

## Perspective Piece

### The Hajj and COVID-19: How the Pandemic Shaped the World's Largest Religious Gathering

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**Abstract.** The Hajj pilgrimage, one of the five pillars of Islam, is held in Saudi Arabia in the second week of Dhu'l-Hijjah, the last month of the Islamic calendar. It is one of the world's largest mass gatherings, constituting more than 2.5 million Muslim pilgrims from more than 180 countries. The COVID-19 pandemic posed a significant public health threat for such mass gatherings. Thus, a health risk assessment for the 2020 Hajj was held by the Saudi Arabia Ministry of Health and the WHO Collaborating Centre for Mass Gatherings Medicine, which concluded that foreign pilgrims should be excluded from the 2020 Hajj and that the number of pilgrims should be significantly reduced. Timely decisions allowed the Saudi government to conduct the Hajj, despite an initial postponement. However, the number of pilgrims was significantly downscaled, and extensive new protocols were set in place because of the pandemic. This article aims to shed light on the challenges faced and efforts made by Saudi Arabia to mitigate the spread of COVID-19 during the religious proceedings of the Hajj.

#### INTRODUCTION

The Hajj pilgrimage, one of the five pillars of Islam, is held in Saudi Arabia in the second week of Dhu'l-Hijjah, the last month of Islamic calendar. It is one of the world's largest mass gatherings, constituting more than 2.5 million Muslim pilgrims from more than 180 countries.<sup>1</sup> It is a compulsory religious obligation that must be undertaken at least once by all adult Muslims who are physically, mentally, and financially capable of undertaking the journey. At other times of the year, Muslims may perform an Umrah, or “lesser or minor pilgrimage” to Makkah, but this pilgrimage is not compulsory and can be performed by anyone who can afford it at any time of the year.<sup>2,3</sup>

On January 30, 2020, the COVID-19 outbreak was declared a public health emergency by the WHO. An increased risk of COVID-19 transmission is highly likely in mass gatherings, especially with prolonged or close contact with infected individuals.<sup>4</sup> The Hajj is one of the largest mass gatherings in the world. Between 2000 and 2019, the number of Hajj participants per year was 2,269,145, of which 1,564,710 were from outside Saudi Arabia.<sup>1</sup> Hence, the Saudi government advised Muslims to postpone Hajj bookings until the pandemic could be mitigated.<sup>5</sup> Later, the Hajj was conducted, but with downscaling of the total number of pilgrims and by implementation of several protocols to limit COVID-19 transmission.

**Mass gathering and health risk assessment.** The first case of COVID-19 in Saudi Arabia was confirmed by the Ministry of Health on March 2, 2020. Previous pandemics, such as H1N1 influenza in 2009 and Middle East respiratory syndrome coronavirus in 2012, have taught the country lessons to tackle respiratory virus outbreaks. To avoid the amplification of COVID-19 transmission and disruption of the host country's response capacity, the WHO provided governments and health authorities with guidance for planning mass gatherings. According to the WHO, a decision should be made according to the risk assessment conducted by public health authorities based on normative and epidemiological context, evaluation of risk factors associated with the event, and capacity to apply prevention and control measures.<sup>6</sup>

The Saudi Arabia Ministry of Health and the WHO Collaborating Centre conducted a health risk assessment for the 2020 Hajj and decided to reduce the number of pilgrims who could attend and to exclude foreign pilgrims. The risk assessment identified potential risks associated with the pilgrimage and identified insufficiency in the number of healthcare facilities to accommodate pilgrims during the COVID-19 pandemic.<sup>7,8</sup>

**National response to COVID-19 (timeline).** The response of Saudi Arabia to the COVID-19 pandemic is of immense importance to the well-being of Hajj pilgrims. International entry for Muslims hoping to perform Umrah rituals was canceled on February 27, 2020. On March 4, 2020, 2 days after the detection of the first COVID-19 case in Saudi Arabia, Umrah rituals were suspended. Saudi Arabia suspended international flights on March 23, 2020.<sup>9,10</sup>

To further tackle the COVID-19 pandemic, the Saudi government announced the suspension of daily prayers and Friday prayers in the two great mosques of Makkah and Madinah and in other mosques around the country on March 17, 2020. Mosque employees and imams were the only people allowed entry, with clear instructions to follow infection prevention and control measures. These measures were implemented although the number of cases in the country was less than 300. This early action helped Saudi Arabia in mitigating the spread of the virus and in subsequently carrying out the Hajj.<sup>10</sup>

On May 31, 2020, the Saudi government declared the reopening of the Prophet's Mosque in Madinah. On June 22, 2020, the Saudi government announced that the 2020 Hajj pilgrimage 2020 would be held, but only for a limited number of pilgrims residing in Saudi Arabia (Figure 1). Subsequently, outcomes of the pandemic have been modest in Saudi Arabia, with a mortality rate of 0.9%.<sup>11</sup>

**Preventative measures (before and during Hajj 2020).** Saudi Arabia's Ministry of Health developed five eligibility criteria for all potential candidates who applied to perform the 2020 Hajj. These criteria were 1) age 20–65 years, 2) not having any high-risk chronic diseases, 3) not obese, 4) not pregnant, 5) and having a negative PCR COVID-19 test.

Before departure for the Hajj, pilgrims were screened with a first COVID PCR test and were quarantined at home for 10 days. After travel to Makkah, eligible candidates were tested with a

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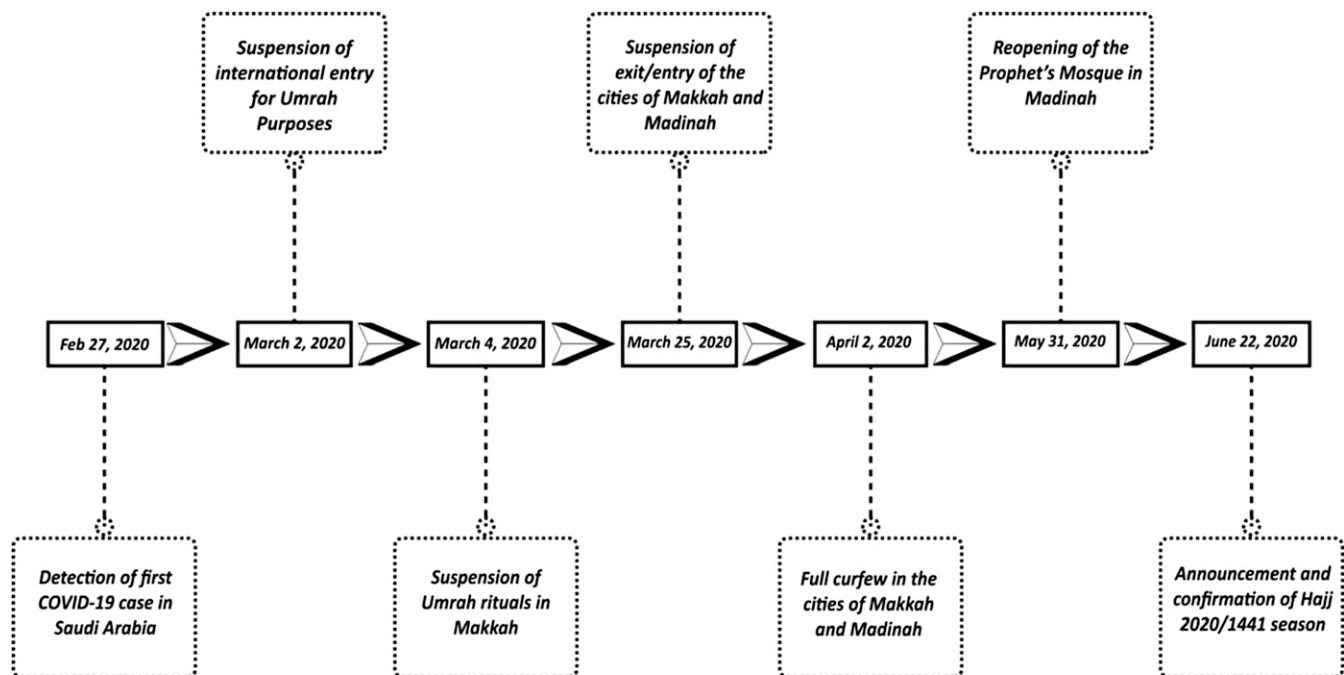


FIGURE 1. Timeline of Kingdom Saudi Arabia announcements regarding Hajj and Umrah 2020. This figure appears in color at [www.ajtmh.org](http://www.ajtmh.org).

second PCR test and quarantined for four additional days. A third PCR test was conducted post-Hajj, and home quarantine for 2 weeks after the Hajj was also required for all pilgrims. Any candidate who tested positive for COVID-19 was excluded from the pilgrimage.

The measures planned and implemented to curb the spread of COVID-19 during the pilgrimage included the following. 1) Safe “bubbles” were created, with pilgrims assigned to a group of 20 pilgrims, with designated tracks. 2) To ensure strict adherence to preventative measures, a group of 50 trained health officers accompanied the pilgrims. 3) Personnel providing Hajj-related services were given special training and categorized according to the level of interaction with pilgrims. 4) Preventative measures included obligatory wearing of face masks, no sharing of utensils or personal items, provision of sterile pebbles and prayer mats, maintaining a distance between pilgrims of 1.5 m, no touching of the Ka’ba (the holiest shrine in Islam) by pilgrims, and quarantining for 14 days after completing the pilgrimage. A total of 1,000 pilgrims from 160 different nationalities and all residents of Saudi Arabia performed the Hajj in 2020, with no confirmed COVID-19 cases among the pilgrims during or after the pilgrimage.<sup>12,13</sup>

## CONCLUSION

The WHO has declared the need for long-term collaborative and dedicated public health initiatives to achieve global control of the COVID-19 pandemic. Saudi Arabia has been following the policies recommended by the WHO on prevention and infection control. Despite the initial announcement of deferment of the Hajj, strategic measures taken by the government and timely decisions allowed Saudi Arabia to conduct a reduced Hajj in this pandemic year.

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