Key planning recommendations for Mass Gatherings in the context of the current COVID-19 outbreak

Interim Guidance
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World Health Organization

1   Introduction

Mass gatherings are highly visible events with the potential for serious public health consequences if they are not planned and managed carefully. There is ample evidence that mass gatherings can amplify the spread of infectious diseases. The transmission of respiratory infections, including influenza, has been frequently associated with mass gatherings.[1] Such infections can be transmitted during a mass gathering, during transit to and from the event, and in participants' home communities upon their return.

The purpose of this document is to outline key planning considerations for the organizers of mass gatherings in the context of the novel coronavirus (COVID-19) outbreak. It should be read in conjunction with WHO's *Public health for mass gatherings: key considerations*,[2] which provides general advice on the public health aspects of mass events. It is also adapted from the interim planning considerations that were previously released by WHO addressing mass gatherings in the context of pandemic (H1N1) 2009 influenza and guidance for international meetings attended by individuals from countries affected by Ebola virus.[3,4] Updated technical guidance on the COVID-19 disease outbreak should also be consulted (https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance).

2   General information about the COVID-19 virus

Coronaviruses are a large family of viruses found both in animals and humans. Some infect people and are known to cause illness ranging from the common cold to more severe diseases, such as Middle East respiratory syndrome (known as MERS) and severe acute respiratory syndrome (known as SARS).

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[1] Rashid H, Haworth E, Shafi S, Memish ZA, Boov R. Pandemic influenza: mass gatherings and mass infections. *Lancet* 2008;8:526–7. doi: 10.1016/S1473-3099(08)70186-5.

[2] Public health for mass gatherings: key considerations. Geneva: World Health Organization; 2015 (https://apps.who.int/iris/handle/10665/162109, accessed 19 February 2020).

[3] Interim planning considerations for mass gatherings in the context of pandemic (H1N1) 2009 influenza. Geneva: World Health Organization; 2009 (https://www.who.int/csr/resources/publications/swineflu/h1n1_mass_gatherings/en/, accessed 19 February 2020).

[4] WHO interim guidance for international meetings attended by individuals for Ebola virus disease–affected countries. Geneva: World Health Organization; 2014 (https://apps.who.int/iris/handle/10665/135751, accessed 19 February 2020).

A novel coronavirus is a new strain of coronavirus that has not been previously identified in humans. The new, or novel, coronavirus, now called the COVID-19 virus, had not been detected before the outbreak that was reported in Wuhan, China, in December 2019.

So far, the main clinical signs and symptoms reported in people during this outbreak include fever, coughing, difficulty in breathing and chest radiographs showing bilateral lung infiltrates. As of 27 January 2020, human-to-human transmission was confirmed largely in Wuhan, but also in some other places in China and internationally. Not enough is known about the epidemiology of COVID-19 disease to draw definitive conclusions about the full clinical features, the intensity of human-to-human transmission, and the original source of the outbreak.

In planning appropriate preparedness measures, meeting organizers may want to consider the following three phases:

- **planning phase** – the period (weeks or months) before the event begins, when operational plans for health and security services during the event are developed, tested and revised;
- **operational phase** – the period after plans are finalized and the delivery of the event services begins; this may be several weeks before the event commences if teams arrive in advance to complete their training or preparations;
- **post-event phase** – the period after the event finishes when participants are returning to their home countries and organizers are reviewing the event delivery and any follow-up actions that are necessary, as well as reviewing any lessons learned and the event's legacy.

3   Planning phase

Good planning should ensure that robust systems and processes are in place to manage public health issues during mass gatherings. Organizers should review their plans to ensure they are fit for purpose. Additional advice could be sought through consultation with global experts.

General advice on planning for the public health aspects of an event is set out in WHO's key considerations document (mentioned in Section 1). Specific actions to be taken in relation to the COVID-19 outbreak are discussed in this section.

3.1 Liaison with local and national public health authorities

- Event organizers should establish direct links with local and national public health authorities. This should include the local provider of health services for the event.
- There should be a nominated liaison person in the organizing team and also one in the designated public health agency. Contact information should be shared, and contacts should be available 24 hours.
- Regular contact should be maintained throughout the planning period to share information, risk assessments and plans.
- Channels of communication between agencies and organizers, and with the public, should be agreed in advance.

3.2 Risk assessment

The decision to proceed with a mass gathering or to restrict, modify, postpone or cancel the event should be based on a thorough risk assessment. Event planners should undertake such an assessment in partnership with local and national public health authorities.

For highly visible or particularly large events, WHO may provide advice and technical support to the host country to help with assessing the public health risks associated with the event.

3.2.1 General considerations

General considerations include the following.

- A comprehensive risk assessment should be undertaken at the beginning of the planning phase, reviewed regularly during planning and updated immediately prior to the handover to the operational phase.
- The risk assessment should include input from the public health authority and should take into account the security assessment for the event.
- In relation to COVID-19 disease, the risk assessment should include consulting WHO's updated technical guidance and ensuring that there is an up-to-date evaluation of the epidemiological situation.
- The risk assessment for the event must be coordinated and integrated with the host country's national risk assessment.

3.2.2 Specific considerations in relation to COVID-19 disease

Specific information that is necessary for the risk assessment includes:

- the global COVID-19 situation report as provided by WHO;
- the national COVID-19 situation report.

The risk assessment for COVID-19 disease should consider both general features and specific features.

- General features of COVID-19 disease include
  - transmission dynamics
  - future likely spread of the epidemic
  - clinical severity
  - treatment options
  - potential for prevention, including available pharmaceuticals and vaccine.

- Specific features of the event that should be considered include
  - crowd density;
  - the nature of contact between participants (for example, a concert or religious event, indoors or outdoors, the layout of the venue);
  - whether the event will be attended by registered and non-registered participants;
  - the profession of the participants and their possible previous exposure;

- the number of participants coming from countries or areas affected by the COVID-19 outbreak within 14 days prior to the event;

- the age of participants; because elderly people who have co-morbid conditions appear to be more seriously affected, mass gatherings composed principally of this cohort may be associated with increased transmission;
- the type or purpose of event (for example, sporting, festival, religious, political, cultural);
- the duration and mode of travel of participants; if the duration of the mass gathering is longer than the incubation period for COVID-19 infection (14 days), then most event-associated cases would be expected to occur while the event is under way. In contrast, if the duration is shorter, most cases would likely occur after the event as people travel and return to their home communities.

WHO's *Public health for mass gatherings: key considerations* can be consulted for a detailed discussion of the general principles and elements of risk assessment and management. Additionally, online training is available about public health preparedness for mass gatherings.

3.3 Specific action plan for COVID-19 disease

Action plans should be developed to mitigate all risks identified in the assessment. Some actions will be the responsibility of the public health authority to deliver, some will be the responsibility of the local health service provider, and the event organizer will be responsible for others; each action plan should specify who is responsible for delivering each action, the timescale for delivery, and how and by whom delivery will be ensured. Action plans should include:

- integration with national emergency planning and response plans for infectious diseases;
- command and control arrangements to facilitate the rapid communication of information and efficient situation analyses and decision-making;
- any appropriate screening requirements for event participants – for example, will participants be screened for COVID-19 symptoms on arrival?
- disease surveillance and detection – for example, how will the disease be recognized and diagnosed in participants?
- treatment – for example, how and where will ill participants be isolated and treated?
- decision trigger points – for example, who will decide whether affected participants can continue or resume their role in the event? What trigger points will indicate the need to reconsider or revise the plans? What would trigger postponement or cancellation of the event?

If the decision is made to proceed with a mass gathering, planning should consider measures to:

- detect and monitor event-related COVID-19 disease;
- reduce the spread of the virus;
- manage and treat ill persons;
- disseminate public health messages specific to COVID-19 disease.

3.4 Capacity and resource assessment

Some of the capabilities and resources to be considered when planning for an event include the following.

- National health authorities should assess whether additional resources and capacity are needed to deliver appropriate risk-mitigation actions to the local community during and after the event, for example, by adding diagnostic testing capacity, isolation and treatment facilities, and resources for contact tracing.
- Event organizers should asses the capacity needed and the resources available to deliver all specific COVID-19 risk-mitigation actions that arise from the risk assessment.
- Capacity and resources should be coordinated with the public health authority and health service provider to avoid duplication or gaps.

3.5 Risk communication and community engagement plan

Event organizers should agree with the public health authority how participants and the local population will be kept informed about the health situation, key developments and any relevant advice and recommended actions.

4 Operational phase

There is no published experiential data specific to planning and implementing a mass gathering during the current COVID-19 outbreak. However, arrangements must be in place to ensure regular communication between event organizers and the public health authority.

These arrangements should include:
- regular and full sharing of information by organizers and public health authorities;
- arrangements to provide participants with information about how to access health advice;
- arrangements for ongoing, dynamic risk assessments to be conducted by the public health authority and organizers as the event progresses;
- arrangements for communicating with participants and the local population to ensure messaging is consistent.

To date, there is no scientific evidence that supports the screening of participants as a cost-effective measure.

4.1 Risk communication

Risk communication is an integral part of mass gatherings. The following measures should be considered.

- Key messages for the local population and event participants must be coordinated and consistent.

- Consideration should be given to how messages about risk can be delivered to the population and to participants quickly if an unusual event occurs.
- Messaging should include:
  - an overall assessment of the local risk;
  - advice on preventive measures, especially respiratory etiquette and hand hygiene practices;
  - advice about how to access local health care if necessary, including how to do so without creating a risk to healthcare workers;
  - advice on self-isolation and not attending the event if symptoms develop;
  - information about disease signs and symptoms, including warning signs of severe disease that require immediate medical attention;
  - advice on self-monitoring for symptoms and signs for participants travelling from affected countries, including checking their temperature;
  - information that WHO does not currently recommend quarantine for healthy travellers or other travel restrictions;
  - information that wearing a face mask is recommended for participants who have respiratory symptoms (for example, cough); it is not recommended for healthy participants.

Event organizers in collaboration with public health authorities may wish to consider whether specific information or advice is needed about the potential risks that persons already at increased risk of severe disease might face in the setting of a mass gathering, especially if the COVID-19 virus is circulating in the community.

More information on COVID-19 risk communication and community engagement can be found in *Risk communication and community engagement (RCCE) readiness and response to the 2019 novel coronavirus (2019-nCoV).*[5] WHO's advice for the public about COVID-19 disease can be found here and information about myths can be found here.[6,7]

4.2 Surveillance of participants

Some of the key features to consider for surveillance include the following.

- Detection and monitoring of event-related COVID-19 disease should be considered in the context of surveillance schemes that are already in place and if new or enhanced surveillance is deemed necessary.

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[5] Risk communication and community engagement (RCCE) readiness and response to the 2019 novel coronavirus (2019-nCoV): interim guidance v2, 26 January 2020. Geneva: World Health Organization; 2020 (WHO/2019-nCoV/RCCE/v2020.2; https://www.who.int/publications-detail/risk-communication-and-community-engagement-readiness-and-initial-response-for-novel-coronaviruses-(-ncov), accessed 19 February 2020).
[6] Coronavirus disease (COVID-19) advice for the public. In: WHO/coronavirus disease 2019 [website]. Geneva: World Health Organization; 2019 (https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public, accessed 19 February 2020).
[7] Coronavirus disease (COVID-19) advice for the public: myth busters. In: WHO/coronavirus disease 2019 [website]. Geneva: World Health Organization; 2019 (https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public/myth-busters, accessed 19 February 2020).

- Organizers will need to work with local public health authorities to ensure that systems are in place to identify indicators of illness arising in the local population or in event participants, such as increases in the number of people experiencing symptoms or a rise in the use of proprietary medicines.
- Surveillance systems will need to operate in real time or near–real time to support rapid response actions.
- Surveillance systems should be linked to risk assessments, so that any abnormal signal in the surveillance systems triggers an immediate revision of the risk assessment

4.3 Testing and diagnostic arrangements

Organizers need to consider with the local health authority how and where participants presenting with COVID-19-like symptoms will be tested. In the current absence of commercial testing kits for the COVID-19 virus, organizers will need to ensure that their health provider has access to appropriate testing tools, probably from the national public health agency. This will also require prior agreement about how to transport specimens or participants to a testing facility.

4.4 Treatment facilities

Some considerations for treatment facilities include the following.

- Event organizers should consider the need to provide isolation facilities at the event site for participants who develop symptoms and need to wait for a health assessment. Whether this is necessary depends on the nature of the event and the extent to which the event will provide its own medical services rather than depend on the local health service to do so. Preparing for an isolation facility includes training healthcare workers, implementing infection control and prevention measures in any healthcare setting, and preparing personal protective equipment to be used by staff.
- Organizers need to consider where any participant who becomes unwell with COVID-19-like symptoms will be treated and how they will be transported to a treatment facility. This is likely to be in a national health facility where there is appropriate containment capacity and expertise, so participants will not be able to remain in the event's medical facility. Agreements about any consequent funding issues should be confirmed in advance.
- Participants at events sometimes expect that they will be returned to their home country for medical treatment rather than be treated in the host country; this will not be possible for anyone diagnosed with COVID-19 illness except through the use of specific medical evacuation flights that have appropriate isolation and containment facilities: such facilities are scarce and expensive and not readily available for illnesses such as COVID-19 infection.
- Organizers need to consider how any affected participants will be transferred home if their illness extends beyond the end of the event and pre-arranged travel is no longer available.
- Event organizers working with public health and healthcare officials need to assess national healthcare capacity to deliver supportive treatment, including admitting participants to an intensive care unit and providing ventilator support. Such care should be provided near to the mass gathering.
- National plans for deploying and providing access to medical supplies, such as antibiotics, ventilators, and personal protective equipment (known as PPE), should be reviewed.

4.5 Decision-making

In collaboration with local health authorities, organizers should also agree in advance the circumstances in which risk-mitigation measures would need to be enhanced or the event postponed or cancelled. Prior agreement on potential trigger points will facilitate these discussions if they become necessary.

4.6 Operational practices for reducing event-related transmission of the COVID-19 virus

The basic general principles for reducing transmission of the COVID-19 virus are applicable to a mass gathering.

- People should be advised to stay away from the event if they feel ill.
- Persons who feel unwell (that is, have fever and cough) should stay at home and not attend work or school and avoid crowds until their symptoms resolve. This applies to participants as well as staff.
- Promoting appropriate hand hygiene and respiratory etiquette in mass gathering venues requires providing informational materials that reach a range of age groups and varying reading and educational levels. In addition, soap and water or alcohol-based hand sanitizers and tissues should be easily accessible in all common areas, and especially at medical treatment sites at the event.
- People who become ill while at the event should be isolated.
- Organizers should plan for the likelihood of persons becoming ill with fever and other typical symptoms of COVID-19 infection during the event. Organizers should consider establishing isolation areas in on-site medical treatment clinics or facilities where such persons can be initially assessed and triaged. Persons who are ill can be provided with a mask to help contain respiratory droplets generated from coughing and sneezing. The isolation area should be equipped with the necessary supplies to facilitate hand hygiene and respiratory etiquette. In addition, medical staff attending persons who are ill should wear a mask, dispose of it immediately after contact with someone who is ill, and cleanse their hands thoroughly afterwards.
- The usual precautions should be practiced with travellers arriving from international destinations.
  - If travellers have symptoms suggestive of acute respiratory illness before, during or after travel, they should be encouraged to seek medical attention and share their travel history with the healthcare provider.
  - Public health authorities should provide to travellers information about reducing their general risk of acute respiratory infections through health practitioners, travel health clinics, travel agencies, transportation operators and at points of entry.
- Crowding should be minimized where possible, and event organizers should consider using distancing measures to reduce close contact among people during the gathering (for example, by increasing the frequency of transport, staggering arrivals, diverting departures and minimizing congregation at sanitary stations and food and water distribution areas).

5   Post-event review

After the conclusion of the mass gathering, the following should be considered.

5.1   After the event

After the gathering, if public health authorities suspect that transmission of the COVID-19 virus has occurred, organizers and participants should support the response of authorities.

- Meeting organizers must liaise with public health authorities and facilitate the sharing of information about all symptomatic participants (such as their itineraries, contact information, visa procedures, hotel bookings).

- Individuals who develop symptoms during the mass gathering and their stay in the country should isolate themselves, seek medical attention and inform the appropriate public health authorities about their potential exposure, both in the country where the event was held and upon returning to their country of residence.

5.2   Risk communication for departing participants

- It may be necessary both for clinical reasons and under International Health Regulations to notify the home countries of returning participants of any people who developed COVID-19 infection while attending the event.
- Organizers also need to ensure that test results reported after the event are notified to the participant and, possibly, to the home country's public health system.

5.3   Lessons identified

As always, it will be important for lessons from any event to be identified through review after the event so that they can be passed on to future event organizers.

5.4   Legacy

Organizing mass gatherings during a global health emergency is unusual, but it can be done depending on the risk assessment. Organizers should see any such event as an opportunity to enhance their ways of working and to pass this learning on to both future events and the host country.