**From:** Kasirye. Olivia < >  
**Sent:** Monday, October 28, 2024 9:18 AM  
**To:** Frost. Sue < >  
**Cc:** Kennedy. Patrick < >; Serna. Phil < >; Desmond. Rich < >; Hume. Pat < >; Villanueva. David < >; Kothari. Chevon < >; Lutz. Timothy < >; Kasirye. Olivia < >  
**Subject:** FW: Clarify COVID vaccine benefit

Dear Supervisor Frost,

Thank you for your patience. This took us a bit longer to provide the response, because I requested assistance from the scientists at CDPH. Their response is forwarded below. A few points I would like to make in addition to their thorough response below are as follows:

1. I have full confidence that the vaccines are effective against the COVID virus because once we started vaccinating the general public in January 2021, we saw a marked reduction in cases, hospitalizations and deaths, especially for those in long term care facilities. The downward trend was halted when the delta variant appeared
2. After the initial period, the picture became more complicated because of several factors: we had a large percentage of people that were vaccinated (we reached 70% in Sacramento); a large number of people had gained immunity through infection; some of the individuals that had received vaccination initially saw waning protection; the new variants/sub-variants exhibited ‘vaccine escape’
3. The authors of the study you forwarded based it on the assumption that the variants/sub-variants were less virulent, not considering the complex picture outlined in #2. Since we still see severe disease in vulnerable individuals, such as those with reduced immune systems and chronic diseases, we can surmise that the virus can still cause severe illness and death.

I have attached some additional references to publications regarding COVID virulence and vaccine effectiveness as well.

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| [A logo for a health care company  Description automatically generated](http://www.scph.com/) | **Olivia Kasirye, MD, MS**  County Health Officer  (916) 875-5881 desk  (916) 854-9709 fax  [KasiryeO@SacCounty.gov](mailto:KasiryeO@SacCounty.gov) |

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| **EXTERNAL EMAIL:** If unknown sender, **do not** click links/attachments.  If you have concerns about this email, please report it via the Phish Alert button. |

**RESPONSES FROM CDPH:**

Summary

The preponderance of evidence supports that [COVID-19 vaccine is effective](https://www.cdc.gov/ncird/whats-new/covid-19-vaccine-effectiveness.html) against infection and especially against severe disease, hospitalization and death from COVID-19. [CDC recommendations for the use of 2024-2025 COVID-19 vaccines](https://www.cdc.gov/mmwr/volumes/73/wr/mm7337e2.htm) review that 2024-2025 vaccination provides additional protection against severe COVID-19-associated illness and death, especially as SARS-CoV-2 viruses continue to evolve and vaccination protection wanes over time.

The Cleveland clinic study regarding infection, and the pre-print (not yet undergone peer and editorial review) study regarding hospitalization both have methodological limitations that underestimate effectiveness of COVID-19 vaccines.

National and [California nursing home data](https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/COVID-19/SNFsCOVID_19.aspx) indicate that nursing home deaths due to COVID-19 have decreased since COVID-19 vaccination first became available.

Details

Numerous studies support [COVID-19 vaccine effectiveness](https://www.cdc.gov/ncird/whats-new/covid-19-vaccine-effectiveness.html) against infection and especially against severe disease, hospitalization and death. Many studies across different age groups, time periods, virus variants, and vaccine products show that COVID-19 vaccines offer significant protection. Although the amount and duration of protection from vaccination or infection can vary from person to person, CDC data have demonstrated that: [original COVID-19 vaccines can help protect against being put on a ventilator and/or death for up to 2 years](https://www.cdc.gov/mmwr/volumes/72/wr/mm7217a3.htm), [bivalent COVID-19 vaccines also provide sustained protection against critical illness and death,](https://www.cdc.gov/mmwr/volumes/72/wr/mm7221a3.htm)and [people who received the 2023-2024 COVID-19 vaccine were half as likely to have symptomatic infection](https://www.cdc.gov/mmwr/volumes/73/wr/mm7304a2.htm).

[CDC recommendations for the use of 2024-2025 COVID-19 vaccines](https://www.cdc.gov/mmwr/volumes/73/wr/mm7337e2.htm) discuss that 2024-2025 vaccination provides additional protection against severe COVID-19-associated illness and death, especially as SARS-CoV-2 viruses continue to evolve and vaccination protection wanes over time. Recent Advisory Committee on Immunization Practices presentations on [COVID-19 epidemiology](https://www.cdc.gov/acip/downloads/slides-2024-10-23-24/03-COVID-Taylor-508.pdf) and [COVID-19 vaccine effectiveness](https://www.cdc.gov/acip/downloads/slides-2024-10-23-24/04-COVID-Link-Gelles-508.pdf) further emphasize that adults 65 years and older and persons with weakened immune systems are at the highest risk for severe COVID-19 illness and would benefit from additional doses.

The studies referenced in the request have methodological limitations.

In the Cleveland clinic study, the rate of prior infection reported in the study time period (40.6% in 9/2022-3/2023) was much lower than [national estimates of infection-induced seroprevalence](https://covid.cdc.gov/covid-data-tracker/#nationwide-blood-donor-seroprevalence-2022) over the same time period (74.0% in Ohio and 70.2% in U.S. in 7/2022-9/2022). Underestimating infection would lead to misclassification of study groups and underestimating vaccine effectiveness. The authors state that prior infections would be missed in similar proportions among unvaccinated and vaccinated groups, which is incorrect because unvaccinated persons are more likely to become infected compared to vaccinated persons. In the figure analyzing COVID-19 infection and number of vaccine doses, persons with fewer vaccine doses are more likely to have a missed infection which would provide protection against reinfection.

In the preliminary manuscript (preprint) on hospitalization that has not yet been formally published after rigorous standard review, the authors use tables from a published paper in JAMA. They incorrectly assume that because influenza vaccination and COVID-19 vaccination percentages were similar in both influenza-hospitalized and COVID-19-hospitalized groups, then each group can be used as a control against the other to calculate vaccine effectiveness.

The fact that influenza and COVID-19 vaccination percentages were similar in both hospitalized groups could reflect higher vaccination acceptance given that most patients were older (70-80% were above 65 years old).

To study influenza vaccine effectiveness against hospitalization, the correct comparison would be how vaccination status differs between patients hospitalized with influenza and those hospitalized without influenza*.* By using the COVID-19-hospitalized group as the “without influenza” control group, the authors neglect the entire group of VA patients hospitalized for something other than COVID-19 or influenza. This selection bias would lead to incorrect calculations of vaccine effectiveness for both vaccines.

One [critique of the preprint](https://www.covid-datascience.com/post/how-can-vaccines-be-effective-vs-covid-hospitalization-if-most-hospitalized-are-vaccinated-and-vacc) also points out the authors use a simulation model that incorrectly assumes that getting an influenza vaccine is unrelated to getting a COVID-19 vaccine and ignores age as a confounding factor in hospitalization rate.

Regarding the plot of nursing home data from Medicare provided by a supporter: Long-term care residents and older adults remain one of the most vulnerable groups to severe COVID-19 illness, hospitalization and death. National and [California nursing home data](https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/COVID-19/SNFsCOVID_19.aspx) demonstrate that nursing home deaths due to COVID-19 have decreased after vaccination.

* + - * In the national nursing home data sharedd in the request email, the number of deaths (orange line) becomes proportionally much smaller compared to number of cases (blue line), which indicates that case fatality has gone down.
      * [California skilled nursing facility COVID-19 data](https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/COVID-19/SNFsCOVID_19.aspx) show rates of nursing home resident COVID-19 infection (light orange line) and death (dark orange line). Cases in nursing home residents are often much higher than general CA population COVID-19 cases (gray shaded area). The peak of nursing home resident cases and deaths occurred in winter 2020-2021, before vaccines were widely available (vaccinations in nursing homes began late-December 2020). Deaths were substantially lower in winter 2021-2022, when resident vaccination coverage was high.

A graph showing a line

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* + - * SNF COVID-19 mortality rate and COVID-19 fatality ratio have decreased dramatically from the peak in 2020-2021.

A graph of orange and grey lines

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A graph of a number of patients

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**From:** Frost. Sue <>  
**Sent:** Monday, October 21, 2024 1:04 PM  
**To:** Kasirye. Olivia < >; Lutz. Timothy < >  
**Cc:** <redacted>  
**Subject:** Clarify COVID vaccine benefit

Dear Dr. Kasirye and Tim,

I am writing to you to ask you to clarify for me what the benefit of the COVID vaccine is.

I am copying the BOS as an FYI.

We were told that it reduces infection, hospitalization, and death.

I have recently been made aware of high-quality data that contradicts those assertions.

If this data is wrong, can you inform me of why it is incorrect and also the best study that you are relying on that is more dispositive?

1. Regarding infection, the Cleveland clinic study ([https://academic.oup.com/ofid/article/10/6/ofad209/7131292](https://urldefense.com/v3/__https:/academic.oup.com/ofid/article/10/6/ofad209/7131292__;!!AvL6XA!1NrFhA_b470hvACN2Y4TxcUMS8YFSy1Cwg2nQXtW7X_Qyp9UXgTM4gwizoulMPqo74aKoPUkE9nr3v8eDRE4GTzDXM0$)) showed that more vaccinations was associated with more COVID infections and the differences were statistically significant (Figure 2). How is that possible if the vaccines do the opposite?
2. Regarding hospitalization, why would the vaccination breakdown of VA patients hospitalized for flu vs. COVID be so similar? Doesn’t that suggest to you that neither vaccine is effective? If not, how do you explain the lack of a difference? See [https://www.preprints.org/manuscript/202408.0338/v1](https://urldefense.com/v3/__https:/www.preprints.org/manuscript/202408.0338/v1__;!!AvL6XA!1NrFhA_b470hvACN2Y4TxcUMS8YFSy1Cwg2nQXtW7X_Qyp9UXgTM4gwizoulMPqo74aKoPUkE9nr3v8eDRE4c12Su9M$)
3. Regarding a mortality benefit, one of my supporters downloaded the US nursing home data from Medicare and plotted it. The case fatality rate didn’t change after the COVID vaccines rolled out to nursing homes. So it didn’t reduce your risk of dying if you got COVID.

So the bottom line is that vaccination is increasing risk of infection, not reducing risk of hospitalization, and did not reduce the risk of death if you were infected.

If this data is wrong, why is it wrong and how can you be confident that it is wrong?



A graph of a person's body

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Thank you.

Sincerely,

Sue Frost

Sacramento County Supervisor - D4