

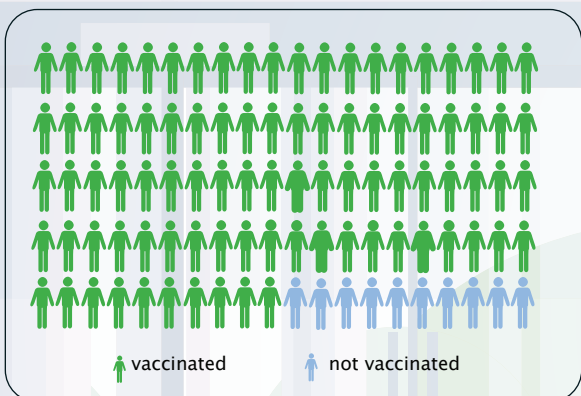


# VACCINE EFFECTIVENESS: Beyond the case numbers



In order to understand the effectiveness of a vaccine, we have to look beyond how many cases are vaccinated or unvaccinated. We need to look at the risk in both groups as a whole.

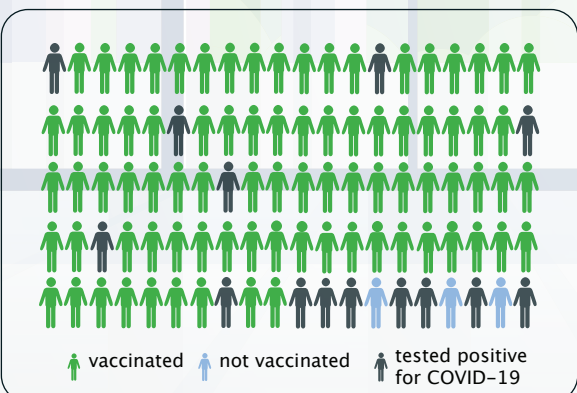
Let's see what this looks like in a group setting using a hypothetical scenario.



In this group of 100 people:

↑ **90/100** were fully vaccinated  
↑ **10/100** were not vaccinated

Everyone in this group is exposed to someone who has tested positive for COVID-19. As they are all considered high risk close contacts, everyone needs to be tested.

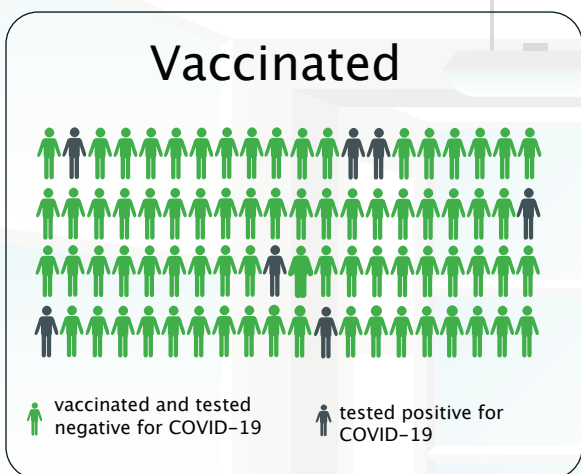


When results come back, **14/100** people tested positive for COVID-19.



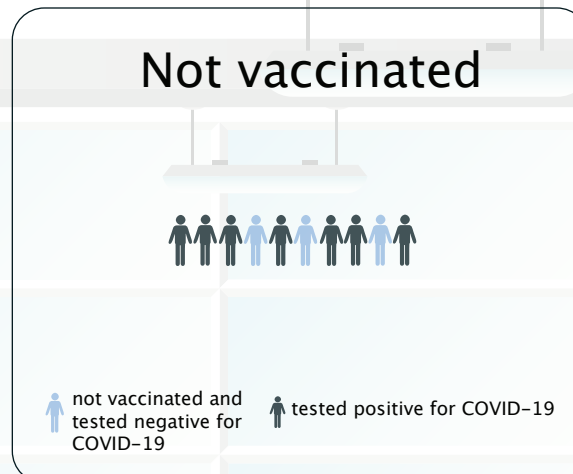
When cases are reported by vaccination status, it might look like the vaccines are not working as well as expected. This is not the case, because we need to look at how many people are vaccinated overall.

## Let's look at the bigger picture.



Out of the 90 who were vaccinated 7 people got COVID-19. This means only 7.8% of the vaccinated guests were infected.

$$7/90 = 7.8\%$$



Out of the 10 who were unvaccinated 7 people got COVID-19. This means that 70% of the unvaccinated guests were infected. Their risk of infection is 9 times higher!

$$7/10 = 70\%$$

In this hypothetical scenario, the vaccine effectiveness is about 90%. That means that the vaccinated cases see about 90% less COVID cases per exposure to the virus.