

NH DHHS Health Care Provider Call 16 Dec 2021

Boosters:

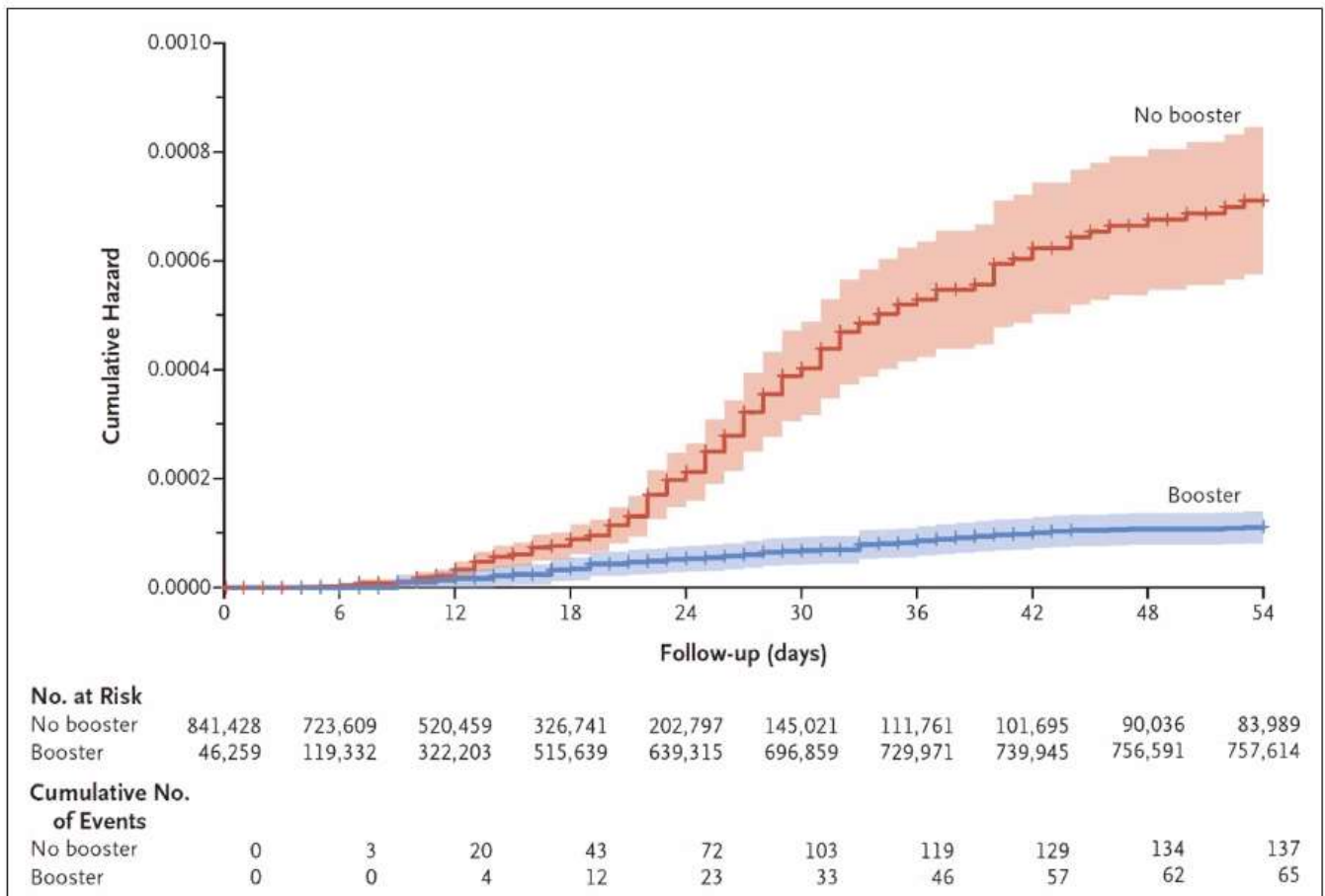
- Studies so far indicate that boosters do “boost” immunity from COVID-19 secured from primary full vaccination and natural immunity from previous infection.
- Primary vaccination does wane. Boosters provide a bump to immunity.
- CDC says everyone over 18 should receive a booster; those 16-17 “may” receive.
- DPHS says everyone over 5 should receive the primary vaccination and everyone over 16 should receive the booster.

Confirmed Infections by Age Group

Age	Nonbooster Group	Booster Group	Nonbooster Group vs. Booster Group Rate Ratio (95% CI)
<i>no. of confirmed infections (no. of person-days at risk)</i>			
≥60 yr	12,456 (22,803,132)	2833 (53,332,528)	12.3 (11.8–12.8)
50–59 yr	10,247 (12,735,098)	1011 (17,239,405)	12.2 (11.4–13.0)
40–49 yr	16,885 (16,560,386)	1157 (14,362,014)	9.7 (9.2–10.3)
30–39 yr	21,452 (19,338,294)	842 (9,541,493)	9.0 (8.4–9.7)
16–29 yr	22,441 (26,675,210)	317 (9,727,114)	17.2 (15.4–19.2)

Severe Illness and Deaths in Older Age Groups

Outcome	Age	Nonbooster Group	Booster Group	Nonbooster Group vs. Booster Group Rate Ratio (95% CI)
<i>no. of confirmed infections (no. of person-days at risk)</i>				
Severe illness	≥60	977 (22,135,011)	166 (46,668,795)	17.9 (15.1–21.2)
Severe illness	40–59	168 (27,599,399)	8 (25,890,717)	21.7 (10.6–44.2)
Death	≥60	288 (17,909,789)	34 (16,768,943)	14.7 (10.0–21.4)

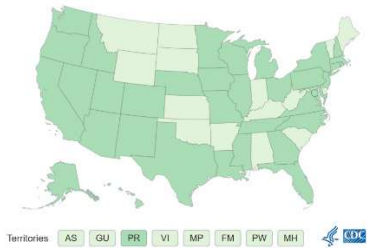


This is especially true against Omicron.

# Omicron:

Widespread presence of this variant.

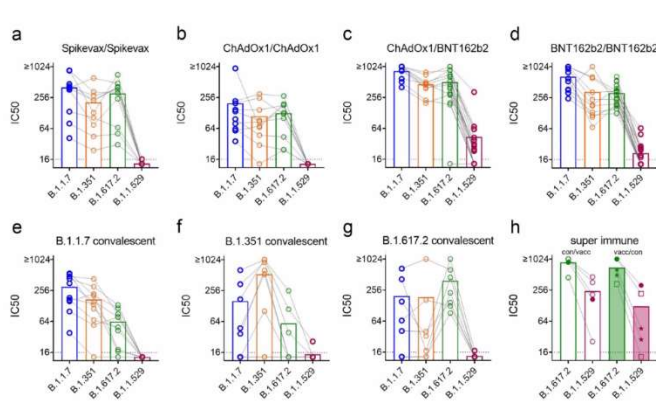
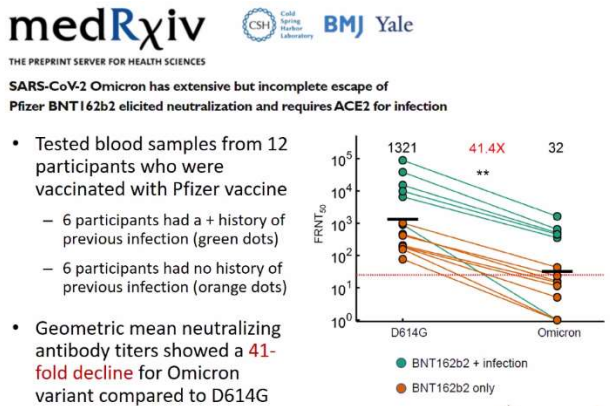
States & Territories with Omicron Detections



## Summary of early Omicron variant studies:

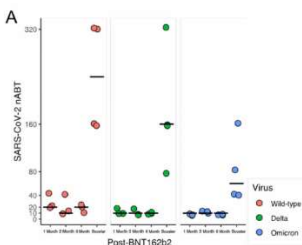
- Variant appears to be more infectious.
- Substantially decreased (10-40x less effective) antibody immunity from vaccination and/or previous infection.
- 2-dose mRNA vaccine is 30-40% effective in preventing COVID-19 from Omicron.
- Booster dose increases antibody immunity to 75% (still lower than vaccine effectiveness against other variants.)

Multiple studies – all consistent results.

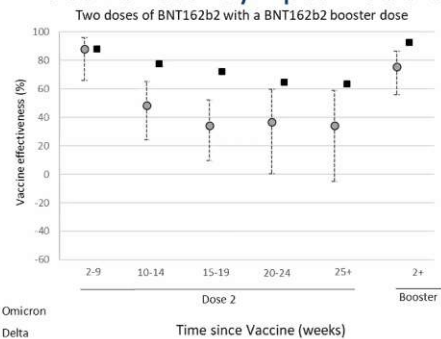
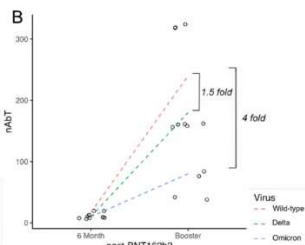


## Vaccine Effectiveness: Symptomatic COVID-19

**A. Neutralizing Ab titers against variants at varying time points after vaccination**



**B. Neutralizing Ab titers 6 months after two vaccine doses compared to 1 month after booster dose**



- 2 doses of Pfizer vaccine followed by a booster increased VE against Omicron variant to around 75%
- Based on low numbers of Omicron cases (uncertainty and imprecision in these estimates)

Shows effectiveness waning after 2; then booster “bump.”