

COVID-19 vaccines

A UK experiment, but potentially with global implications

- UK COVID-19 vaccine recommendations prioritise wider 1st dose administration over 2 doses per patient, 3 weeks apart
- The recommendations look to be designed to protect the UK healthcare system from overload in the short term
- However, the biggest risk is a lack of sufficient protection and the potential induction of more virulent virus variants

UK – prioritisation of first vaccine dose and potential use of a different second vaccine. The UK has now approved two anti-COVID-19 vaccines: BNT161b2 from Pfizer/BioNTech and AZD1222 from AstraZeneca, both of which required 2 doses given around 3 weeks apart to provide 95% and 62% protection respectively, against COVID-19 infection, based on interim phase III data. The UK's Joint Committee on Vaccination and Immunisation (JCVI) has also issued guidance, prioritising administration of the first dose of either vaccine in an attempt to reduce infections and mortality in as many individuals as possible rather than providing greater protection for fewer individuals; after the first dose of either vaccine, the protection rate was around 52%, according to phase III data. The first dose prioritisation means that patients may not receive the fully protective second dose of either vaccine for up to 12 weeks after the first dose. Patients may also be given a different vaccine for the second dose.

The UK guidelines are not based on hard clinical data but likely reflect the escalating scale of the UK's challenge. The JCVI's recommendations on first dose prioritisation and on potentially using a different vaccine for the second dose are not based on hard clinical data. The first dose prioritisation is based on the interpretation of short-term clinical data, not pre-specified clinical end-points, and there is no evidence that delaying the administration of the second dose of BNT161b2 until up to 12 weeks will provide enough protection. The suggestion that a different vaccine could be used for the second dose is not based on any clinical data at all, only scientific rationale but with no evidence. With a more virulent B1.1.7 COVID-19 variant spreading rapidly in the UK, the JCVI's recommendation likely reflects a UK situation that is likely to worsen before vaccinations can make a tangible difference.

If the UK experiment fails to curtail infections, COVID-19 transmission and mortality, it could adversely affect the UK and other countries. A risk with this experiment, however, is that if the first dose prioritisation strategy fails to provide sufficient protection, the new virus variant (B1.1.7) could continue to spread at a high rate. A bigger risk is that a high rate of viral transmission together with vaccine-induced selection pressure might arguably lead to more virulent COVID-19 variants and a worse – not a better – outcome for the UK and potentially for other countries as well.

This is a redacted version of the report published on 05-Jan-21. Please contact your HSBC representative or email AskResearch@hsbc.com for information.

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