

the vaccine  
is effective

$$p(\text{infected} \mid \text{vaccinated}) < p(\text{infected} \mid \text{not vaccinated})$$



**TABLE 2. COVID-19 vaccine effectiveness among health care personnel case-patients and controls, by number of COVID-19 vaccine doses received before SARS-CoV-2 test date — 33 U.S. sites, January–March 2021**

Interval from dose to test date	No. (%)		Vaccine effectiveness <sup>†</sup> % (95% CI)	
	Case-patients* (N = 623)	Controls* (N = 1,220)	Unadjusted	Adjusted <sup>§</sup>
<b>Dose 1</b>				
≥14 days	64 (10)	241 (20)	82.2 (75.1–87.3)	81.7 (74.3–86.9)
<b>Dose 2</b>				
≤2 days	5 (<1)	109 (9)		
3–6 days	16 (3)	85 (7)	93.4 (86.4–96.8)	93.5 (86.5–96.9)
≥7 days	19 (3)	184 (15)		

**Abbreviations:** CI = confidence interval; HCP = health care personnel; mOR = matched odds ratio; OR = odds ratio; PCR = polymerase chain reaction; VE = vaccine effectiveness.

\* Case-patients: HCP who received positive SARS-CoV-2 PCR or antigen-based test results and had one or more symptoms of COVID-19–like illness; controls: HCP who received negative SARS-CoV-2 PCR test results.

<sup>†</sup> VE (Pfizer-BioNTech and Moderna) was estimated using a conditional logistic regression model accounting for matching by site of enrollment and week of test date.

<sup>§</sup> OR used in conditional logistic regression model to calculate VE was adjusted for age, race, and presence of underlying conditions: VE = 100% × (1–mOR).