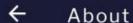


Pandemusic is not a medical app.

It is a risk management tool.

- We need it because the risk from Covid has not gone away.
- It is likely that Covid will become an endemic disease.
- Choral singing will hereafter always carry a risk of spreading covid.
- If we understand the risk, we can manage it.





About PandeMusic

PandeMusic allows *abcd* and Making Music to compile weekly statistics on safe group music-making.

It will show how safe group music-making is when suitable mitigations are followed by comparing the number of reported group music events with the number of reports of infections attributed to group music-making.

If an infection is reported following a rehearsal, it will help identify possible causes, allow *abcd* & Making Music to update their guidance, and thus help other music groups to adapt their practice.

The app is intended to be used for reporting on rehearsal situations only, not performances.

Who should use it?

A person responsible for the group's Covid-19 security should use the app.

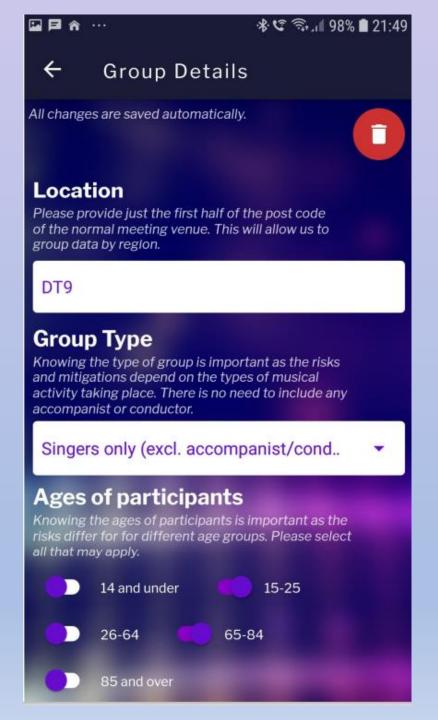
How does it work?

Before each scheduled rehearsal (ideally a day before), answer two simple questions about the previous rehearsal for that group. We are assuming approximately weekly rehearsals but the exact frequency is not crucial.

It takes less than a minute to send a report and the app will help you keep track of when you last did so.

We live with other endemic diseases, such as malaria if we travel to Africa or South America, or measles in Europe.

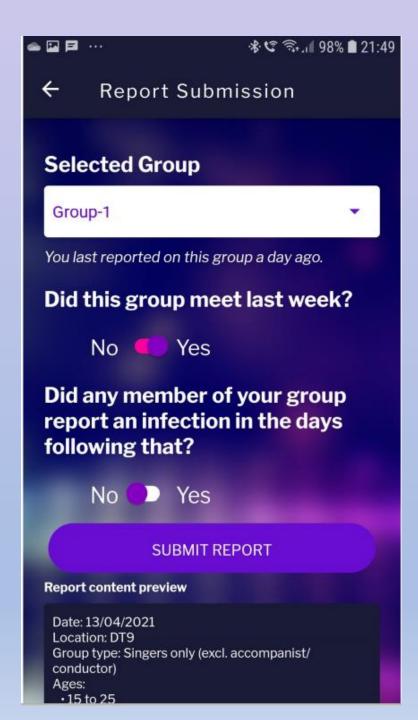
- We don't worry much about measles because it has been brought under control.
- But it has not gone away. If we relax our control measures, it will come back.
- Measles can be serious, even fatal in some cases.
- Measles is now on the increase, largely because of the antivax movement and other misinformation.
- Measles, like covid, is an airborne disease spread through respiratory particles.
- Carelessness, complacency and willful ignorance will spread endemic diseases in wealthy countries
- Poverty spreads endemic diseases everywhere else.



We need to understand as much as possible what the risks are. There are new risks outside the control of music group managers that government must manage.

- Vaccine hesitancy.
- Over-confidence in vaccination.
- International travel.
- National travel to "hotspots".
- A growing sense of complacency.
- Willful denial by some governments.
- Failure to manage the disease globally –inequality in the distribution of vaccine or ability to lockdown.
- New mutations and strains that may resist vaccine or attack young people and children.

These risks have not yet been fully quantified because there is as yet insufficient empirical data. *Therefore, the precautionary principle still applies.*



We do know that out of all cultural and sporting activities, choral singing remains near the top of the list of risky activity – and always will. We do <u>not</u> know how much the risk actually is when choral singing takes place in a country with high levels of vaccination.

- Stochastic modelling can provide guides and pointers.
- The only way we will find out for sure is by allowing choirs to sing and seeing what happens (empirical data).
- This is not a priority for government.
- It most certainly is a priority for us!
- The process of recording how many infections are reported as a proportion of rehearsals will be helpful in quantifying risk.
- We hope that the proportion will be very low perhaps similar to the proportion of blood clots to AstraZeneca vaccinations?



ABCD produced risk assessment guidance according to the principles and methods of the Institution for Occupational Safety and Health.

- An international organisation and a globally recognised method.
- An entirely novel situation.





First Choirs Standing? What risks were taken by choirs returning early to singing during the 2020 Covid pandemic, how were the risks managed and what were the outcomes?

Martin Ashley PhD
Editor-in-chief, ABCD Choral Directions Research

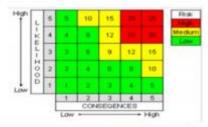
Conclusions

For all the painstaking work that has been carried out in large studies such as the Colorado-Boulder collaboration, the question of how to express and quantify risk remains. James Weaver, Director of Performing Arts and Sports for the US National Federation of High Schools stated that

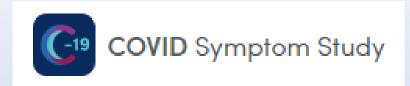
We are not using a live virus, we are not infecting participants, we are not allowing participants to be infected while doing labratory experiments so something that we can't answer is, you know, if the play, will they be infected, we can't tell you that (Weaver, 2020).

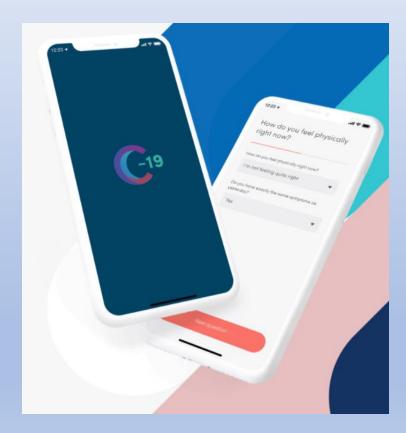
Arguably, the first choirs standing *did* use a live virus in that they took the risk that the live virus would not be present in their spaces in sufficient quantity to cause an infection – but it could have been.

L Value	Likelihood	C Value	Consequence
1	Very unlikely	1	Inconvenience – absent child
2	Unlikely	2	Pattern of significant absence
3	Fairly likely	3	All families have to quarantine 14 days
4	Likely	4	Several hospitalisations requiring oxygen
5	Very likely	5	Catastrophic - ventilators, death(s)



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				





PandeMUSIC was inspired by the ZOE covid symptom study, which is still very much ongoing. The ZOE app asks:

- Have you had a covid test?
- Have you been vaccinated? (once or twice?)
- How do you feel physically right now.

If you click not normal or unwell, only then does it take you to further questions that will provide vital basic information to the researchers and analysts.

Answers to questions such as these will help with the identification and quantification of risk.

10. Conduct of the rehearsal. *	
Please check any that apply.	
Performers met for self-contained sectional rehearsals whilst others remain at home	
The singing/playing time was reduced to under two hours	
The singing/playing time was reduced to under one hour	
Attendees leave the room for a ventilation break of at least 15 minutes	
Singers were asked to restrain themselves and sing quietly whenever possible	
Instrumentalists who create spit asked to collect and dispose on towels/containers to seal and take away	

What we thought were the risks a year ago

Table 1
Perceived Risks and Controls Devised

Perceived Risk	Controls Devised			
Contaminated surfaces	Enhanced cleaning			
	Removal of furniture/music stands			
Close proximity of singers	Reduction of singer numbers			
	Spacing/distancing (various)			
	Floor markers			
	One-way systems			
	Sectional rehearsals			
Infected singers attending	Voluntary quarantine			
Poor ventilation	Air conditioning			
	Open doors and windows			
	Breaks to allow air to clear			
Small rehearsal spaces	Larger rooms			
	Outdoor rehearsals			
Older singers	Not members of the choir			
	Restricted attendance			
Personal hygiene	Provision of sanitiser			
	Supervision of children			
Long rehearsals	Shorter rehearsals			
Travel	Cancellation of engagements			

What we are more confident now are the risks that have been programmed into PandeMUSIC in order of likelihood

Known Risks	Controls Devised			
Older singers	Vaccination			
Travel	Cancellation of engagements			
	Restrictions on travel			
Small rehearsal spaces	Outdoor rehearsal and performance			
Poor ventilation	Passive aids, <u>e.g.</u> doors, windows			
	Active aids, <u>e.g.</u> fans, air conditioners			
Long rehearsals	Shorter rehearsals			
	Fewer full rehearsals, more			
	sectionals			
Close proximity of singers	Spacing			
	Disposition			
	Movement patterns			
	Wearing of masks			
	Length and location of breaks			
Personal hygiene	Provision of sanitizer			
	Supervision of children			
Surfaces and cleaning	Enhanced cleaning			
	Removal of furniture			

What we still don't know

4 means "likely"

2 means "unlikely".

But how "likely" is likely? And how unlikely is "unlikely"?

A 1 in 100 chance?

A 1 in 10 000 chance?

A 1 in 10 000 000 chance?

Figure IIIa Part of a categoric mitigation risk assessment for hypothetical mixed-age choir

		L	С	R	Action
Hazard	Members of vulnerable	4	4	16	Immediate measures required. Stop
	groups in the choir				activity if necessary
Control	Over 70s and persons with underlying health issues				
	asked not to attend	2	3	6	Monitor. Look to improve at next review or if there is a significant change

New situation since First Choirs Standing

Control Vaccination of over 70s	1	4	4	Monitor. Look to improve at next review or if there is a significant change	
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It is considered that the chances of a blood-clot from the AstraZeneca vaccine are "1". 1 = "very unlikely".

In this case "very unlikely" has been attributed to empirical data that indicate approximately 4 people out of a million vaccinated will also have blood clot (1 in 250 000). This is not an epidemiological risk ratio, neither is it a causal link between the vaccine and the clotting. It is only an indicative first step. But it is the basis of the advice that L = 1.

Another new situation

Н	lazard	Unvaccinated vulnerable persons in the choir	?	?	16	Should the precautionary principle apply?
C	ontrol	Vaccine passports? Health declarations?				

Some controversial issues here!

2021 holds the hope of a better year than 2020 But there remain many uncertainties and risks.

PandeMUSIC should:

- Help scientists and researchers identify the risk
- Remind choir managers of their responsibilities
- Help government to manage an endemic disease
- If ABCD members provide the data, scientists are helped in the hard work of calculating epidemiological risk ratios



