing Note:

- Williams, S., and Navarro, P. May 20, 2020. [COVID-19 Quick Response Report: Choirs and COVID-19](#). Evidence for the Newfoundland & Labrador Health System. *Newfoundland and Labrador Centre for Applied Health Research*.