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## Editorial

## Mandatory immunization against SARS-CoV-2 of athletes, companions and supporters for the Tokyo Olympics



The 2020 Olympic Games were postponed and are now scheduled to open in Tokyo on the 23rd July 2021. Japan is just past the peak of its 4th wave of COVID-19, reporting 6425 cases on 13th May, declining to 4448 (3 cases per 100,000 population) on 26th May ([Ourworldindata, 2021](#)). However, Japan has shown positive daily testing rates of 5%–10% compared to 0.5% in Denmark ([Statens Serum Institut 2021](#)). Denmark performs around 130 tests per 1000 population per day where Japan perform less than one ([Ourworldindata, 2021](#); [Statens Serum Institut, 2021](#)). Thus, the number of COVID-19 cases in Japan are most likely underestimated. On 28th of May the medical authorities in Japan said that “. . . case numbers in Tokyo need to be much lower to prevent another surge during the Games ([The Guardian, 2021](#)).

The major public health concern, however, is not the current state of COVID-19 control in Japan, but the potential risk of local and global spread of SARS-CoV-2 from athletes, companions and spectators during and after the Tokyo Olympic Games. Naoto Ueyama, chairman of the Japan Doctors Union has raised concern that the International Olympics Committee (IOC) and the Japanese government had underestimated the risks of allowing 15,000 Olympic and Paralympic athletes from more than 200 countries – as well as about 80,000 officials, journalists and support staff – to enter Japan this summer ([The Guardian, 2021](#)).

The impending Olympic Games in Tokyo sets the scene for the perfect storm with up towards 100,000 visitors arriving from all over the globe, with every conceivable SARS-CoV-2 variant, known or hitherto unknown. Transmissions occurring outside the competition sites are inevitable, as experienced for instance in the Men's World Handball Championship held in Cairo at the end of January 2021. Hotels were high risk areas with rooms shared by athletes, and teams lost members due to quarantine after positive tests.

A recent perspective in the *New England Journal of Medicine* ([Sparrow et al., 2021](#)) argues that the IOC's guidelines on handling COVID-19 are not built on scientifically rigorous risk assessment ([International Olympic Committee, 2021](#)), and the authors suggest that “. . . the WHO immediately convene an emergency committee that includes experts in occupational safety and health, building and ventilation engineering, and infectious-disease epidemiology, as well as athlete representatives, to consider these factors and advise on a risk-management approach for the Tokyo Olympics” ([Sparrow et al., 2021](#)). This recommendation is too late to be taken forward since the Olympic Games are scheduled to open in less than seven weeks.

Globally, we are in the middle rather than at the end of the COVID-19 pandemic which was declared a public health emergency of international concern (PHEIC) by the WHO under the rules of the International Health Regulations, IHR ([WHO, 2005](#)). Article 13 of the IHR states that “Each State Party shall develop, strengthen and maintain the capacity to respond promptly and effectively to public health risks and public health emergencies of international concern”. To that end, the responsible party for an event in Japan in the middle of a PHEIC is the Japanese government alone, which has to fulfil its task of protecting its own population and visitors including prevention of spread to other countries after the event irrespective of the IOC COVID-19 guidelines.

Participants, companions, support staff, spectators and media at the Tokyo Olympics carry the risk of acquiring and importing new SARS-CoV-2 variants, and exporting them upon return back to their home countries. Many countries require post-travel quarantine and testing and it is not clear whether this would be applied here, but asymptomatic individuals may still be infective ([Keehner et al., 2021](#)).

With seven weeks before the opening ceremony, it becomes important that Japan introduces as a mandatory pre-requisite, one condition under which the games could go forward – that is full immunisation of all athletes, companions, support staff, press and other visitors. This would reduce risk of SARS-CoV-2 acquisition and transmission, and should be in addition to the implementation of infection control and quarantine measures for COVID-19 ([WHO GDG, 2021](#)). Protective immunity after a single immunisation of any vaccine is approximately 70% ([Bernal et al., 2021a](#); [Voysey et al., 2021](#); [Sadoff et al., 2021](#)), thus accepting entrance and participation in the games after a single immunisation seems not to be an option. A preprint released by Public Health England on the 22nd May showed that the Pfizer/Biontech vaccine was 88% effective, two weeks after the second dose, against the B.1.617.2 variant and 93% against B.1.1.7, known as the UK variant. The AstraZeneca vaccine was 60% effective against B.1.617.2 at two weeks after the second dose and 66% against the Kent variant. But both vaccines were only 33% effective against symptomatic disease from B.1.617.2 three weeks after the first dose, whereas they were 50% effective against B.1.1.7 ([Bernal et al., 2021b](#)).

In the middle of a pandemic declared a PHEIC it should be clear that participation must depend on a valid COVID-19 vaccine certificate issued by a credible national authority. Will such vaccination ‘passports’ be available before 23<sup>rd</sup> July 2021? At the current pace of development of electronic passports it seems

unlikely. Japan would have to accept national vaccine certificates some of which would be on paper (Schlagenhauf et al., 2021; Petersen et al., 2021). Individuals down to the age of 12 years can be vaccinated (Centers for Disease Control and Prevention, CDC, 2021; EMA, 2021). However there are issues surrounding vaccine hesitancy and exemptions that need to be dealt with. Those who for medical reasons cannot be immunised should be allowed to enter Japan as part of an Olympic team, trainers, companions or press corps. There are issues of inequity which also arise. Many athletes who may want to be vaccinated, may not be able to access the vaccines, and thus would thus be denied the right to compete in the Games. With a donation of vaccines from Pfizer/Biontech this becomes a logistic issue not an inequity issue. Finally, pre-departure PCR testing for SARS-CoV-2 before boarding flights and systematic PCR screening of participant at entry port followed by a ten day period of close follow-up, (although representing an important constraint), could represent an additional measure that could circumvent many issues with regards to vaccine efficacy and inequities.

In conclusion, the government of Japan must take full responsibility for the Olympic Games in Tokyo under the IHR convention. We believe that the choice is between full immunisation of participants or the Games should not be held at all.

The opinion expressed here are the personal opinion of the authors and does not necessarily represent the opinion of their institutions and societies.

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