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Ignoring the Science (delayed second mRNA vaccine doses) puts frontline workers and all recipients at risk

ENT UK, the professional membership body representing Ear, Nose and Throat surgery, as well as its related specialities have been contacted by a number of members expressing concern about the Government's decision to delay the administration of a second dose of COVID-19 vaccines, specifically the mRNA vaccines (Pfizer/BioNTech and Moderna).

The argument against not deviating from the approved two dose vaccine schedule at day 1 and day 21/28 for mRNA vaccines is reinforced by the recommendations of the respective manufacturers, and most importantly, the World Health Organisation (WHO). It is understandable that pragmatic solutions need to be devised in response to the logistical issues of mass vaccination. Our concern, however, is that this deviation is not based on the science of the specific mRNA vaccines which the Oxford-AstraZeneca vaccine is not.

It is recognised that the mRNA vaccines have never been used before in human trials; mRNA vaccines are more fragile; and that after the first inoculation, vaccine efficacy falls to 50%. This requires a second booster at a specific time (day 21/28) in order to further stimulate and reinforce immune memory to achieve 90-95% efficacy. This final level being consistent with the available non-mRNA alternatives (Oxford-AstraZeneca). The mRNA vaccine is recognised to degrade after the first dose and the time lag between the first and second determines the final immunity: the longer this time lag the less of a reinforcement immune boost this second dose is reported to confer.

Leaving a second dose beyond a maximum of 6 weeks falls outside the clinical trial data for the Pfizer/BioNTech vaccine. The resultant efficacy is an unknown quantity which conflicts with the ethics and consent of its approved licence and approval from the original Medicines and Healthcare Regulatory Agency (MHRA) application.

Our concern, based on the published science, is this will lead to a cohort of mRNA vaccine recipients with a partial vaccine response and the risk of infection from further resistant or mutant strains in this pandemic. We strongly affirm that those who have had first doses of the mRNA vaccines be given their second dose according to the 21/28 days schedule and in exceptional circumstance up to a maximum of 6 weeks in line with the WHO and trial data.

We affirm that priority needs to be given for immediate vaccination to all front-line workers, particularly those most at risk from close contact with patients and aerosol generating procedures (AGP), in-order for them to minimise sickness. This will enable frontline workers and trainees to continue to do their job by protecting patients and the NHS.

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