

Deaths and Injuries in Hajj: An Important Implication for Mass Gathering Management

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Dear Editor,

Hajj is the most important religious ceremony of the Islamic world, held annually in Saudi Arabia, and attracting over two million Muslims, worldwide (1). These rites are held in the two holy cities of Mecca and Medina. It is known as the largest and longest annual mass gathering in the world (2). Huge crowds of pilgrims, in addition to limited accessibility, inadequate crowd-control, and lack of on-site health and medical care can lead to catastrophic consequences (3). For instance, in 1998, more than 118 pilgrims were trampled to death and more than 180 injured during the Stoning of the Devil ritual (Ramye al-Jamarat). In 2001, 35 pilgrims were killed; in 2003 overcrowding caused the death of 14 pilgrims while there were 251 reported deaths in 2004, three in 2005, and 364 in 2006; all as a result of overcrowding during the 'Stoning' ritual (4). In the latest Hajj ceremony in 2015, two incidents took place namely a crane collapse in Masjid al-Haram (the sacred mosque), which left 107 people dead and 238 injured, and, the deadliest Hajj disaster, was Mina overcrowding, which claimed more than 4000 lives (5).

Trauma is a major cause of injury and death during Hajj (6). Pilgrims walk long distances through or in close proximity to dense traffic, and motor vehicle accidents are inevitable. The most feared trauma hazard, however, is a stampede. In such dense crowds, little can be done to avoid or escape a stampede once it has begun, however the physical environment of the Hajj has been engineered specifically to minimize this risk. Past stampedes have often begun as minor incidents; the 2006 Hajj stampede, when some pilgrims tripped over fallen luggage, and it resulted in hundreds of injuries and deaths. Death usually results from asphyxiation or head trauma; providing prompt treatment is next to impossible in large crowds." In addition to the medical facilities like ambulances, med-

ical stations etc. are provided and available in the route for assistance of pilgrims before and during Hajj. Despite the medical facilities, however, this huge crowd necessitates the improvement of mass gathering management and draws more precise attention to this issue (7). The above-mentioned statistics and high rate of mortality in Hajj clearly shows the importance of more focus on mass gathering management in such great ceremony. The challenges of Hajj management and strategies toward preserving people's lives should be seriously taken into account (2). Several reports have implied that heat exhaustion, suffocation, asphyxiation or head trauma after Hajj stampede, were common causes of death (5).

According to experts, the following factors seem to be the main reasons for such disasters: failure of crowd-control, lack of resources, defect in implementing crisis management systems, lack of effective strategies to identify the pilgrims, lack of skilled staff, lack of controlling the scene of the incident, and problems in communicating with the pilgrims.

As the season of Hajj is approaching, it is expected for Saudi Arabia government and health care officials to provide facilities for the prevention of such disasters. In this regard, close and scrupulous supervision by international organizations; assessment of potential hazards; monitoring administrative infrastructure particularly in Mina before, during and after the ceremony; and the presence of international organizations in disaster and crisis management such as the red cross (ICRC) can play effective roles in prevention and management of future incidents. Most authors emphasize on the necessity of performing and conducting both quantitative and qualitative research to explore all factors affecting the death and injuries of pilgrims and most importantly to identify preventive strategies, which are currently underway.

Footnotes

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