Infographic. Successful hosting of a mass sporting event during the COVID-19 pandemic

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In a previous BJSM blog posted in April this year Nitin K Sethi posed the question, ‘Amid the COVID-19 pandemic should combat sports events be held ‘behind closed doors’?’. The article’s conclusion was that with the right preparation and ‘by adopting some of the above practices a cautious start to combat sports events can be contemplated’. Within this context, the Ultimate Fighting Championship (UFC) elected to hold a series of fights on Yas Island, Abu Dhabi, hosted by the Department of Culture and Tourism and in close liaison with the Department of Health, from 01 to 31 July 2020.

According to the WHO Mass Gatherings Risk Assessment COVID-19 Tool, the risk of hosting the event during that time (during the active phase of the pandemic) was considered ‘Very High Risk’. The decision then to go ahead was one that was not taken lightly, but the event organisers were confident that they could take the right measures, with a strong operational plan, to successfully protect all involved in a city that was particularly well resourced and already effectively dealing with the pandemic at a population level.

The potential for negative press was anticipated, especially should there be an outbreak at the tournament. The communication strategy for the event was thus inclusive of a strong public relations crisis management plan in the case of positive cases being identified or any reason for the safety of the participants being compromised. The trust of the local and international media was gained through involving them in everything and ensuring transparent and continuous communication around all aspects of the event. With the safety of the fighters ensured, the public was only too eager to support the tournament, having been starved of watching world-class sport due to the pandemic.

The Abu Dhabi Department of Health was involved in the tournament throughout, and local guidelines for management of an outbreak would have been followed should the need arise. Should such an ‘outbreak’ be significant enough, the event would have to be cancelled; the threshold for this decision being low.

An area of 11.8 km² on Yas Island was identified to be turned into a virus free ‘safe zone’. Within this area there were 7 hotels, 29 food and beverage outlets, 8 swimming pools, a golf course, 4 spas and 5 gyms. Two weeks before the launch of UFC ‘Fight Island’, the zone was secured; 1650 local staff went into lockdown and had at least two nasopharyngeal PCR tests performed prior to the start of the event. Any positive testing staff were immediately removed from the safe zone.

This meant that by the time the event was launched on 01 July and an additional 532 international delegates, including fighters and their management teams, started arriving, everyone in the zone was SARS-CoV-2 free. International delegates were quarantined in airport hotels for 48 hours prior to their departure and could only board their planes on receipt of a negative result. One fighter, billed to

![Infographic](http://bjsm.bmj.com/)

SUCCESSFUL HOSTING OF A MASS SPORTING EVENT DURING THE COVID-19 PANDEMIC

THE NUMBERS

| 1,650 | LOCAL STAFF |
| 532 | INTERNATIONAL DELEGATES |
| 102 | FIGHTERS |

THE AREAS

| 11,8km² | AREA OF SAFE ZONE |
| 0 | TRUE POSITIVE RESULTS |
| 17 | FALSE POSITIVE RESULTS |

THE TESTING

| 18,530 | Unaccompanied samples collected |
| 18,706 | Tests ordered but awaiting results for positive test results |
| 97 | Tests not required |

3 PILLARS TO ENSURE INTEGRITY OF SAFE ZONE

1. Establish Safe Zone: Everyone in safe zone was COVID-19 free prior to arrival of international delegates and fighters.
2. Screening: Effective, frequent screenings of everyone in safe zone with rapid turnaround of results and immediate action taken on positive tests.
3. Maintenance of safe zone: Safe zone was successfully kept COVID-19 free due to measured approach to place mitigation measures in place at a local level.

THE FIGHTER JOURNEY

1. Check in: Athletes arrive at airport and are held 24 hours prior to their flight to Abu Dhabi.
2. 1st PCR Test: Athletes undergo PCR test at the airport and are held 24 hours prior to their flight to Abu Dhabi.
3. Results: Athletes are assessed for transmission to the safe zone.
4. Transfer to Hotel: Athletes are transferred to the safe zone in a COVID-19 negative taxi.
5. 2nd PCR Test: Athletes undergo PCR test at the hospital and are held 24 hours prior to their flight to Abu Dhabi.
6. Quarantine: Athletes are quarantined at their hotel.
7. Receive Result: PCR test received results within 24 hours.
8. 3rd PCR Test: Athletes are tested on day 3 and undergo PCR test before leaving the zone.
9. End of Quarantine: Athletes are cleared to leave the safe zone and are tested on day 3 and 7.
10. Hygiene and PPE: Athletes are required to wear masks, gloves, and gowns at all times.

CITIES OF DEPARTURE

59

12. Leaving the UAE: Athletes are required to take a test 48 hours prior to their flight leaving the UAE.
fight in the main event, returned a positive sample (and was symptomatic), so was excluded from further participation. During travel a strict virus transmission risk mitigation strategy was employed. All passengers were required to wear personal protective equipment (PPE) and follow normal hygiene measures with social distancing, while all Etihad crew and airport staff were quarantined and tested regularly for 2 weeks prior to the flights (as were all bus drivers). One of the Abu Dhabi Airport terminals was made available for the exclusive use of the international delegates. During the spectator-free tournament over a period of approximately 4 weeks, 51 fights were held on 4 different dates. All international delegates within the safe zone were subjected to 48 hours quarantine on arrival (with two PCR tests conducted 24 hours apart during this time); since the incubation period of SARS-CoV-2 can be up to 14 days, a longer quarantine period would be ideal. However, it was a case of weighing up risk mitigation versus operational requirements and determining an acceptable risk:benefit ratio. It was felt that the risk of the reduced quarantine time was mitigated by the frequency of testing and close surveillance of everyone. In addition to testing, other recommended risk mitigation measures were employed - ongoing education on hygiene was provided and strict sanitization measures social distancing and PPE wearing were enforced. Participants were subjected to daily temperature and symptom checks and movement into and out of the zone was stringently restricted. Thermal cameras situated throughout the zone continuously monitored peoples’ temperatures. Athletes were generally kept away from other participants where possible and had their own private, exclusive gym and training area adjacent to each of their hotel rooms. There was additional focus on sanitising the arena before, during and after fights. Everyone within the safe zone was tested two times per week, including 24 hours before an event. Separate isolation rooms were established and anyone testing positive or leaving and re-entering the zone was placed in these areas. 48 hours quarantine and two negative PCR results allowed re-entry into the zone. Fighters requiring medical attention outside of the zone were taken to ‘COVID-free’ hospitals, full PPE was worn and contact with anyone outside limited as much as possible. While the quarantine time for this is shorter than the recommendations, this approach worked under these particular conditions.

A total of 18,530 samples were collected by 97 nurses and 18,706 tests were conducted (due to retesting of borderline results). The average turnaround time for reporting was 11 hours and 43 min with an expedited service for fighters and management returning results as in little as 1 hour and 45 min. During the 4 weeks, 17 tests returned positive results, but on resampling and retesting two times, all of these were found to be false-positive results. All these false-positive results showed only one marginally raised cycle threshold (Ct) value, with multiple low Ct values on longitudinal testing before and after this single ‘abnormal result’. None of these individuals was symptomatic (understanding that a positive case may be asymptomatic).

In retrospect, the following could have been done better: the quarantine period for international delegates could have been extended to 5–7 days with an additional PCR test conducted prior to release into the ‘safe zone’, food and other deliveries into the zone could have been consolidated to reduce the frequency thereof, newer testing procedures employed in some circumstances to ensure a quicker turnaround time of results and a radiology facility could have been made available in the zone to avoid the need for injured fighters to leave the zone for imaging.

This exercise demonstrates that with the correct processes and resources in place, it is possible to safely host a mass gathering sporting event of this nature in the active phase of the COVID-19 pandemic.

REFERENCES