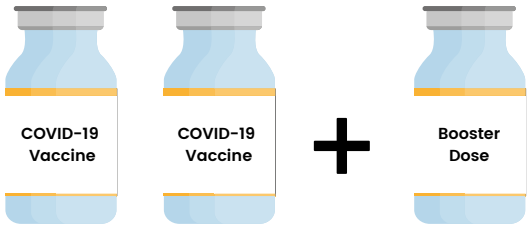
COVID-19 VACCINES
EVIDENCE IN BRIEF

BOOSTER DOSES

RESTORING PROTECTION

COVID-19 vaccines show high vaccine effectiveness against infection and even more so against severe disease, hospitalization, and death compared to those unvaccinated. However, emerging data shows vaccine effectiveness wanes with time since vaccination, especially in older adults. Booster doses are additional doses provided to individuals who have already received a primary vaccination series when immunity has fallen over time below a rate deemed sufficient in that population.



WHO INTERIM GUIDANCE

Mixed Schedules

While homologous COVID-19 vaccine schedules remain the standard practice, WHO supports a flexible approach to homologous vs. heterologous schedules.

Countries should consider vaccine supply, access, and product-specific factors when weighing homologous vs. heterologous schedule options. Rapidly achieving high vaccination coverage with a primary series in priority groups should continue to be the focus while supply remains constrained.

Both heterologous and homologous schedules should be utilized to achieve high coverage and vaccination should not be delayed over considerations regarding the potential benefits of heterologous schedules.

Read the full WHO interim guidance on mixed COVID-19 vaccination schedules here

Booster Doses

All booster studies to date show a strong immunological response, achieving or improving upon the peak antibody levels following the primary immunization series for both homologous and heterologous booster regimens.

Introducing booster doses should be evidence-driven and targeted to the population groups at highest risk of serious disease and those necessary to protect the health system.

Equity considerations support improving coverage of the primary vaccination series in high risk populations as the top priority. More data are needed to understand the potential impact of booster vaccination against specific variants.

Read the full WHO interim guidance on COVID-19 vaccine booster doses here

(WHO interim guidance on other priority topics will be added as it becomes available.)

RESOURCES

Full studies and supplemental data are available at https://bit.ly/covid-vax-evidence and https://VIEW-hub.org/covid-19/effectiveness-studies

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COVID-19 VACCINES
EVIDENCE IN BRIEF

BOOSTER DOSES

EXPLORE THE DATA

TIME SINCE BOOSTER	VACCINE EFFECTIVENESS (95% CI) [1]	PREDOMINANT VARIANTS OF CONCERN [2]	STUDY REFERENCE
AGAINST SEVERE DISEASE			
Pfizer primary series + Pfizer booster			
7+ days	92% (82-97)	Delta	Barda, *Lancet*, 2021
12+ days	94% (91-96) [60+ yr]	Delta	Bar-On, *NEJM* ,2021a
	95% (91-98) [40-59 yr]	Delta	Bar-On, *NEJM*, 2021b
	95% (93-95) [60+ yr]		
	95% (92-97) [60+yr]	Delta	Tan, *SSRN*, 2022
Pfizer primary series + Moderna booster			
12+ days	92% (44-99) [60+yr]	Delta	Tan, *SSRN*, 2022
AGAINST HOSPITALIZATION			
Pfizer primary series + Pfizer booster			
0+ days	45% (27-58)	Delta	Sharma, *medRxiv*, 2021
7+ days	93% (88-97)	Delta	Barda, *Lancet*, 2021
	89% (87-91)	Delta	Waxman, *Nature Portfolio*, 2022
14+ days	70% (48-83) [18+yr]	Delta	Tartof, *Lancet*, 2021
14-20 days	92% (87-95) [40+yr]	Delta	Patalon, *JAMA IM*, 2021
28-65 days	97% (95-98) [40+yr]	Delta	Patalon, *JAMA IM*, 2021
Moderna primary series + Moderna booster			
0+ days	50% (26-66)	Delta	Sharma, *medRxiv*, 2021
AGAINST DEATH			
Pfizer primary series + Pfizer booster			
7+ days	81% (59-97)	Delta	Barda, *Lancet*, 2021
7-54 days	90% (86-93) [50+yr]	Delta	Arbel, *NEJM*, 2021
	93% (89-96) [60+yr]	Delta	Bar-On, *NEJM*, 2021b

[1] VE estimates use primary series as comparator (not unvaccinated). VE assessed among individuals 16+ years old unless otherwise indicated

[2] Predominant variant identified by study authors or based on https://outbreak.info/location-report . Refer to cited study or report for more details.

DISCLAIMER: This table is not a comprehensive summary of all available vaccine effectiveness data and studies for other vaccines and mixed schedules are ongoing; visit the links below for additional studies and data. As a result, this brief does not report on all available COVID-19 vaccines. Data may not reflect most recent variants of concern and will be updated as studies become available.

RESOURCES

Full studies and supplemental data are available at https://bit.ly/covid-vax-evidence and https://VIEW-hub.org/covid-19/effectiveness-studies

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