

abcd Guidance on Risk Assessment

This is one of three documents published by *abcd* to assist conductors and their choirs in their planning and risk assessments for returning to singing in light of the current COVID-19 pandemic. They are published on our website and all three should be read in conjunction with each other:

1. Guidance on Risk Assessment
2. Risk Assessment templates
3. Practical considerations for choirs and conductors

Separate government guidelines are in place for England, Scotland, Wales and Northern Ireland. Our guidance is applicable to all of them, but you should ensure you read the relevant guidelines for your nation in detail when you make your own risk assessment.

Purpose of this document/preamble

As the conductor, director or manager of a choir you have a responsibility to conduct a risk assessment to ensure that hazards that could reasonably have been foreseen have been identified and minimised. A 'hazard' is defined as "anything that has the potential to cause actual harm" and there are various hazards associated with choral performance and rehearsal that might result in singers getting hurt or ill under normal circumstances. You have an ongoing duty to protect your singers from these. For professional choirs, this is a legal requirement. For amateur choirs, there is an expectation that similar procedures will be followed. At the present time, there is an additional hazard - the SARS-CoV-2 virus. The potential harm that this might cause is such that you must show that you have foreseen the outcomes of the transmission of this virus and taken all reasonable steps to prevent them occurring.

It is not possible to provide a 'copy and paste' approach to this, nor would this be a demonstration that you have thought through your plans with sufficient care. Your organisation needs to take an active part in the risk assessment process through production of a bespoke document that is responsive to:

- The specific nature of your choir
- Changing local circumstances
- Updated government advice/instruction
- New scientific information as and when it becomes available.

The purpose of this document is to help you do that.

Enabling Choral Singing.

The purpose of risk assessment is to *enable* choral singing, not to prevent or obstruct it. This is what *abcd* wishes to encourage now that the English government (DCMS) has sanctioned both professional and amateur singing under strictly controlled conditions (Phase 4).

Risk should not be confused with fear or precaution

- *Fear* is an irrational response arising from the failure to evaluate actual risk. Responses arising through fear are almost certain to be more risk-averse than they need be.

- *Precaution* is a rational response arising from scientific uncertainty. Precautionary responses may often turn out to have been more risk-averse than they need to have been as scientific understanding increases.
- *Risk* is a rational response based on the most comprehensive scientific information available and is, by definition, permissive of an activity.

There is always risk. It is impossible to eliminate risk from human existence. It must be considered also that there are risks to *not* singing. For example, singers may suffer psychological distress or find alternative activities and not return to choir.

The best we can do is ask three fundamental questions:

1. Is the level of risk acceptable?
2. Does it outweigh the alternatives?
3. Have we done all we can to minimise it?

Evaluating risk

Evaluation in this case means making a judgement of relative efficiency – “this is better than that”. The quantification of probability is not the same as making a value judgement as to whether a risk is acceptable. For example, at the time of writing, there are 454 active cases of COVID per million people in Wiltshire. This means that the probability of encountering an active case is .0005. This does little to tell us whether the risk is in any way acceptable because we have not identified the actual hazard and we have not compared the hazard with other known hazards that may be more or less likely to occur and more or less severe in their consequence. An established way of doing this is to identify the actual hazard and make two judgements about it:

- A judgement of the likelihood of its occurring on a scale of 1 – 5 (the L number).
- A judgment of the consequence of its occurring on a scale of 1 – 5. (the C number).

We then compute risk by multiplying the two numbers together and reading from a table that assigns risk categories to the product.

L value	Meaning	C value	Meaning
1	Very unlikely	1	Inconvenience – absent singer
2	Unlikely	2	Pattern of significant absence
3	Fairly likely	3	All associated with choir must quarantine
4	Likely	4	Several hospitalisations
5	Very likely	5	Catastrophic – ventilation needed; possible death

High ↑ LIKELIHOOD ↓ Low	5	5	10	15	20	25
	4	4	8	12	16	20
	3	3	6	9	12	15
	2	2	4	6	8	10
	1	1	2	3	4	5
		1	2	3	4	5
		CONSEQUENCES				
		Low	→ High			

R Value	ACTION TO BE TAKEN
20–25	Stop – stop activity and take immediate action
15–16	Urgent action – take immediate action and stop activity if necessary, maintain existing controls rigorously
8–12	Action – improve within specified timescale
3–6	Monitor – look to improve at next review or if there is a significant change
1–2	No action – no further action but ensure controls are maintained and reviewed

It is important to understand that we have not quantified risk by doing this. We have not made any measurements of probability. We have made subjective ‘this is better than that’ judgements and the important thing is that in so doing we have constructed an ordinal scale – we have rank ordered things by goodness (or badness if you prefer). It is true that something that is unlikely to occur is not as bad as something that is likely to occur. It is *not* true that a death is five times as bad as a singer missing a rehearsal. That would be a nonsense. An ordinal scale does not have that level of statistical power.

No absolute, measured value has been ascribed. We have not measured *how* likely and we could not because many detailed, complex measurements would need to be made as the basis of advanced statistical formulae. Such a process would challenge the most able scientific minds as indeed it is in many different but related areas. An ordinal scale in this context only has any real value if we *perform our assessment twice* and show that our second assessment is better than our first because of the *control measures* that we have applied. Remember, we are *evaluating our actions in relative terms*. If we can show that we have moved from fairly likely to unlikely, or that we have reduced the expected consequence from quarantine to significant absence from choir, we have shown that we have done what we can to make things better. That is what is required of us. We cannot be expected to quantify the risks we are taking in absolute terms.

Here is an example:

At Risk	Singers, their families and wider contacts in <i>N</i>	L	C	R	Action
Hazard	Transmission of the virus via music stands in rehearsal room.	3	3	9	Unacceptable risk. Stop activity and devise control measure
Control	Music stands removed.	1	3	3	Acceptable risk. Continue the activity whilst monitoring any changes. Set review date.

We can see that the application of a control measure has made the hazard less likely to occur. The consequences would still be the same if it did occur, but we have made it less likely. Alternatively, a different control measure achieves the same outcome, though arguably less well than the alternative:

At Risk	Singers, their families and wider contacts in <i>N</i>	L	C	R	Action
Hazard	Transmission of the virus via music stands in rehearsal room.	3	3	9	Unacceptable risk. Stop activity and devise control measure
Control	Music stands must be wiped with sanitising liquid after each rehearsal.	2	3	6	Acceptable risk. Continue the activity whilst monitoring any changes. Set review date.

Control measures

We have not eliminated subjectivity by doing this. In the parlance of health and safety legislation, we have made an ‘educated decision’, which is the best we can do. If the risk is a familiar one, this is not too difficult. For example, if you were organising a youth choir tour, you would know from the

collective experience of many who do this that there is a risk of leaving a child behind at a venue. You would control this risk by taking a roll call on the bus before it leaves.¹ Who, though, can make an ‘educated decision’ about how likely it is that a SARS-CoV-2 infection will spread sideways through an ill-fitting mask? This requires a level of scientific education that has hitherto not been the concern of choir managers. For this reason, you are going to need help with control measures.

The tables below have been compiled from three sources:

- Ongoing review of the relevant scientific literature
- Control measures required by various administrations across Europe
- The experience of choirs that have been singing for some time during the COVID pandemic

Note that there are some risks over which you can and should exercise a relatively high degree of control. These are shown in Table A. Other risks, shown in Table B, you will have less ability to control, but you will need to take account of them in other ways. Note also that the use of specific measurements such as ‘2-metre social distancing’ are not suggested. There is a good reason for this. Once again, a precision that does not really exist is avoided. It is not true to say that there is no risk at 2.1m social distancing but a significant risk at 1.9m distancing. This would be nonsense. It *is* true to say that a greater social distance poses less risk than a close social distance. Remember, we are reducing risk in relative terms by control measures for which there is scientific justification. We are not acting on calculated probabilities.

Table A

Hazard	Why a hazard?	Possible Controls
Shouting, talking loudly and singing	The concentration of respiratory particles increases rapidly in proportion to the volume of voice use and varies by more than an order of magnitude from the quietest to loudest volume, whether speaking or singing.	Sing quietly as much as possible Talk quietly and avoid the need to raise the voice over ambient noise. Wearing of masks
Contaminated surfaces	The virus travels through the air in respiratory droplets that fall onto surfaces where they evaporate, leaving behind viable loads of the virus or viral particles. The virus remains viable for different lengths of time according to the surface material -up to 72 hours on some kinds of plastic.	Remove unnecessary furniture Regular deep cleaning/ Sanitisation of walls, table tops, door handles Issue singers with personal copies or learn music by rote if appropriate Wearing of masks
Close personal contact	High levels of transmission occur between persons close together through either direct touch or respiratory clouds. Respiratory clouds travel further forwards than sideways	Facilitate social distancing through floor markers and one-way systems Reduce the number of singers

¹ Anecdotal it may be, but a choir known to the author once lost a chorister by not taking a **roll** call *after* disembarkation. The boy had fallen asleep on the journey and slipped downwards off his seat unnoticed. The bus departed to the depot with the sleeping boy still on board. We cannot eliminate risk altogether!

	<p>Sharing confined spaces such as the home or a car forces people to be close together for protracted periods.</p>	<p>Configure singers in lines, avoiding placing one singer in front of another</p> <p>Avoid singers facing each other (e.g. through a circular formation)</p> <p>Discourage car sharing</p> <p>Wearing of masks</p>
Airborne transmission	<p>Large concentrations of the virus travel through the air over short distances in exhalation clouds</p> <p>The virus travels further through the air in particles small enough to remain in suspension (aerosols).</p> <p>Aerosols evaporate leading to increased concentration of the virus.</p> <p>Aerosols travel over unpredictable distances in difficult to predict patterns.</p> <p>Aerosols accumulate in spaces where the air is stationary or slow moving</p>	<p>Sing outdoors</p> <p>Position singers as far apart as is practical</p> <p>Reduce the number of singers</p> <p>Move to the largest possible indoor space</p> <p>If there is a floor to ceiling air mechanical ventilation system, ensure it is turned on and functioning efficiently</p> <p>Avoid air conditioning systems that recirculate air</p> <p>Keep doors and windows open</p> <p>Reduce the length of rehearsal time</p> <p>Vacate the rehearsal space for periods long enough to allow a complete air change</p> <p>Limit audience size</p> <p>Discourage audience participation (including congregational singing in acts of worship).</p>
Poor hygiene	<p>The virus is readily and directly transmitted by touching any part of the body proximal to an airway (i.e. particularly the face).</p> <p>Singers may forget the importance of washing or become complacent.</p>	<p>Provide sanitising liquid in prominent places such as doorways.</p> <p>Issue regular reminders</p> <p>Supervise children and require handwashing before and after rehearsal/performance</p>

Vulnerable groups	<p>Susceptibility to the virus increases rapidly with age</p> <p>Susceptibility to the virus significantly higher in persons with co-morbidities or underlying health conditions.</p> <p>Associations between susceptibility and ethnicity have been shown.</p>	<p>The elderly or persons with known vulnerabilities may self-exclude. Accept this.</p> <p>Consider other ways of discouraging attendance by vulnerable groups.</p> <p>Prohibit attendance by elderly if justified.</p>
Symptomatic carriers	<p>Symptoms can be mild enough for singers still to feel well enough to attend.</p> <p>Symptoms in children often very mild, but the virus is still dangerous to higher risk groups.</p>	<p>Require all singers to self-declare good health.</p> <p>Make attendance conditional on being entirely symptom free.</p> <p>Require and provide for removal of singers who feel unwell.</p> <p>Wearing of masks</p>
Aysmptomatic carriers	<p>Prevalence of asymptomatic carriers higher than first thought. Singers look and feel perfectly well so will be unlikely to quarantine or declare symptoms.</p>	<p>Ensure attendance records well kept and contain up-to-date contact records to facilitate tracing.</p>

Table B shows risks that are largely beyond your control, of which the ‘R number’ or transmission rate in your region or area is the most significant. If the R number rises to above 1, a risk assessment that was valid when the R number was below 0.5 might no longer be valid. This problem is likely to be taken out of your hands as government would take the necessary measures, which could include some form of lockdown or restriction that would affect your choir, but not choirs in other parts of the country. The risk *you* need to anticipate and manage would be the financial and other consequences of an event cancelled or postponed under such circumstances. Remember also that what happens in your choir could have consequences for other activities and businesses in your area. If there is a regional outbreak that originated in your choir, that could cause other businesses to be closed. That is why government intervention and surveillance by public health authorities is a risk we must accept and plan for.

Table B

Hazard	Why a hazard?	Why hard to control?
A high level of community infection rate (R number above 1)	Increased risk of infected individuals attending, including asymptomatic carriers	R number depends on public behaviour, e.g. illegal rave, noisy, overcrowded pub, gym failing to apply COVID secure measures
Transmission in the home	Close contact in the home reported as one of the most potent means of transmission	We cannot really dictate how people behave in their own homes
Climate and weather	Viral potency and contagion likely to rise in colder, wetter months	Cannot control the weather or climate, though there is some scope to plan concerts for warmer months.
Cross-contamination from other activity	Risk proportionate to the diversity of activity. Amateur singers perhaps more than professionals may engage in multiple other activities where virus could be transmitted.	We must rely on and trust the actions of other activities and businesses.
Ethnicity	Higher transmission and infection reported amongst ethnic minority communities and individuals	We cannot discriminate on grounds of ethnicity. We must rely on and respect judgments of singers from ethnic minorities.

So, to conclude, we are acting reasonably to reduce risk demonstrably in relative terms to the best of our knowledge and ability once government has managed the risks outside our control. There are no absolute standards or numbers that we can use, though it is advisable to pay attention to the current rules on social gatherings. Thus, the control measure “reduce the number of singers” leaves the number to your discretion. Church choirs should be “small”. They do not have to be octets or quartets. This recognises relationships such as that between the number of singers and the size and ventilation possibilities of the building. Your obligation is to demonstrate clearly that you have understood that “cumulative aerosol transmission from both those performing in and attending events” is the key risk factor.

The templates (in a separate document) can be used as the basis of a risk assessment that shows how existing practice has been evaluated and then made relatively safer by the implementation of the control measures you have selected and adapted to your circumstances.

Professor Martin Ashley
September 2020

*Prepared by **abcd** to help, advise and guide members. This advice is for general guidance only and does not represent any instruction or encouragement to return to or begin singing. abcd can accept no liability for the consequences of your decision, including any illness or other adverse impact. We strongly recommend that you and your choir ensure you have adequate insurance.*