

CASE STUDY

Strengthening public health: making the case for mass gatherings

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ABSTRACT

Mass gatherings like sporting events or religious pilgrimages are highly visible events attended by a sufficient number of people to potentially strain the public health resources of the hosting community, city or country. Potential public health risks created by mass gathering events thus require considerable preparedness and response capabilities on the part of the hosting community and may even represent significant challenges for the health care system as a whole. The high visibility of mass gatherings and the political commitment required to host them can be leveraged to strengthen the emergency preparedness of the health system, including core capacities under the International Health Regulations (IHR) (2005). The enhancement of the public health system for a specific event may leave a positive legacy for

the health system as a whole, especially if this enhancement includes capacity development and appropriate health technology investment. At the request of a Member State, the WHO Regional Office for Europe, in collaboration with WHO headquarters and the network of WHO collaborating centres on mass gatherings, has provided advice and technical support for mass gatherings, including in Poland (2016 World Youth Day), Spain (2017 World Pride Festival) and Turkmenistan (2017 Asian Indoor and Martial Arts Games), to ensure that such large international events are as safe as possible from public health risks and to encourage a positive public health legacy. No major public health incident was reported in the three countries during and in the aftermath of the above-mentioned events.

Keywords: MASS GATHERINGS, INTERNATIONAL HEALTH REGULATIONS (IHR) (2005), EMERGENCY PREPAREDNESS, EUROPE

INTRODUCTION

World Health Organization (WHO) defines mass gatherings as “events attended by a sufficient number of people to strain the planning and response resources of a community, state or nation” (1). Mass gatherings present complex planning and preparedness challenges for public health infrastructure. With mass gatherings becoming increasingly international in attendance, natural, accidental and deliberate risks to health security, including but not limited to those posed by communicable diseases, must be addressed during the planning of public health measures (2). Under the pressure imposed by these challenges, public health preparedness measures must also be taken to counteract any serious issues arising in the evolving international health context, such as a terrorist threat/attack or environmental hazard; the public health response to mass gatherings is analogous to that for public health emergencies in which the existing infrastructure may be inadequate for the surge in demand (3). While resources must be in place to respond to infectious disease risks, public health preparedness must be undertaken for all-hazard threats.

Nevertheless, mass gatherings may offer an opportunity for the host country to improve the health of the local community, and constitute a platform on which to raise awareness of health issues and leave a positive legacy. The hosting of an event has the potential to boost intersectoral coordination and communication as well as investment in capacity development at various levels and for various areas of expertise. Mass gatherings, therefore, provide the opportunity to bring about lasting benefits to health systems and health security (4–7).

WHO supports Member States hosting mass gatherings with public health preparedness, implementation and legacy capture. The benefit of WHO’s work in mass gatherings was recognized

by the Executive Board in 2012.¹ Globally, WHO collaborates with its Member States, collaborating centres and scientific and public health partners to improve planning for mass gatherings. This entails analysing and acting on the risks and opportunities of mass gatherings in the countries concerned, their existing capacities and the additional needs imposed by the gatherings, as well as the countries' requests for support.

In 2016–2017, the WHO Regional Office for Europe provided support to the following Member States hosting mass gathering events: Poland (World Youth Day), Spain (World Pride Festival), and Turkmenistan (Asian Indoor and Martial Arts Games).

Specific areas of WHO support include:

- all-hazard risk assessment and response: ensuring that correct standards are applied to risk assessment, surveillance and response, including outbreak management, infection control and vaccination;
- emergency medical services and hospitals: supporting planning for the management of mass casualties and emergencies in local communities, at event venues and in related locations (such as fan zones);
- laboratory capacity: ensuring that adequate diagnostic capacities (including human resources and reagents) and transport procedures are in place;
- travel medicine: ensuring that procedures are in place to provide updated health advice and guidance for visitors on topics such as vaccinations, food and water safety, and emergency contact numbers;
- promotion of healthy behaviours: carrying out activities before and during mass gatherings to encourage such behaviours, such as increased physical activity, cessation of tobacco use, avoidance of excess alcohol and safe sex practices.

¹ See decision EB130/DIV/3, (EB130(3): Global mass gatherings: implications and opportunities for global health security), which states: "The Executive Board, having considered the report on global mass gatherings: implications and opportunities for global health security, recognizing that mass gatherings have significant implications for public health beyond the acute public health events which may occur and require rapid detection and effective management; recognizing that the planning and organization of mass gatherings is the responsibility of the Member States; building on the existing WHO resources to support the planning and conduct of mass gathering events; and acknowledging the challenges of some Member States in managing mass gatherings (...): (1) requested the Director-General to further develop and disseminate multisectoral guidance on planning, management, evaluation and monitoring of all types of mass gathering events(...)"

The following case studies highlight some of the key activities carried out by the Regional Office in collaboration with WHO headquarters in preparation for and during three mass gathering events in 2016 and 2017.

CASE STUDIES

A.

World Youth Day brought an estimated 2.5 million young people from all over the world to Krakow, Poland, on 25–31 July 2016. Poland has a long history of hosting mass gathering events, such as the 2012 UEFA European Football Championship and annual music festivals. Prior to the event the country's preparedness was assessed and WHO acknowledged the positive effect of previous mass gatherings on public health preparedness, notably strong interministerial and intersectoral coordination, and adequate public health infrastructure and services, including emergency medical services (8).

During the event, the Regional Office supported enhanced event-based surveillance through implementation of an electronic platform called the Hazard Detection and Risk Assessment System (HDRAS) that monitors a wide range of information sources (such as news media, social media, blogs and specialized news aggregators). Experts in emergency preparedness, health security and infectious disease control use the system to rapidly identify and monitor public health threats. During the event, the Regional Office was in regular contact with the Polish Ministry of Health and the Chief Sanitary Inspectorate, which were also monitoring potential public health threats. No major public health incident occurred during the event, but a fatal case of meningitis was reported afterwards. All of the deceased person's close contacts received a prophylactic antibiotic as a precaution and no further infection was reported.

B.

About 3 million people participated in the World Pride Festival that was held in Madrid, Spain, from 23 June to 2 July 2017. The Regional Office conducted a risk assessment on the likelihood of transmission of hepatitis A during the event and on that basis provided guidance for attendees to be followed before, during and after the event (9). WHO also worked with the European Centre for Disease Prevention and Control on reviewing and providing input to a rapid risk assessment of communicable disease risks related to the event. In the first three months of 2017 Spain had six times more cases of hepatitis A than in the same period in 2016. Most cases were in men aged between 15 and 45 years, and men having sex with men were the most affected group (10).

C.

The Asian Indoor and Martial Arts Games in September 2017 was the first international mass gathering event ever held in Turkmenistan. The Ministry of Health requested WHO to provide expert technical assistance in planning and carrying out a risk assessment. Before the event, WHO headquarters and the Regional Office conducted several training sessions for national experts based on the relevant WHO guidance (1). The curriculum addressed public health issues such as preventing or minimizing risk of injury and outbreaks of infectious diseases, and maximizing safety for participants, spectators, event staff and residents. Following the training, the Regional Office supported national experts in conducting a comprehensive risk assessment for the event, which identified technical areas that required further strengthening. The identified gaps led the Regional Office to conduct, jointly with national partners, training on mass casualty management, food safety and risk communication, as well as hospital safety assessments and simulation exercises. In preparation for the event, Turkmenistan also developed with the Regional Office a document on emergency risk communication planning and the country volunteered for a Joint External Evaluation of its International Health Regulations (2005) core capacities (11), which was conducted in June 2016 (12).

During the event, the Regional Office supported enhanced event-based surveillance using the HDRAS platform. While 7 030 news items on the Asian Indoor Games were scanned over the 12 days of the event, no significant events of public health impact were reported either locally or internationally. After the event, the Regional Office provided technical support to Turkmenistan to conduct a workshop aimed at identifying how the enhanced systems for the event could be integrated into the regular public health system, bringing together all the stakeholders involved.

In line with its core function of providing leadership on matters critical to health, in November 2017 WHO organized a technical consultation on planning for and hosting mass gathering events for experts from seven countries in the WHO European Region and 11 cities in the Russian Federation, which is to host the 2018 FIFA World Cup. The experts, from countries with considerable experience in hosting mass gathering events, discussed challenges, best practices and the operational nuances of planning for and hosting such events, as well as potential legacies. Conclusions drawn included the understanding that:

1. mass gatherings are opportunities to build the capacities of countries for more resilient health systems;
2. these capacities can be used to strengthen existing health systems, including multisectoral networking and interdisciplinary knowledge transfer;

3. enhanced coordination mechanisms between countries, interregionally and internationally are key prerequisites for the successful management of the health-related aspects of mass gatherings;
4. strong IHR (2005) core capacities improve the preparedness and management of mass gatherings; and
5. integration of enhanced services, developed as a result of the mass event, into the wider health system following a mass gathering event should be an important aspect of the lasting positive legacy of any mass gathering event.

DISCUSSION

Mass gatherings often generate political momentum and resources and they present an important opportunity to build sustainable and long-term health improvements in four areas: improved medical and hospital services; a strengthened public health system; an enhanced living environment; and increased health education and awareness. The health legacy is one of the most important results of large-scale events. WHO's efforts to support health authorities in planning for such events is in line with the all-hazard and whole-of-society approaches driving public health risk management under the IHR (2005). The potential positive legacy of public health preparedness for mass gatherings is thus a core focus of the involvement of the Regional Office.

As the three case studies above show, positive legacy areas include improvements in IHR (2005) compliance, capacity and capability building, surveillance and response, stronger health care systems, emergency planning, environmental health, health promotion, social infrastructure such as parks, stadiums and roads and the ability to host future mass gatherings. The example from Turkmenistan shows that political commitment to successful hosting of mass gathering events can be leveraged by national health authorities to enhance IHR (2005) core capacities. The examples also highlight the fact that mass gatherings can be powerful platforms for promoting health messages, especially physical activity and active living, healthy nutrition and hygiene advice.

Recognizing the importance of knowledge sharing to enhance positive legacies for health systems, WHO has developed, jointly with Public Health England (WHO Collaborating Centre for Mass Gatherings and Global Health Security), a framework for legacy research based on four areas of health system improvement:

- improved medical and hospital services;

- strengthened public health system;
- an enhanced living environment;
- increased health awareness.

So far the results are mainly case study reports and there is no systematic or standardized approach to the legacy of mass gatherings. The positive benefits of hosting mass gatherings still need to be standardized and promoted. There is a growing desire to make the hosting of mass events cost effective, which means there is a focus on long-term benefits for the host in a variety of areas, such as public health and education (1). So far, the most important and tangible positive legacy seems to be passing the knowledge gained on to future planners of other mass gathering events.

CONCLUSION

Based on the experience gained by the Regional Office in 2016 and 2017, it is clear that early involvement of health authorities in the planning of mass gathering events has beneficial effects in terms of both improving public health measures for the event itself and providing long-term gains to the health system following the event. Investments, activities and improvements to existing public health system should permanently benefit the host countries' public health capacities and infrastructure. The political support and additional visibility that result from mass gatherings provide an opportunity to build capacity in public health and compliance with the IHR (2005) by strengthening the core functional capacities of Member States.

The Regional Office will use the opportunity provided by mass gatherings to build and strengthen core capacity in line with the IHR (2005) in countries and use the political momentum that comes with organizing mass gathering events to ensure positive legacy for the countries involved and knowledge transfer to other Member States.

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