Religious practices have been ranked as carrying a high level of risk for spreading a respiratory virus such as SARS-CoV-2, the cause of COVID-19. In fact, a number of outbreaks have been traced to religious gatherings. Religious practices bring many people close together. Worshipers talk and sing and hold and shake hands. They share hymnals, collection baskets, and receive hosts and a chalice from another’s hand. In the age of COVID-19, the liturgy puts the faithful at risk for infection.

REVIEW: HOW THE VIRUS SPREADS
Respiratory viruses spread in three ways: droplets, contact, and aerosols. Droplets are larger particles, some of which may even be visible. Droplets are made by talking, singing, coughing, and sneezing. After being emitted, these droplets usually land within six feet, within fifteen to twenty minutes. Occasionally, the droplets spread further than six feet, such as when propelled along air-conditioning currents. Uncovered coughs and sneezes propel particles at great speed over long distances. These particles, which are too large to be breathed into the lungs, infect people after entering the nose, mouth, or eyes (called mucous membranes).

These viruses can be transmitted by direct or indirect contact. When droplets land on objects, the contaminated objects are called fomites. When a person touches fomites and then the face, the virus can be transferred to their mucous membranes. This is called indirect contact. In direct contact, touching an infected person transfers the virus.

Aerosols are very small droplets; they stay around for a very long time and travel long distances. The smell of someone’s perfume from across the room is due to an aerosol. Viruses that spread by aerosol land in the nose, mouth, and eyes and are breathed into the lungs. Aerosols are formed through breathing; talking and singing create even more of these tiny droplets. And the louder the talking or singing, the greater the generation of the aerosols.

Since SARS-CoV-2 is a new virus, many unanswered questions remain. The main way that this virus is thought to spread is person-to-person, through droplets; spread through contact seems to play a less important (though still possible) role. The role that aerosols play in spreading this virus is debated. Since the amount of virus needed to cause an infection is unknown, it is important to look at these sources of spread not as mutually exclusive, but as each playing a greater or lesser role.

Containing the virus would be simpler if it were possible to be sure of who is infected. With COVID-19, however, individuals are contagious two to three days before symptoms begin, some people never develop symptoms, and testing misses some of the infections. It is possible, therefore, that a number of people who might gather for worship will not know they are infected.
HOW TO INTERVENE
Short of medications and vaccines, handwashing, covering of coughs, physical distancing, and disinfecting are utilized to save the lives and the health of our parishioners and neighbors. Covering coughs and sneezes catches most droplets at the source. Washing hands and not touching the face eliminates the transfer of the virus to the mucous membranes. Not sharing objects and disinfecting commonly touched surfaces decreases the spread of the infection by fomite. The production of droplets and aerosols can be limited through quiet speech and by avoiding singing. Keeping a distance of six feet from others allows for droplets to land before reaching a person and for aerosols to begin to dissipate. Open windows and doors let air circulate and allow for the dispersal of aerosols.

Gloves and Face Coverings
Non-sterile gloves in the healthcare setting keep the user’s hands clean. Because the gloves become contaminated, they are discarded after each use. Especially since they can have small tears, gloves are not a substitute for careful handwashing. Non-latex (for example, nitrile) gloves are preferred since some people have an allergy to latex.12

There are two types of medical masks: N95 respirators and face masks used in surgery or during other medical procedures.13

The reason to wear cloth face coverings, or non-medical masks, differs from that of the covering health care workers use. According to the Centers for Disease Control, they are not a substitute for physical distancing but may be helpful when physical distancing in public is difficult.14 The primary purpose of the masks is to keep people without symptoms from spreading the virus but they may (or likely) also serve as protection from the virus. These coverings seem to help with the droplets created by talking,15 but their use to prevent droplet spread while singing has not been studied. Like masks, they do not protect against, or prevent the expulsion of, aerosols.

Face shields16 act as a barrier against splashes and sprays, such as respiratory droplets. Face shields can protect the mouth, nose, and eyes (which goggles also do). They also prevent the wearer from touching their face and potentially infecting themselves. To be effective, cloth face coverings17 and all other equipment must be used properly. Once used, they are considered to be contaminated, so taking them off safely is important.

Resurgence
As restrictions are lifted, the cost of increased interaction will be more people becoming sick and more people dying. Communities are tasked with trying to keep those numbers to a minimum and avoiding a resurgence of the pandemic (and reimposition of restrictions).18 Two questions need to be answered: When is the right time to begin the transition back to more familiar practices? How should that be done?

When: What Are We Looking For?
There are four possible strategies. One approach would be to wait until herd immunity is achieved, meaning that a sufficient amount of the population (about 60 to 70 percent) is immune so that the virus cannot become established in the community and spread. Herd immunity can be brought about by natural infection or by vaccination. Optimistically, a safe, effective, and readily available vaccine is at least a year away. Trying to achieve herd immunity by allowing two-thirds of the population to be infected risks causing tremendous suffering.

The next safest approach involves waiting to make incremental changes until there is no further evidence of community spread—essentially, when no (or very few) new cases are being reported each day. The riskiest approach would be to relax physical distancing measures while the number of cases, hospitalizations, and deaths per day continues to rise and inadequate surveillance (such as testing) continues.

Between the second and third scenarios is the option many states are choosing. Incremental changes are being made once the crest of the first wave has passed. In this approach, before changes are made, a drop in infections and deaths must be evident, the community must be ready to handle the return of the outbreak, and the community must be able to determine what will occur after changes have been made.19

It is unclear if the virus will be experienced through a steady presence, waves that come and go, or a future tsunami, such as occurred with the 1918 flu pandemic.20 Given this uncertainty, it is helpful to think about interventions in steps or phases.21 If the situation continues to improve, communities relax restrictions a little more. If the situation stops improving, there should be a pause. If infections and deaths increase, restrictions are tightened, even if that means suspending worship services or closing churches again. Each step or phase involves calculated risk.

How: Gathering Again for Public Worship
Based on the general principles discussed earlier, some common precautions need to be taken as churches reopen. These general principles are applied to the Mass and other rites in the article “Minimizing Risks at the Liturgy.”22 Even if processes are implemented perfectly (which never happens), infections will still occur. The best outcome can be achieved through the fewest people being in a space for the least amount of time, with the greatest reasonable distance between them, and through the minimizing of droplets and aerosols.

THE FAITHFUL
For the duration of the pandemic, the faithful need to be dispensed from the obligation to attend Mass on Sundays and holydays. The dispensation will help keep the most vulnerable people home and will assist in accommodating the realities of physical

Open doors and windows will help dissipate aerosols and droplets.
distancing. Parishes should continue to livestream, record, or broadcast liturgies for those who cannot attend.

Parishes will need to monitor the entrance into the church building, discouraging entrance for those in the vulnerable category (people over age sixty-five or with chronic medical conditions), and refusing entrance to those who are ill or have signs of COVID-19, and those who have been exposed during the prior fourteen days to someone with the virus or who is suspected of having the virus. Some places have recommended that children younger than three not attend services and have reminded parents that small children need to be with an adult at all times. Social gatherings or receptions after liturgies should not occur.

How can a parish fairly determine who may attend a given Mass? A first-come, first-served approach privileges some and can lead to conflict. A sign-up system must allow for more than just internet-based registration, given that not all parishioners have internet access. Attention to those on the margins is essential. Emotions are running high, and any appearance of favoritism needs to be avoided. Depending on the number of parishioners, households may need to be limited to one Mass weekly, every few weeks, or even monthly.

Many parishes will find it challenging to keep the church building at the allotted capacity and to discourage those in the vulnerable category and even the ill from attending Mass. Will posting signs be sufficient, or will greeters need to question parishioners about risk factors and turn them away if they fall into one of the categories mentioned earlier? What if people lie to get in the building, or threaten or assault these ministers? Should taking the temperature of parishioners be part of the screening, as it is for employees at some businesses? And what happens when maximum attendance has been reached, or people insist on lingering?

Communication will be key to a successful implementation of a policy that aims to keep people safe. To ensure that all are notified, policies on seating, parish practices, and individual responsibilities should be made available through a variety of means. Post signs at the church building and on the parish website and Facebook page, and send emails and letters through the mail.

Keeping a Safe Distance
To maintain a minimum of six feet between worshipers, the number of persons allowed into the church will need to be limited. One way to maintain appropriate distances would be to limit seating to every third row or pew, and then ask households to keep six feet between each other if seated in the same row. Parishioners also will need help keeping six feet apart as they make their way into, out of, and through the church. Separate doors can be indicated for entrances and exits and aisles or pathways marked with arrows to establish one-way traffic flows.

Ideally, the time people spend together in a space should be limited to less than thirty minutes. Priests, then, should make judicious use of the options, using shorter texts, omitting optional components of rites, and limiting the length of the preaching. If appropriate, a longer version of the homily might be posted online.

In which space should the community gather for worship? In most cases, it will be the church. A larger meeting hall may better serve some communities, both in terms of the space available and the ease of movement. Small rooms, such as adoration chapels and cry rooms, should remain closed.

Droplets and Aerosols
Proper cough hygiene should always be followed, and use of cloth face coverings should be encouraged. Given all the unknowns, as well as the risks, it would seem prudent to avoid singing and the use of brass or woodwind instruments. In addition, the omission of singing shortens the length of time the community is gathered. Spoken responses should be made in a softer voice (or even not at all, especially if in close proximity and cloth face coverings are not worn).

Because the virus is transmitted mainly by person-to-person spread (via respiratory droplets), greetings should not be made with a handshake or a hug. Ritual touch also should be avoided, unless absolutely essential to the rite being celebrated. Celebrating the liturgy with the fewest number of ministers will keep movement to a minimum and also decrease the number of people who may touch objects (see below). Volunteers at high risk should not be permitted to serve as ministers.

Finally, the circulation of air ought to be taken into account. Consideration should be given to seating people outside the flow from air conditioning vents. Open doors and windows, and the celebration of the liturgy outdoors, would help dissipate droplets and aerosols.

DIRECT AND INDIRECT CONTACT
Since transmission of the virus may take place by contact, touch needs to be avoided, and items should not be used in common or passed. Fonts should be emptied and water fountains turned off. Attention needs to be paid to handwashing and to keeping hands away from the face. Parishes will need to set up handwashing stations with hand sanitizer, tissues, and covered receptacles for trash. Anyone entering the building should disinfect their hands. All ministers should wash their hands for twenty seconds with warm soap and water before and after the liturgy. During the liturgy, hand sanitizer should be used if handling objects in common or if hands become contaminated.

Cleaning and Disinfecting
Even before worshipers return, parishes need to be careful to safely reopen buildings that have been shut down. Attention needs
to be paid to water systems, to ensure that Legionella (the cause of Legionnaire’s Disease) is not an issue, and to potential problems with mold.33

A challenge for parishes, in terms of time, personnel, and supplies, will be to properly clean and disinfect the church. Crews will need to be trained in the proper use of the cleaners and disinfectants, and will need to be supplied with the equipment (gloves, masks, goggles) to do so safely.

Droplets remain airborne for around twenty minutes; aerosols for hours. The longer one waits, the more these particles settle on surfaces and the more air in the church is exchanged and aerosols dispersed. It may be prudent, then, to wait after a liturgy before allowing the cleaning crew into the space—both for their own safety and to allow for more effective cleaning. There is no clear answer as to how long crews should wait.

Based on a study34 of air exchange in houses, the following approach is reasonable. At a minimum, cleaning crews wait ninety minutes after a liturgy to begin their work (if the size of the church is less than 20,000 square feet, the minimum wait is one hour). The larger the room, the longer the wait. If windows and doors are closed and the heating or air-conditioning system is not in use, crews should wait 180 minutes. Cleaning and disinfecting before the first liturgy of the day allows for the disinfecting of those particles that settled overnight.

Sufficient time for cleaning before and between liturgies will be required, so while the temptation will be to maximize the number of Masses in a day, attention needs to be paid to scheduling. Are there enough staff and volunteers to add more Masses, or would that stretch parish resources too far? How would multiplying the Masses raise the risk to the priests (many of whom already are in the high-risk category)? A schedule must also account for allowing priests a weekly day off, especially under these stressful circumstances.

**Emergencies**

Finally, a room should be set aside where anyone who falls ill can be safely isolated if assistance is needed or the person is unable to leave immediately. Mask, gloves, and goggles or a face shield should be provided to anyone caring for them. If the person who is ill is not having trouble breathing, they too should wear a mask. Both a thermometer and pulse oximeter should be available. The room will need to be cleaned and disinfected after use.35

**CONCLUSION**

While a time of promise, the reopening of a parish church for public worship is also stressful. Taking the time well ahead of reopening to prepare staff and volunteers in new procedures, to communicate clearly with parishioners, and to answer questions and concerns, will make these transitions easier on everyone. Some parishioners will be relieved that Mass will be celebrated, and concerns, will make these transitions easier on everyone. Given all that, everyone will need to be especially patient and understanding during this in-between time.
transmission in the absence of symptoms reinforces the value of measures that prevent the spread of SARS-CoV-2 by infected persons who may not exhibit illness despite being infectious.” Nathan W. Furukawa, John T. Brooks, and Jeremy Sobel, “Evidence Supporting Transmission of Severe Acute Respiratory Syndrome Coronavirus 2 While Presymptomatic or Asymptomatic,” Emerging Infectious Diseases 26, no. 7 (July 2020); https://doi.org/10.3201/eid2607.201595.

11. Documents commonly refer to “social” distancing. Speaking of “physical” distancing instead reminds us that even though we need to stay physically distant, socially and relationally we are still bound to each other and should not allow the pandemic to become a wedge between us. The importance of physical distancing in preventing the spread of infectious diseases is highlighted in https://www.gao.gov/assets/710/706916.pdf.


17. See: https://jamanetwork.com/journals/jama/fullarticle/2764955.

18. Anthony Fauci, MD, put the choice starkly: “How many deaths and how much suffering are you willing to accept to get back to what you want to be some form of normality sooner rather than later?” Interview on CNN, May 4, 2020.

19. Public health experts talk about relaxing social (physical) distancing measures when (1) for at least fourteen days the number of cases in a state have gone down, (2) the healthcare system can care for all who are sick (which includes having all the personal protective equipment that’s needed), and (3) there is a way to know what is actually happening in the community, either by testing and contact tracing or other means. See, for example: https://www.ama-assn.org/delivering-care/public-health/ama-states-should-follow-4-signposts-safely-reopen-america. However, the resurgence of the virus on the Japanese island of Hokkaido in an even more severe second wave should serve as a caution here (https://time.com/5826918/hokkaido-coronavirus-lockdown/).


21. See, for example, the Archdiocese of Chicago: https://www.archchicago.org/coronavirus/reopening.


23. Such as chronic lung disease and moderate-to-severe asthma, heart disease, diabetes, chronic kidney disease on dialysis, or liver disease, as well as people who are immunocompromised (due to illness or medications) or severely obese. See: https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/people-at-higher-risk.html.


25. Local public health departments may give more specific advice. For more ideas, see the guidance from the Federation of Diocesan Liturgical Commissions (FDLC): https://www.fdlc.org/sites/default/files/files/Re-Opening_Summary_FDLC.pdf.


27. In some places, perhaps every second row. The advantage of every-third-row seating is that it also helps limit the total number of people present.


29. See Footnote 5.


Deacon Francis L. Agnoli, OSF, MD, MDiv, is the director of the Office of Liturgy and the director of deacon formation for the Diocese of Davenport, Iowa.

At www.PastoralLiturgy.org

Find and share this article with parish staff and the liturgy committee at the following URL: http://www.pastoralliturgy.org/resources/ReopeningParishesSafely.pdf.