



Editorial

Legacy in global health security: Insights from the 5th international conference for mass gatherings medicine



Global health security (GHS) is a comprehensive approach, including preparedness, collaboration, and resilience, to ensure the safeguarding and well-being of the global population [1,2]. Mass gatherings (MGs), such as international gatherings and religious pilgrimages, may act as potential hotspots for disease transmission and catastrophic accidents that threaten the GHS [3,4]. Thus, health security at MGs necessitates robust planning, surveillance, and communication and extends across various pivotal areas such as infectious disease surveillance and response, crowd management, disaster preparedness and response, health education and promotion [5]. This has been particularly amplified by lessons learned from previous MGs, which contributed to strengthening GHS and protecting the broader health of our interconnected world [6]. As WHO DG stated, “no one is safe until we are all safe”. The legacy opportunity inherent in MGs is a transformative concept emphasising the enduring benefits of integrating GHS strategies with mass event planning. The legacy of effective MG health measures is vital to our GHS framework, as it improves health systems of host countries which in turn strengthen GHS [2].

The 5th International Conference on Mass Gatherings Medicine (ICMGM), held from October 29–31, 2023, in Riyadh, Saudi Arabia, provided a platform for experts, policymakers, and stakeholders to discuss the interdependencies between MGs and GHS. The conceptual framework for the 5th ICMGM, revolving around the theme “Legacy in GHS,” encapsulated the diverse and integral aspects of health security within the domain of MG health. This framework encompassed a broad spectrum of themes ranging from preparedness and resilience to international travel measures to address the multifaceted nature of GHS challenges associated with mass gatherings.

The recommendations presented in this article were derived from the discussions and consensus reached during the 5th ICMGM. These recommendations were based on the expert opinions of healthcare professionals, researchers, and policymakers specialising in MG health. The conference recommended promoting GHS through multilateral collaboration, facilitating evidence and data-driven approaches and research innovation, ensuring biosafety and biosecurity, risk communication and community engagement, capacity building and continuous assessment, and legacy planning (Table 1).

Regarding institutional capacity building, the conference recommended that MGs should be seen as opportunities to enhance the capacity and sustainability of health systems. Investments

should be made to foster a positive, long-term impact on healthcare institutions, avoiding cycles of panic and neglect. Medical facilities, laboratories, and supply chains must be adequately equipped and efficiently integrated. Strengthening these aspects ensures better preparedness and response capabilities during MGs. A robust framework encompassing risk assessment [7,8], resource allocation, and coordination mechanisms should also be formulated. Such plans would enable effective and coordinated response efforts during mass gatherings, minimising potential health risks. This robust framework should be based on a hybrid “Bottom-up and Top-down” approach involving grassroots efforts and top-level support to complement well-designed frameworks, such as the “Key Considerations” [9]. Evidence-informed and risk-based policies and GHS considerations should guide decision-making. This should be coupled with a multinational collaborative approach to develop unified health protocols, standards, and guidelines for MGs.

Investments in data analytics infrastructure are necessary to optimise governance procedures and planning outcomes. A comprehensive data collection and analysis system allows informed decision-making and ensures better resource allocation during MGs. Adequate resources and funding must be allocated to support GHS initiatives within the context of MGs. This investment will facilitate the necessary infrastructure and protocols to enhance preparedness and response capabilities. The conference also emphasised that joint research initiatives should be encouraged, enabling the sharing of experiences, best practices, and knowledge related to MGs. Addressing knowledge gaps through collaborative research efforts will improve outcomes during such events.

A multidimensional, multidisciplinary, and multisectoral strategy is required to ensure effective risk communication and community engagement, focusing on vulnerable groups. Behavioural science approaches can play a significant role in fostering compliance and streamlined procedures during MGs. Emphasising behavioural health as a priority in public health interventions during mass gatherings is critical. Behavioural science principles should be applied to promote compliance, adherence to safety measures, and overall well-being of attendees.

Comprehensive assessments should be conducted to identify and address bottlenecks in the supply chain during MGs. Strategies must be devised to ensure sufficient availability and proper distribution of resources. Additionally, strengthening laboratory surveillance networks and promoting multidisciplinary collaboration are essential for effectively detecting and managing infectious diseases during

Table 1
Recommendations from the 5th International Conference on Mass Gatherings Medicine “Legacy in Global Health Security”.

1.	Mass gatherings are vehicles to ignite building capacities and work continuously for institutions to foster a positive, sustainable impact on the health systems, and avoid cycles of “panic and neglect”.
2.	Our era calls for ensuring the capacity and readiness of medical facilities and laboratories. We need to build capabilities with integrated services .
3.	We need to formulate comprehensive preparedness and response plans encompassing risk assessment, resource allocation, and coordination mechanisms.
4.	We need a combined, bottom-up and top-down approach to complement a robust, well-designed framework , scaling up the “WHO Key Considerations” document, and evidence for mass gatherings and global health security.
5.	Adopting a data-driven decision model and securing investments in data analytics infrastructure is crucial to optimise governance procedures and planning outcomes.
6.	Forming international working groups to develop unified health protocols, standards, and guidelines for mass gatherings has become necessary.
7.	We advocate for allocating resources and funding to support global health security initiatives within mass gatherings.
8.	We encourage the development of joint research initiatives, sharing experiences, and best practices to address knowledge gaps related to mass gatherings.
9.	We advocate for a multidisciplinary, multisectoral, and multidimensional strategy for successful Risk Communication and Community Engagement, especially among vulnerable groups.
10.	The future of public health is to focus on behavioural health . There are many potential areas for using behavioural science to ensure compliance and streamline procedures.
11.	We need comprehensive assessments to identify supply chain bottlenecks and devise strategies to ensure sufficient availability and distribution during mass gatherings.
12.	We advocate for implementing advanced surveillance systems , including laboratory surveillance network, capable of real-time data collection, monitoring, and analysis to track health indicators during mass gatherings for early warning.
13.	We need to integrate emergency medical teams in mass gatherings’ preparedness and response planning processes.
14.	We need comprehensive immunisation and port-of-entry strategies to prevent and control the spread of infectious diseases.

MGs. Advanced surveillance systems capable of real-time data collection and analysis should be implemented during MGs [10]. This will enable timely identification of potential health risks, prompt response, and informed decision-making. Lastly, the conference’s output highlighted the need for integrating emergency medical teams in preparedness and response planning processes, which is vital for effectively managing health crises during MGs.

These recommendations open the gate for legacy opportunities in MGs to foster GHS. By capitalising on the large-scale mobilisation and international collaboration that MGs naturally facilitate, we have the opportunity to create a lasting impact on health systems worldwide. This involves leveraging the infrastructural and logistical enhancements developed for MGs to improve the permanent healthcare framework, leaving a “legacy” of improved GHS extending beyond the events themselves. MGs can serve as catalysts for advancements in public health surveillance, emergency preparedness, and the strengthening of healthcare systems. Investments in health infrastructure for MGs, such as enhancing medical facilities and integrating advanced data analytics, can provide lasting benefits to local and global health systems.

Moreover, MGs present unique scenarios to test and refine emergency response protocols and disease surveillance systems under real-world conditions, thereby contributing valuable insights and innovations that can be integrated into routine health security systems. By approaching MGs as legacy opportunities, we can transform temporary health security measures into sustainable improvements, contributing to a more resilient global health framework. This perspective can drive international commitment and investment in health security, ensuring that the efforts and resources dedicated to MGs have a lasting positive impact, fortifying health systems against future threats and improving global health outcomes.

In conclusion, the recommendations put forth by the 5th ICMMG highlight the need for a comprehensive and collaborative approach to managing these events. Global collaboration, evidence and data-driven decision-making, and behavioural health strategies are essential to optimise MG preparedness and response capabilities. Enhancing MG health requires a concerted effort from various stakeholders, including healthcare professionals, researchers, policy-makers, and the public. Implementing the recommendations discussed in this editorial will contribute to more effective management of mass gatherings and ensure the safety and well-being of all individuals involved.

Declaration of Competing Interest

None.

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