Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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Religious tourism and mass religious gatherings — The potential link in the spread of COVID-19. Current perspective and future implications

Dear Editor,

COVID-19 has exposed the fragility and preparedness of healthcare systems around the globe. Various countries have widely adopted preventive measures, such as social distancing, face masks, frequent hand wash/sanitizer and lock downs. The pandemic with shifting epicentres from Wuhan to Iran and Italy presents two relevant questions for any next outbreak or epicentre in future:

a) How did COVID-19 travel from one country to another?
b) To what extent are countries prepared in context of preventive measures in mass gatherings in future?

Religious tourism — visit to sacred places in a given country — is a huge market that significantly contributes in the revenue of many countries. Churches, mosques, temples, shrines, synagogues, gurdwaras and other sites of religious significance attract hundreds and thousands of tourists globally [1]. Religious tourism takes full swing in certain months and results in mass religious gatherings (MRGs) which pose a significant public health risk in context of the potential spread of infections across the borders and within the communities. It has always been challenging for the governments to effectively implement preventive measures in MRGs. Table 1 enlists some of the prominent planned MRGs in different parts of the world. In the past, MRGs, for instance *Kumb Mela*, and *Hajj* 2013, have been identified as the locus of spread of antibiotic resistant bacteria and respiratory infections [2].

Religious tourism and MRGs have been linked with the explosive spread of COVID-19 across the globe. To begin with, 35% of the new Malaysian COVID-19 cases stemmed from an MRG of 19000 Muslims which include 1500 foreigners from 30 countries. This was organized by *Tableeghi Jammat*, a Muslim evangelists group involved in proselytization of masses. This transmission has now been termed as the largest known viral vector that spread the virus to other countries [3]. In Iran, religious tourism — a substantial source of revenue — attracts 8 million foreigners annually. In the wake of pandemic, Irani clergy remained reluctant to ban MRGs of pilgrims attending holy shrines in Qom and Mashhad till Iran became the new epicentre of the virus. These infected pilgrims, carried the virus to home countries and a prominent example is Pakistan where a substantial number of cases in the province of Sindh and Punjab (the most affected provinces) are pilgrims from Iran. Meanwhile, in Pakistan, despite government's repeated pleas, *Raiwind Tableeghi Ijtema,* gathered 250,000 believers from 80 different countries by 11th March. The true extent of spread of the virus from the participants of this *Ijtema* may be known later, however, Palestine, Kyrgyzstan, Malaysia and Indonesia have reported confirmed cases stemmed from the *Raiwind Ijtema*, besides, half of the local cases in Punjab were traced back to this congregations [4].

Hajj — an obligatory pilgrimage for Muslims to the "House of Allah" in Mecca, Saudi Arabia — is the most diverse MRG in the world (2.5–3 million pilgrims, from 180 countries in 2019). Respiratory infections were common among the *Hajj* pilgrims and many studies reported low adherence and implementation of preventive measures during the *Hajj* in the previous pandemic of H1N1(2009) and MRES outbreak (2013) [5, 6]. COVID-19 has prompted Saudi government to consider cancelation of the *Hajj* this year. However, it would not be an easy decision, and most likely Saudi Kingdom will open its boarder for *Hajj-2020* (28th July- 2ndAugust) because of the associated religious emotions and potential economic loss of $8.5 billion revenue from the religious tourism pertaining to *Hajj*. In this case, any country opening its boarder for religious tourism and MRGs must demonstrate capability to implement adequate preventive measures and diagnostic capabilities. Furthermore, to avoid any potential ramifications, authors suggest restrictions on the entry of the *Hajj* pilgrims who are/from:

a. epicentres and hotspots,
b. over 50 years old,
c. chronic disease patients with diabetes and cardiovascular complications,
d. countries with suboptimal diseases surveillance system, and
e. countries with inadequate quarantine and diagnostic infrastructure for returning pilgrims

Saudi Arabia needs to deploy a pre-emptive approach for all the necessary arrangements. The threat of the virus spread out of *Hajj* could be a reality, hence, time for action is now or never.

Table 1
Prominent mass religious gatherings in the world.

Name	Country	Frequency
Kumbh Mela	India	After every 6/12 years
Hajj	Saudi Arabia	Annual
Arba'een Pilgrimage	Iraq	Annual
Makara Jyothi	India	Annual
Bishwa Ijtema	Bangladesh	Annual
Black Nazarene	Philippine	Thrice in any year
Raiwind Tableeghi Ijtema	Pakistan	Annual

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