July 1, 2021

Dr. Thomas Bach
President
International Olympics Committee
Route de Vidy 9
1007 Lausanne
Switzerland

Dear Dr. Bach,

We share the common goal that Tokyo2020 can be held safely, assuring the health of athletes, support team members, event staff, the media and the public.

Should the Olympics happen safely, it will be cause for great celebration. However, it is important that Tokyo2020 not become a global superspreader event. What happens at the Olympics affects us all. The reputation of sport will suffer immeasurably if the Olympics set back global public health at a time when efforts to combat the pandemic remain precarious and COVID-19 cases are increasing in much of the world.

We recently published an article in the New England Journal of Medicine identifying several areas where the IOC's Playbooks fall short. Since that time, despite sharing our input and expertise with those tasked to ensure the safety of Tokyo2020, we have not seen any measurable progress. With the Olympics less than a month away, there remain a number of outstanding issues that require your urgent attention. These are essential for reassuring the Japanese public, Olympic athletes, and the wider global community that the required measures are in place to prevent the Olympics from contributing to the spread of SARS-CoV-2.

Despite being warned of the risks, the International Olympic Committee (IOC) has not put into place best practices to limit SARS-CoV-2 transmission or to fully utilize expert advice on the robust and rigorous safety measures that are needed to protect everyone who is part of the Olympic games. IOC representatives invited us to participate in recent meetings but then largely ignored our questions and suggestions.

We are concerned that the IOC's repeated assurances that 80% of those in the Village will be vaccinated may not be adequate for preventing transmission among athletes and other participants. While vaccination is very important, it is insufficient protection, as illustrated by the vaccinated Ugandan athlete and coach who tested positive on entry into Japan, requiring the entire team to isolate for multiple days. More such cases appear inevitable given shortcomings in the proposed Playbook measures and the variability in vaccine effectiveness for vaccines produced by multiple countries and private companies.

Our fears are heightened as the virus continues to evolve and more variants of concern appear. The Delta variant, now dominant in many countries, is predicted to become the most common

variant in Japan as the Torch arrives in Tokyo. It may be more transmissible, cause more serious disease in all ages, and evade some protection of our vaccines.

We are aware that IOC has claimed that no SARS-CoV-2 infections have been demonstrated to have been transmitted on the field of play. There is no evidence to support that claim. The factors are clear: risk increases with more potential sources, more and closer contacts, and more time spent in a shared space.

Risk of SARS-CoV-2 Infection by Contact and Location with Example Sports

	Outdoors	Indoors
No Close Contact	LOW Archery, BMX freestyle, canoeing, golf, surfing	LOW – MEDIUM Gymnastics, diving, table tennis, badminton
Some Contact	MEDIUM Beach volleyball, softball, track and field	MEDIUM – HIGH Basketball, volleyball, track cycling
Considerable Contact	MEDIUM-HIGH Football, rugby 7's	HIGH Fencing, judo, boxing, wrestling

The IOC has failed to conduct an assessment that differentiates risk by sport. As we illustrate in the above table, wrestling has much higher risk of transmission than sailing. Similar tables should be constructed for venues, activities, and living spaces. Interventions should focus on making high-risk sports, venues, locations and activities more like low-risk ones.

Many more steps could be taken to mitigate risk. Assurances of safety by the IOC are not convincing. For example, the IOC claims that the dining hall will have only one third occupancy, yet videos from a media tour show chairs for several thousand occupants. Placing barriers between occupants will not protect anyone from infectious aerosols that remain suspended in air for many minutes and hours and are easily dispersed throughout rooms, halls and corridors. Ventilation of three air changes per hour (ACH) is 50% less than the minimum six ACH recommended by engineering standards. Opening windows periodically will not ensure adequate ventilation in large or small spaces, and in any case, will vary in effectiveness depending on factors such as the size of windows and their position in rooms, prior occupancy, design of rooms, and availability of make-up air.

Stadiums are built to channel people through small spaces: this applies to both spectators and athletes. As June 21, national spectators are now permitted. Tunnels and corridors, including hotel hallways are by design, places of higher density, but lower ventilation. Evidence shows that hotel hallways are sites of ‘leakage’ from even well-ventilated rooms and are places where people, both guests and staff, are exposed. Under these circumstances, an urgent risk assessment and review of all environments occupied by athletes, support team members and spectators will congregate is prudent to avoid congregation of athletes and spectators and minimize the risk of exposure.

Athletes, support staff, workers and spectators all need to know that all reasonable steps have been taken to protect them from harm. The IOC must recognize that the fallout from the decisions they make in Tokyo will affect the entire world. Much more is known today about the transmission of SARS-CoV-2 than at the time the first Playbooks were published, but the IOC seems "stuck" in the rudimentary understanding of the science of a year ago. It appears to have missed the well-researched and publicized messages about transmission of microscopic particles by inhalation in shared spaces -- both near and far -- from an infected source.

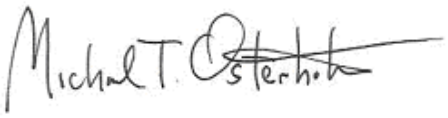
The Japanese public, physicians, scientists and even the Emperor have all expressed serious concern about holding this mega-event in their country, which has only recently emerged from a fourth surge and has a small fraction of its population vaccinated.

Accordingly, we have some fundamental questions, listed below, that require thoughtful and public answers:

1. What is the response plan if there is an outbreak of Covid-19 during the Games?
2. Why isn't daily testing being conducted on everyone with potential for close contacts, using PCR-based testing?
3. Will there be genomic testing to better understand who infected whom, and to better prepare countries as athletes return?
4. What has been done to evaluate the quality of ventilation in all venues and locations throughout the Olympic Village and Games Venues?
5. What has been done to implement air filtration in all venues and locations throughout the Village and indoor Games Venues in all areas where ventilation is inadequate?
6. Are there enough resources in the Village to manage a large outbreak?
7. How will a readily available supply of approved masks be obtained and distributed to athletes – i.e., medical-grade masks or 3-layer cloth coverings (or at least two cloth layers with a filter)?
8. Will workers and others required to spend lots of time in close contact with many people be provided with fit-tested respirators, to ensure that they are adequately protected from an infectious dose?
9. How is the IOC updating the Village and Venues in light of the new variants, especially the Delta variant?
10. What steps are being taken to ensure the preparation and delivery of the Games does not compromise the public health situation in Japan, including the diversion of essential resources and medical personnel?
11. Where and how will the required resources and medical personnel be sourced from to ensure the Games protect public and athlete health?
12. What medical facilities have been secured in Tokyo for athletes / others who test positive for Covid-19 and display critical symptoms, including the need for hospitalisation?
13. What measures are the IOC putting in place to ensure that athletes do not unwittingly take the virus or variants home to unprotected, unvaccinated populations?

We remain committed to sharing our expertise and helping the IOC work through these challenges constructively – but also urgently.

Sincerely,



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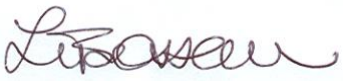

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