

Infectious Diseases Outbreak Management Tool for endurance mass participation sporting events: an international effort to counteract the COVID-19 spread in the endurance sport setting

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The COVID-19 pandemic has caused considerable economic damage throughout the world in addition to a severe health crisis. Social distancing is the main preventative measure for person to person transmission of SARS CoV-2.¹ This has essentially put a halt to all mass participation endurance sporting events, with

road races, triathlons, cycling, Nordic skiing and rowing events being indefinitely postponed or cancelled. The benefits of endurance exercise have been widely demonstrated,² therefore, the current halt has had significant health and social consequences worldwide. From a financial perspective, the economic impact on the endurance sport mass participation industry has also been catastrophic. Endurance events are estimated to generate over US\$3 billion/year in the USA alone.³ Taking the example of road running, 17.6 million people registered for road running events in the USA in 2019.⁴ Endurance sports, thanks to the competition format, allow elite and amateur athletes to compete together, attracting large crowds of participants (e.g. Henley Royal Regatta, Vasaloppet, Gran Fondos, International Triathlon Union World Championship Grand Final). Therefore,

the cessation of endurance events represents a huge societal loss.

At some point, the pandemic will give way to isolated clusters of cases with no widespread community transmission and people will be able to return to mass participation sporting events.⁵ However, until there is a vaccine, a specific cure or wide-spread herd immunity, participation in endurance events will remain potentially unsafe and could be considered socially dangerous. COVID-19 has dramatically shifted the focus of medical directors to infectious threats, reflecting the concerns that endurance mass participation events can present specific public health challenges because of the gathering of large crowds for prolonged periods. Furthermore, such events often result in mixing of populations that travel to the competition destination from different parts of the world, thus are exposed to a different infectious risk (higher or lower) than the hosting local community.

To tackle these challenges the International Institute for Race Medicine and World Athletics have gathered representatives from International Sports Federations of endurance mass participation sporting events (i.e. International Cycling Union, International Skiing Federation, World Rowing and World Triathlon), to form a medical task force. The task force also included experts from the International Paralympic Committee and from WHO COVID-19 Mass Gatherings Expert Group. Representatives from the International Olympic Committee and WHO were present as observers to ensure consistency of preventive measures across different mass gathering sectors. Only sports that share a high aerobic demand, have mass starts or mass arrivals or which

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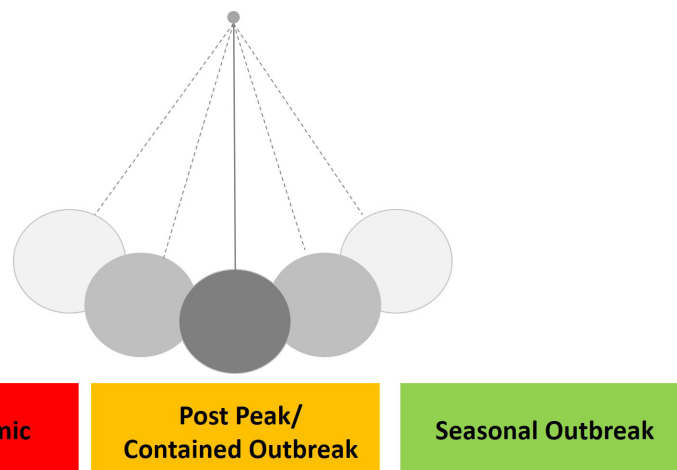


Figure 1 Pendulum of risk.

focus competition in a relatively small area over several days such as rowing regattas, were included in the medical task force to keep the group uniform. Finally, endurance events planners and stakeholders were added as an advisory working group, to provide perspective and support to the medical task force.

By adapting already existing tools developed by WHO^{6,7} to the characteristics of endurance mass participation sporting events, the medical task force created a web-based supporting tool for event's organisers. The Infectious Diseases Outbreak Management Tool (<https://idom.worldathletics.org/>) aims to become an accompanying tool for endurance mass participation sporting events organisers and should help by:

- ▶ Assessing the risk level of the event in both quantitative and qualitative manner.
- ▶ Determining the public health and sport event's mitigation preparedness.
- ▶ Proposing the steps to take to further mitigate and reduce the risk.

The tool provides a macroscopic, multisport perspective taking into consideration local health and safety regulations, the individual event's characteristics and the local community needs. It strongly encourages partnership with local and regional health and safety agencies, by bringing together the specific expertise of the sports bodies with that of the local public health system.

Based on the principle that a certain level of risk will always be present, and on a simplified version of WHO Pandemic Phase Description,⁸ the task force introduced the concept of the pendulum of risk (figure 1). The pendulum hypothesises the existence of three infectious diseases outbreak phases, active pandemic, post-peak/contained outbreak and seasonal outbreak, as part of a continuum. Therefore, the infectivity and transmissibility risk of any infectious disease will have to

be assessed before the organisation of all future events.

It is our opinion that the management of endurance mass participation sporting events during outbreaks can be improved from the current situation, so that potential future outbreaks will not require the same scale of countermeasures. The continuous understanding of COVID-19 requires a flexible approach and the acknowledgement that all the currently available resources should be considered as 'living documents'. It is in the interest of the entire endurance event industry and of the communities in which these events take place, to develop innovative strategies to stage events in a way that allows the health, economic and social benefits to be achieved while reducing any outbreak-associated risks.

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