

“The point of modern propaganda isn't only to misinform or push an agenda. It is to exhaust your critical thinking to annihilate truth.”

Garry Kasparov, Chess grandmaster

# Case Study

To vaccinate or not to vaccinate?



**Paul Mitchell (@PaulMitchell on GETTR)**  
 @PaulMitchell\_AB



Alberta Covid Bombshell: 18.25% of people hospitalized with Covid are triple vaccinated! 💣💥

82.6% of current cases are jabbed (1-3 times).

So, how are those vaccine passports working out for you @jkenney?

Table 3. COVID-19 case outcomes in Alberta by vaccine status. Counts are provided for new, active cases, and those currently identified as being hospitalized.

Outcome	Vaccine status	Count (n)	Percent (%)
New cases	Three doses	830	13.12
New cases	Two doses	4,015	63.47
New cases	One dose	301	4.76
New cases	Unvaccinated	1,180	18.65
Active cases	Three doses	7,370	11.49
Active cases	Two doses	43,135	67.26
Active cases	One dose	2,466	3.85
Active cases	Unvaccinated	11,158	17.40
Currently hospitalized	Three doses	150	18.25
Currently hospitalized	Two doses	334	40.63
Currently hospitalized	One dose	33	4.01
Currently hospitalized	Unvaccinated	305	37.10

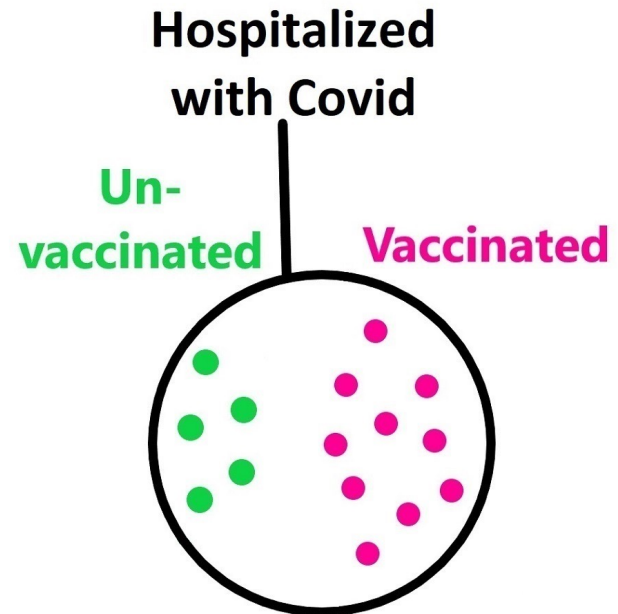
Note:

3:25 AM · Jan 17, 2022 · Twitter for iPad

# What is he saying?

# What are the likely explanations?

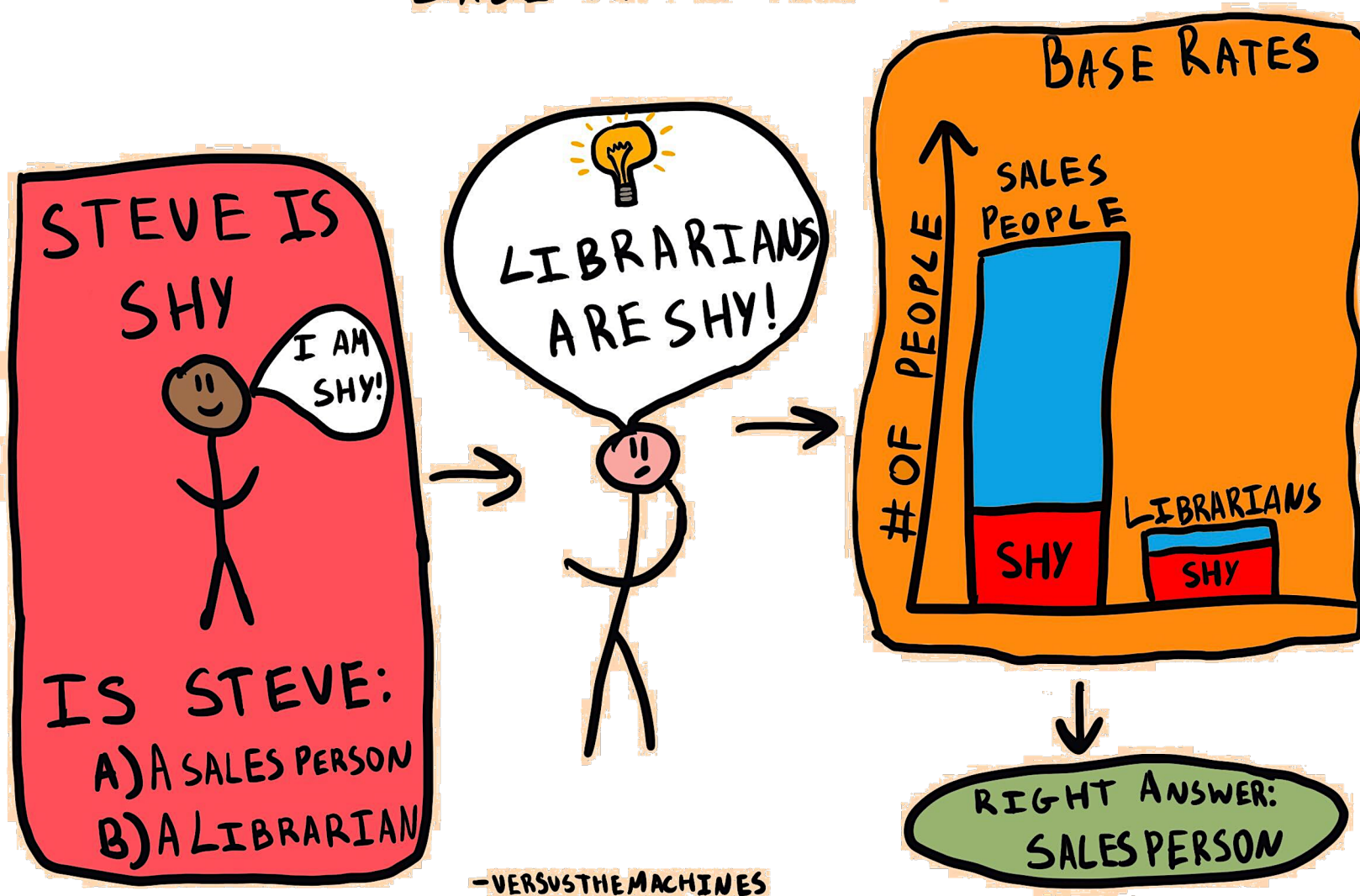
<https://www.alberta.ca/stats/covid-19-alberta-statistics.htm#vaccine-outcomes>



More vaccinated than  
unvaccinated people  
in the hospital

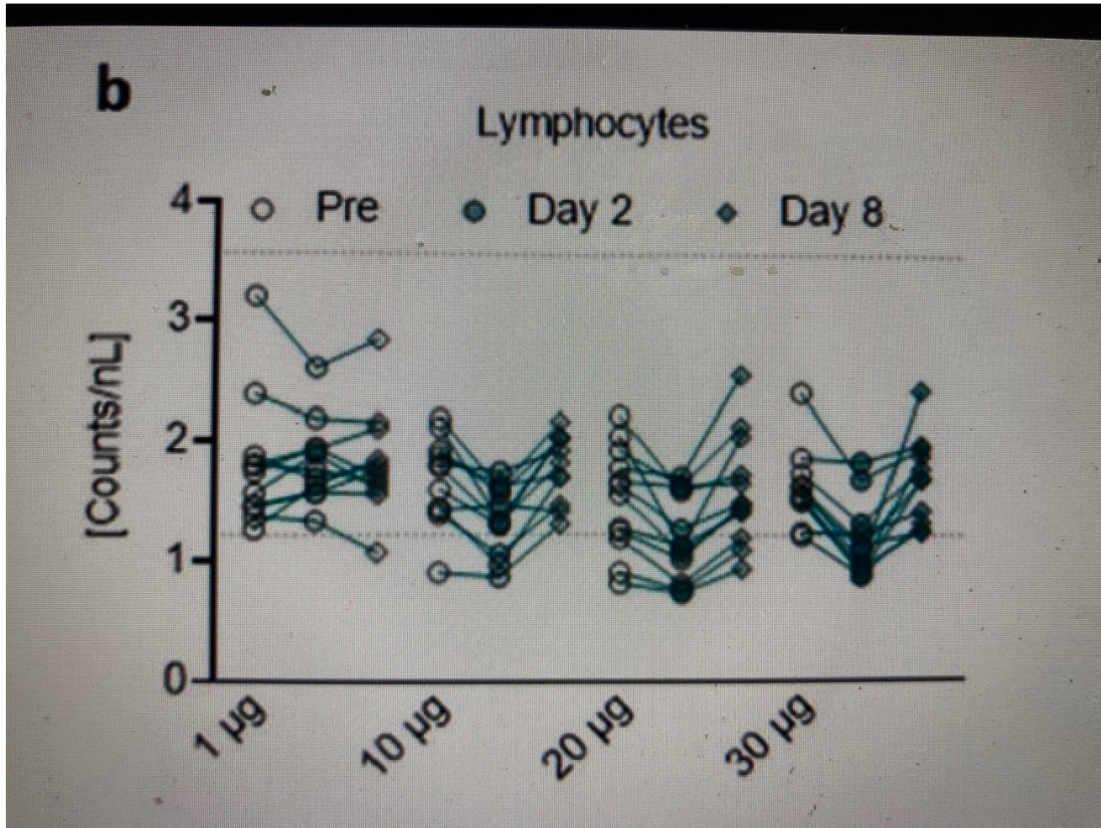
**The Power of a Good Visualization**

# BASE RATE FALLACY



That excuse cannot be used for Alberta. Canada's vaccination campaign began relatively late, and nearly all of it took place after the winter 2020-2021 Covid spike. Through mid-February 2021, barely 2 percent of Alberta residents had received their first dose.

The most likely explanation for the spike was and remains that the first dose of the vaccines transiently suppresses the immune system, as Pfizer's own clinical trial data reveal.



# What is he saying?

## What are the likely explanations?

<https://alexberenson.substack.com/p/covid-infections-and-deaths-soar>

**BNT162b2  
cells in hu**

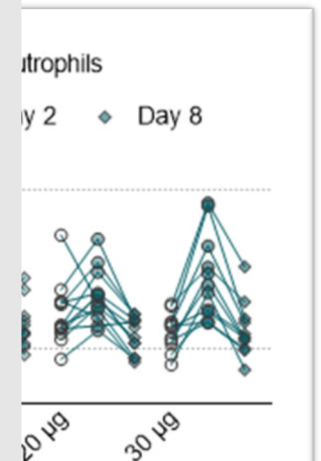
Ugur Sahin  
Mathias Voigt  
Daniel Maurer  
Ann-Kathrin Ebner  
Marie-Cristine  
Martin Bexon  
Jonas Reinhold  
David Cooper  
doi: <https://doi.org/10.1101/2020.12.01.20223845>

**This article  
It reports  
used to gu**




**Abstract****Abstract**

BNT162b2  
(mRNA)  
protein (S)  
coronavirus  
and antibody response data from an  
vaccine trial<sup>1</sup>. We present here antibo

“No clinically significant changes in routine clinical laboratory values occurred after BNT162b2 vaccination. In line with previous reports for RNA-based vaccines [1,9,10,16] a mild drop of blood lymphocyte counts (without concomitant neutropenia) and an increase in C-reactive protein (CRP) were observed, both transient, dose-dependent and within or close to laboratory normal levels (Extended Data Fig. 3). Both effects are considered pharmacodynamic markers for the mode-of-action of RNA vaccines: blood lymphocyte counts transiently decrease as the lymphocytes redistribute into lymphoid tissues in response to innate immune stimulation[17], and CRP is a downstream effect of innate immune modulation [18–21]”

**Extended Data Figure 3 | Pharmacodynamic markers.**



Vinay Prasad, MD MPH     
@VPrasadMDMPH



Pre Vax 2020, FDA said 📌 they would not accept vaccine efficacy less than 50% (minimum bar)

Ontario data now suggesting a 3rd dose (booster) has Vax effectiveness of 37% for Omicron 📌

Yet FDA & CDC advising booster FOR omicron?

Few thoughts 📖  
[medrxiv.org/content/10.110...](https://medrxiv.org/content/10.110...)

Vaccines

### FDA will require 50% efficacy for COVID-19 vaccines. How high is that bar?

by Eric Sagonowsky | Jun 30, 2020 9:10am

#### Results

We included 3,442 Omicron-positive cases, 9,201 Delta-positive cases, and 471,545 test-negative controls. After 2 doses of COVID-19 vaccine, vaccine effectiveness against Delta infection declined steadily over time but recovered to 93% (95%CI, 92-94%)  $\geq 7$  days after receiving an mRNA vaccine for the third dose. In contrast, receipt of 2 doses of COVID-19 vaccines was not protective against Omicron. Vaccine effectiveness against Omicron was 37% (95%CI, 19-50%)  $\geq 7$  days after receiving an mRNA vaccine for the third dose.

# What is he saying?

# What are the likely explanations?

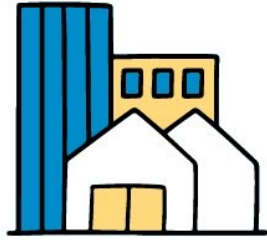
Dr. Vinay Prasad is an associate professor of epidemiology at the University of California-San Francisco





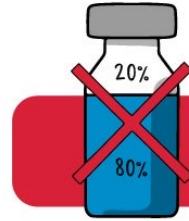
### Vaccine efficacy

refers to how the vaccine performs in ideal conditions - controlled clinical trials.



### Vaccine effectiveness

refers to how the vaccine performs in the wider populations.



If a vaccine has an efficacy of 80 percent:

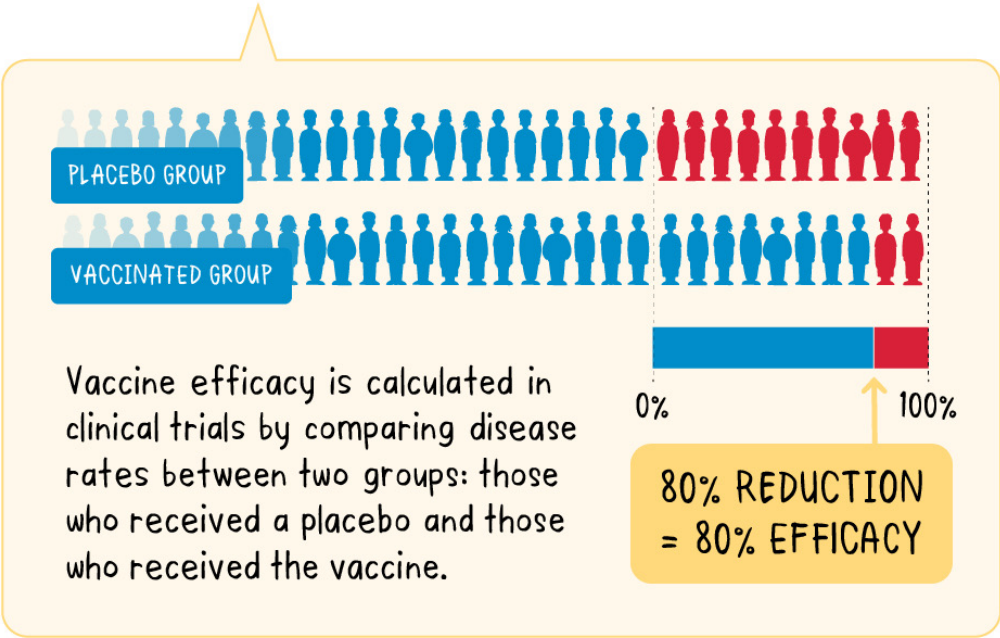
It does not mean that the vaccine will only work 80% of the time.

It does mean that in a vaccinated population, 80% fewer people will contract the disease when they come in contact with the virus.



## What do you expect of vaccine effectiveness vs. efficacy?

<https://www.who.int/news-room/feature-stories/detail/vaccine-efficacy-effectiveness-and-protection>



# Side-note: take the flu-shot?


‘In the “relatively uncommon” case where the vaccine matched the annual flu variety, the rate of influenza was 4% for the unvaccinated and 1% for the vaccinated, so 3 less people out of every 100 would become ill. In the more common scenario of vaccine/flu mis-match the corresponding numbers were 2% sick among unvaccinated [and] 1% of the vaccinated, thus 1 less per 100.’

Calling Bullshit: The Art of Skepticism in Data-Driven World

What are the vaccine effectiveness rates here?

## Effectiveness of COVID-19 vaccines against Omicron or Delta infection

[Comments \(13\)](#)

Sarah A. Buchan, Hannah Chung, Kevin A. Brown, Peter C. Austin, Deshayne B. Fell, Jonathan B. Gubbay,  Sharifa Nasreen, Kevin L. Schwartz, Maria E. Sundaram, Mina Tadrous, Kumanan Wilson, Sarah E. Wilson, Jeffrey C. Kwong

doi: <https://doi.org/10.1101/2021.12.30.21268565>

**This article is a preprint and has not been peer-reviewed [what does this mean?]. It reports new medical research that has yet to be evaluated and so should not be used to guide clinical practice.**

Abstract

Full Text

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Metrics

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### ARTICLE INFORMATION

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What is the paper saying?

What are the likely explanations?

Health · SECOND OPINION

## Canadian COVID-19 vaccine study seized on by anti-vaxxers – highlighting dangers of early research in pandemic



Study found boosters only 37% effective against Omicron, but data being revised



Adam Miller · CBC News · Posted: Jan 15, 2022 4:00 AM ET | Last Updated: January 15



Paradoxical findings were later found to have been influenced by behavioural and methodological issues, such as the timing of the observational study, the way in which vaccine passports altered individual risk and changes in access to COVID-19 testing.

"We're in the process of adding two more weeks of data and it looks like there's no more negative VE (vaccine effectiveness)."

"And then higher VE with the boost. So I think that's good news and we're just in the process of running those analyses and we hope to have an updated version, a version two, by sometime next week."

“Extraordinary claims require extraordinary evidence”

Carl Sagan, Astronomer, Science Communicator, Creator of Cosmos

# Battling Infectious Diseases in the 20th Century: The Impact of Vaccines

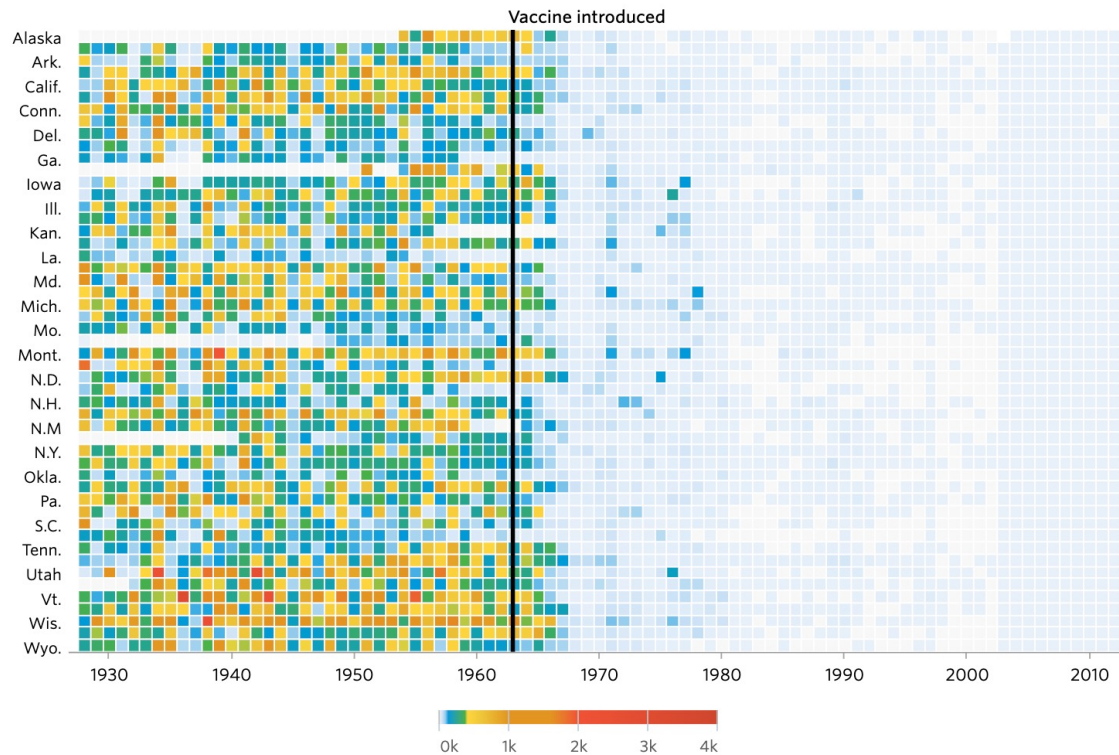
By [Tynan DeBold](#) and [Dov Friedman](#)

Published Feb. 11, 2015 at 3:45 p.m. ET

The number of infected people, measured over 70-some years and across all 50 states and the District of Columbia, generally declined after vaccines were introduced.

The heat maps below show number of cases per 100,000 people.

## Measles



Note: CDC data from 2003-2012 comes from its Summary of Notifiable Diseases, which publishes yearly rather than weekly and counts confirmed cases as opposed to provisional ones.

# Do vaccines work? A visual narrative

<http://graphics.wsj.com/infectious-diseases-and-vaccines/>

Hot Take

“This headset will give you  
superpowers”



## Arab Health 2022: Headset could help reverse diabetes and obesity

► Cost-effective device sends electric pulses to the brain stem to regulate blood sugar and appetite



Jason McKeown, chief executive of Neurovalens, demonstrates the Vestal DM device at Arab Health in Dubai. Antonie Robertson / The National



We have seen a three times more likely chance of improving diabetes by wearing the device, than without it.

Dr Jason McKeown, Neurovalens

<https://www.thenationalnews.com/uae/2022/01/25/arab-health-2022-headset-could-help-reverse-diabetes-and-obesity/>





**Ask an expert: Prof. Bas Rokers, NYUAD**

