

Introduction and objectives of the meeting

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Can booster doses contribute to control this
pandemic: what research is needed?
August 13, 2021



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The fundamental question is if/when boosters are needed, and if so, for which vaccines and in whom?

Situations where additional doses of a COVID vaccine in previously vaccinated individuals might be considered

There is evidence that primary vaccination never induced enough immunity to be protective, e.g.,

- Immunocompromised
- Recipients of vaccines with low or unproven efficacy

Vaccine induced immunity wanes to the point that previous vaccination is no longer believed to be adequately protective

New variants arise that escape vaccine induced immunity, such that previous vaccination is no longer believed to be adequately protective

Vaccine benefit and risk

It is generally agreed that vaccine benefits need to exceed the risks

Risks of “boosting” may include immediate safety concerns for vaccinees, unknown long-term consequences of boosting, and public health outcomes

Thus, benefits of boosting should be clear in order to make a benefit:risk assessment

What vaccine efficacy outcomes are most critical?

Severe disease?

- Most would agree that primary protection against severe disease is most important

Mild disease?

- Mild disease is tolerated for many other illnesses, and may even confer long term protection advantages
- Increases in mild disease might predict subsequent increases in severe disease

Transmission?

- Transmission is driven by the unvaccinated
- Long term protection against transmission may be impossible to achieve with current vaccines
- Often difficult to assess in clinical trials
- We don't have direct evidence about impact on transmission for most vaccines in use today

Infection?

- Preventing infection would protect against mild disease, severe disease, and transmission
- Most vaccines are not successful in completely preventing infection
- Often difficult to assess in clinical trials

WHO is reconvening its vaccine target profile expert group

Additional thoughts

There will always be reasons why rich countries will see possible advantages to jumping to the head of the line for additional vaccines or vaccine doses, further delaying worldwide control of the pandemic.

In a pandemic, perception of some of these advantages may be driven by fear, not fact

Our goal today is to provide a framework for discussion of the science behind booster doses, so that decision-making can consider all of the relevant facts