



Medical resources deployed for the 2019 World Athletics Championships in Doha, Qatar

Guillaume Alinier^{1,2,3,4}, Naven Pullian¹, Nicol van Dyk^{5,6,7}, David Rehn⁵, Damon Tilley⁵, Nikki Jeanguyot⁵, Louis Holtzhausen⁵, Maria-Carmen Adamuz⁵, Ramy Gharib¹, Shaneer Shamso⁸, Liesel Geertsema⁵, Celeste Geertsema⁵, Raouf Rekik⁵, Stephen Targett⁵, Emin Ergen⁵, Brendon Morris^{1,*}, Juan-Manuel Alonso⁸

ABSTRACT

Background: International sporting events such as the World Athletics (WA) competition require proper medical coverage to ensure the wellbeing of athletes, support teams, and spectators¹. Several factors may have an impact on people's requirements for medical attention such as the climate, altitude, and intensity of the sporting competition on the athletes^{2,3}. The International Association of Athletics Federations (IAAF) held its 2019 competition in Doha, Qatar, and this study reports on the medical resources deployed to cover the event based on risk assessment.

Case presentation: Although the competition was held for 10 days across two venues. The medical cover started 3 days earlier and also encompassed warm-up/training venues and official hotels (Table 1). It involved multiple healthcare organizations providing equipment, manpower, medical tents/clinics, and vehicles in case of transportation to the hospital was required.

Results: Resources were allocated to various locations based on the risk assessment (Table 1) and depending on the number of people competing, training, or attending, and the size of the venue. Environmental factors were accounted for with the provision of cold-water immersion recovery baths at multiple locations and ample manpower with rostering of clinical staff from various relevant healthcare professions (Table 2). All resources were deployed on a rotational shift basis in the official locations well ahead of the start of each event until an hour or two after the completion of the event.

Conclusion: Proper planning, communication, and collaboration among organizers, hosts, medical services providers, and other authorities play a vital role in the safety of athletes, support team members, and spectators. Such large events impose huge strain on the resources which can impact aspects of daily healthcare delivery to the rest of the community and hence need to be carefully considered. It is worth noting that the medical coverage provided was not overwhelmed by patient demand, hence; the medical coverage was appropriate.

Keywords: Athletics, Medical coverage, Qatar, Championships, Sporting event

¹Hamad Medical Corporation Ambulance Service, Doha, Qatar
²School of Health and Social Work, University of Hertfordshire, Hatfield, UK
³Weill Cornell Medicine-Qatar, Doha, Qatar
⁴Faculty of Health and Life Sciences, Northumbria University, Newcastle upon Tyne, UK
⁵Aspetar Orthopaedic Sports Medicine Hospital, Doha, Qatar
⁶High-Performance Unit, Irish Rugby Football Union, Dublin, Ireland
⁷Section Sports Medicine, Faculty of Health Sciences, University of Pretoria, Pretoria, South Africa
⁸Qatar Red Crescent Society, Doha, Qatar
*Email: b.morris@hamad.qa

<http://dx.doi.org/10.5339/jemtac.2022.qhc.3>

Submitted: 27 July 2021
Accepted: 9 September 2021
Publication date: 15 January 2022
© 2022 Alinier, Pullian, van Dyk, Rehn, Tilley, Jeanguyot, Holtzhausen, Adamuz, Gharib, Shamso, Geertsema, Geertsema, Rekik, Targett, Ergen, Morris, Alonso, licensee HBKU Press. This is an open access article distributed under the terms of the Creative Commons Attribution license CC BY-4.0, which permits unrestricted use, distribution and reproduction in any medium, provided the original work is properly cited.

Table 1. Key planning and risk assessment elements for the 2019 World Athletics Competition in Doha, Qatar.

<p>Key figures:</p> <ul style="list-style-type: none"> - 24 September 2019 to 6 October 2019 (13 days) - Minimum-Maximum temperatures of 28-36°C (Feeling like: 31-42°C) and humidity of 32-71% in Doha. - 206 teams - 1,772 athletes - 49 events - 2 competition venues (Khalifa stadium and Corniche) - 1 training venue - 1 warm up venue - Multiple official hotels for the teams <p>Risk assessment aspects:</p> <ul style="list-style-type: none"> - Hazards due to time of year/weather/location of the event. - Increased ambulance staff personnel coverage in anticipation of athletes and events workforce feeling unwell because of the heat and humidity. - Dedicated command and control mechanisms put into place in the event of a mass casualty incident. - Dedicated communications pathways for the event. - Dedicated pathways for medical emergencies. - Collaboration between all medical teams/disciplines where rehearsed and documented in the event that a scenario became an eventuality.

Table 2. Medical staff provision at various locations. (This does not account for the fact that some national teams have their own medical staff as well).

	Stadium	Corniche (Long distance events)	Warm up venue	Training venue	Official Hotels
Venue medical officers	2	2	2		1
Sport medicine physicians	6	2		1	2
Physicians	4				1
Intensive care unit physicians		3			
Orthopaedic surgeon	1				
Anaesthetist	1				
Podiatrist		2			
Pharmacist		2			
Physiotherapists	3	5	6	2	4
Nurses	10	10	2	3	4
Intensive care unit nurses		4			
Massage therapists			3		4
Paramedics	29	43	6	4	
Critical Care Paramedics	4	4			
Volunteers	3	38	5		
Emergency Care supervisors	2	2			
Total	65	120	24	10	16
Ambulances	6	7	1	1	
Medical golf carts	1	5	1	1	
Medical bicycles		6			

REFERENCES

- [1] Mountjoy M, Moran J, Ahmed H, Bermon S, Bigard X, Doerr D, et al. Athlete health and safety at large sporting events: the development of consensus-driven guidelines. *Br J Sports Med [Internet]*. 2021 Feb;55(4):191–7. Available from: <https://bjsm.bmj.com/lookup/doi/10.1136/bjsports-2020-102771>
- [2] Bermon S, Adami PE. Meteorological Risks in Doha 2019 Athletics World Championships: Health Considerations From Organizers. *Front Sport Act Living [Internet]*. 2019 Nov 12;1. Available from: <https://www.frontiersin.org/article/10.3389/fspor.2019.00058/full>
- [3] Grobler L, Derman W, Racinais S, Ngai ASH, Vliet P. Illness at a Para Athletics Track and Field World Championships under Hot and Humid Ambient Conditions. *PM&R [Internet]*. 2019 Sep;11(9):919–25. Available from: <https://onlinelibrary.wiley.com/doi/10.1002/pmrj.12086>