



# The Necessity of Health-Centered Research in Arbaeen Mass Gathering

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The Arbaeen Pilgrimage is one of the largest religious gatherings in the world, which is held on the 40th day of the martyrdom of Imam Hussein, the third Imam of Shia. According to the definition of the World Health Organization (WHO), mass gathering refers to a structured or spontaneous event held with the participation of at least 25,000 people at a specific site for a certain duration and purpose (1). More than 20 million people from all around the world march towards Imam Hussein's shrine in Karbala within 10 to 20 days. The pilgrims walk hundreds of kilometers for a few days to reach Karbala. Religious organizations and the general public are the main providers of water, food, shelter, residence, and treatment facilities for pilgrims.

The gathering can be associated with several risks for the public health of the host country and countries of origin of the participants, such as morbidity and mortality resulting from communicable and non-communicable diseases, incidents, and terrorist attacks. The occurrence of these events depends on the number of participants, the nature of the gathering, the size of the space, and other environmental factors such as infrastructures and the level of preparedness.

This mass gathering has some characteristics that should be taken into account when evaluating health risks. For example, the Arbaeen Pilgrimage is a religious event where the level of activity is not constant, and the pilgrims, in addition to attending the main event, traverse a distance by foot or by a vehicle; therefore, any risk can be seen through the pathway towards Karbala. This annual rite takes 10 to 20 days and begins 10 days earlier every year compared to the previous year; therefore, it is influenced by seasonal and climate changes. This gathering differs from any other mass gatherings due to the participation of people from different countries, high density of participants especially on the days leading to the rite, the presence of the elderly, children, and persons with disabilities,

indoor and outdoor presence of pilgrims, reception by others, temporary lavatories, and low quality and low quantity of services provided in the host country, Iraq, which has limited infrastructures.

It seems that this gathering is distinguished from all other mass gatherings due to its different features and hence, some problems may be neglected. Field research and health data collection carried out during this event is limited to a few studies from Faris Lami performed in 2014 and 2016 and published in 2019 (2-5), as well as some sporadic articles. The limited number of these studies indicates the presence of a few research teams in place and little attention of health systems to research on the issues of this gathering.

The identification of common diseases in recent years including gastrointestinal and respiratory diseases, musculoskeletal pain, trauma, and heart diseases, as well as the trend of health issues in consecutive years and their causes and determination of strategies for providing improved services to pilgrims, should be top priorities for health systems of countries from which citizens attend this rite.

## Footnotes

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