

COVID-19 - The Update

Jan 5, 2021

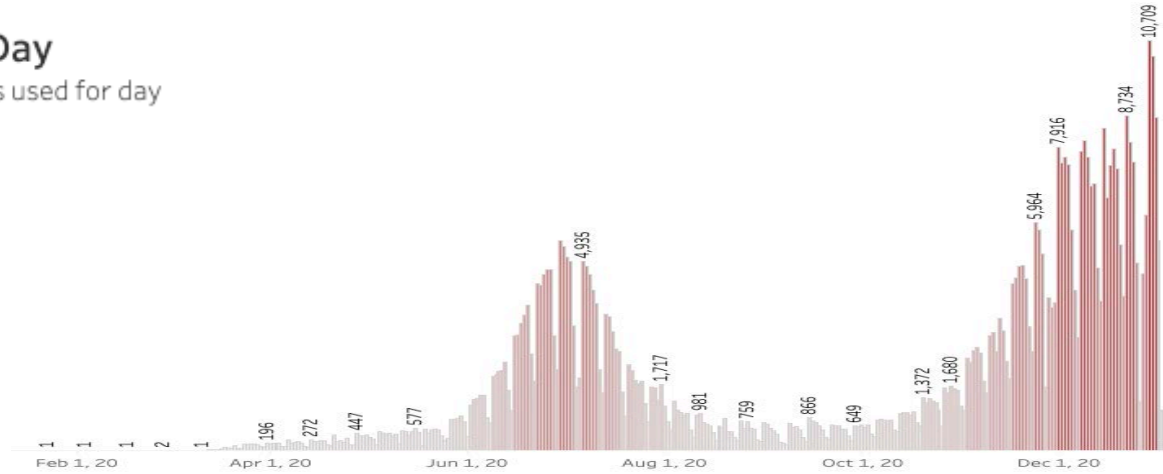
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Translational Genomics Research Institute

The State of COVID (1/4/2021)

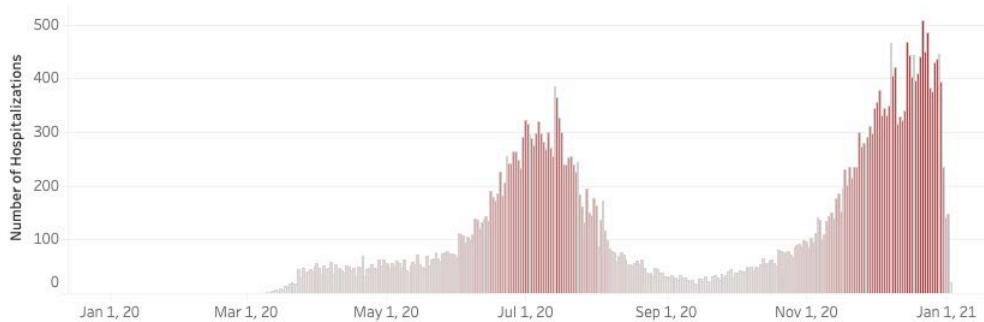


COVID-19 Cases by Day

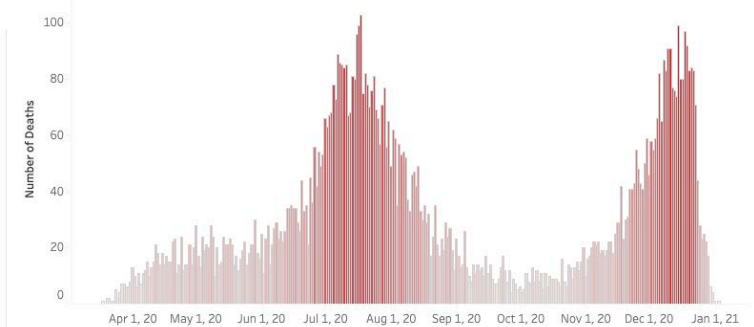
Date of specimen collection is used for day



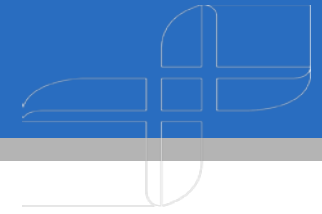
Number of COVID-19 Cases that are Hospitalized by Date of Hospitalization



COVID-19 Deaths by Date of Death



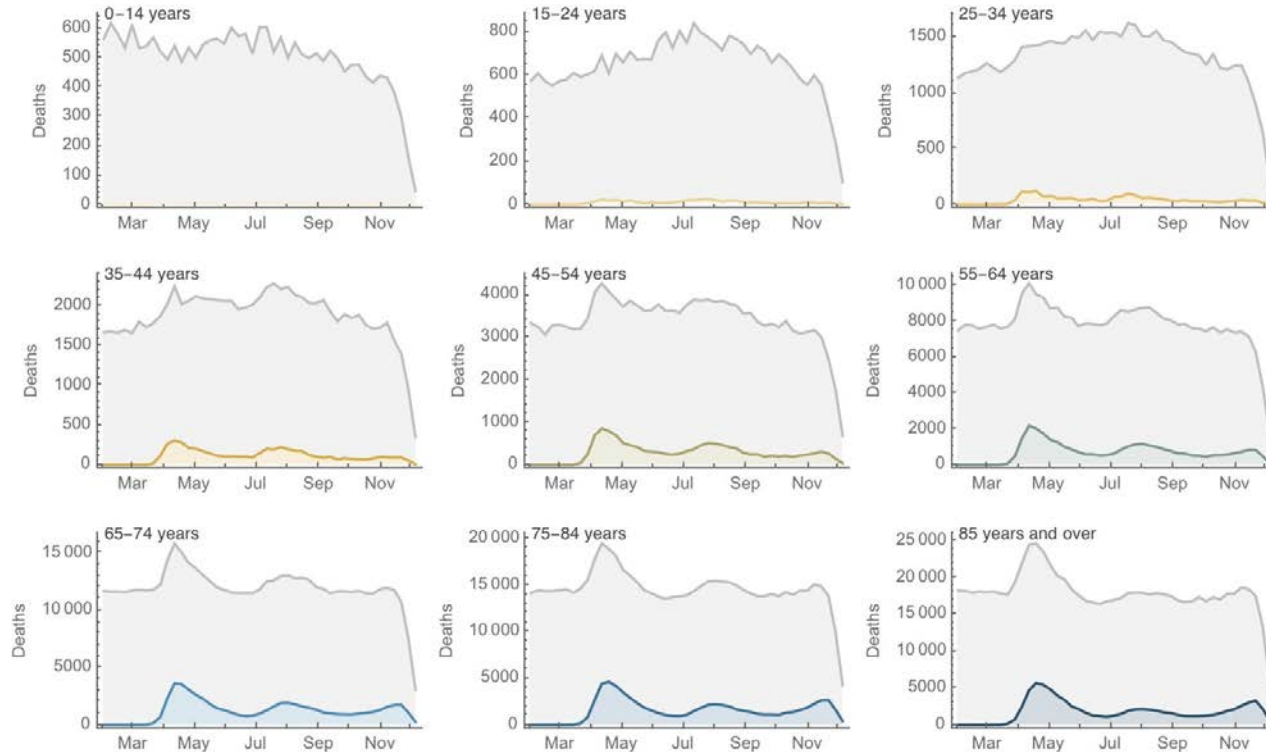
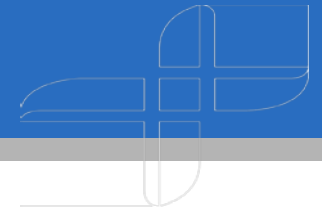
COVID Fatalities - AZ (1/4/2021)



Age Group	# of Fatalities	Case Fatality Rate	% of Total Deaths
<20	15	0.017%	0.17%
20-44	452	0.18%	4.99%
<45	467	0.14%	5.15%
45-54	582	0.70%	6.42%
55-64	1339	2.00%	14.77%
>65	6673	9.12%	73.62%
TOTAL	9064	1.70%	100%

The Kids are Alright – The Grandparents are Not!

COVID and All Cause Mortality



COVID Impact on Native American: Deaths

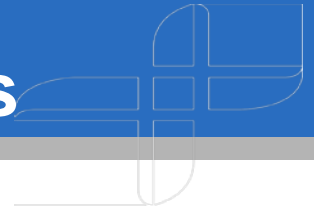
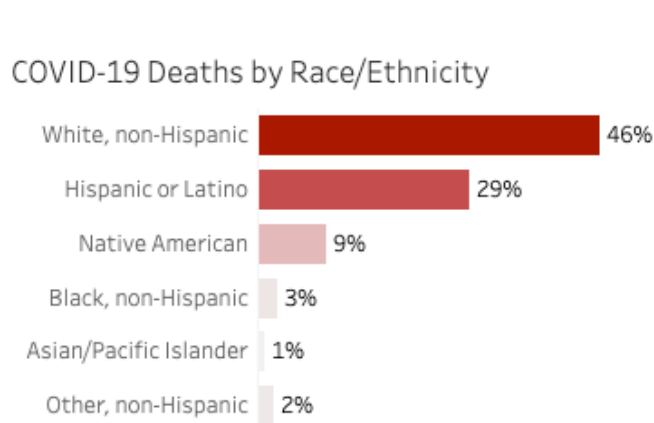
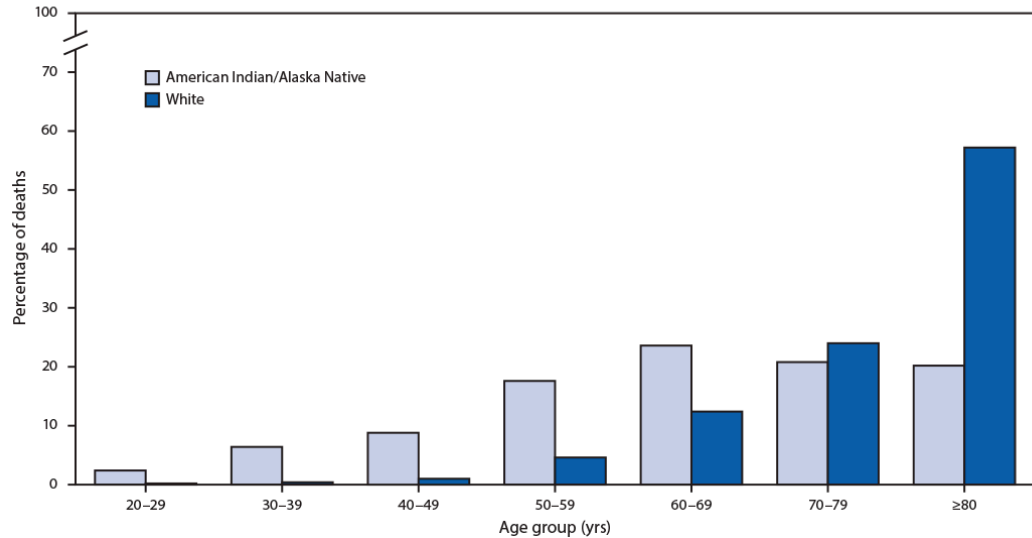


FIGURE. Percentage distribution of COVID-19–associated deaths among American Indian/Alaska Native* and non-Hispanic White persons aged ≥ 20 years, by age group[†] — 14 states,[§] January 1–June 30, 2020

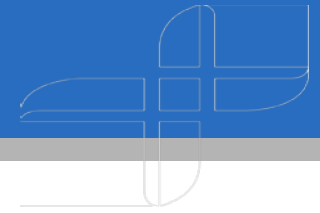


Source: ADHS



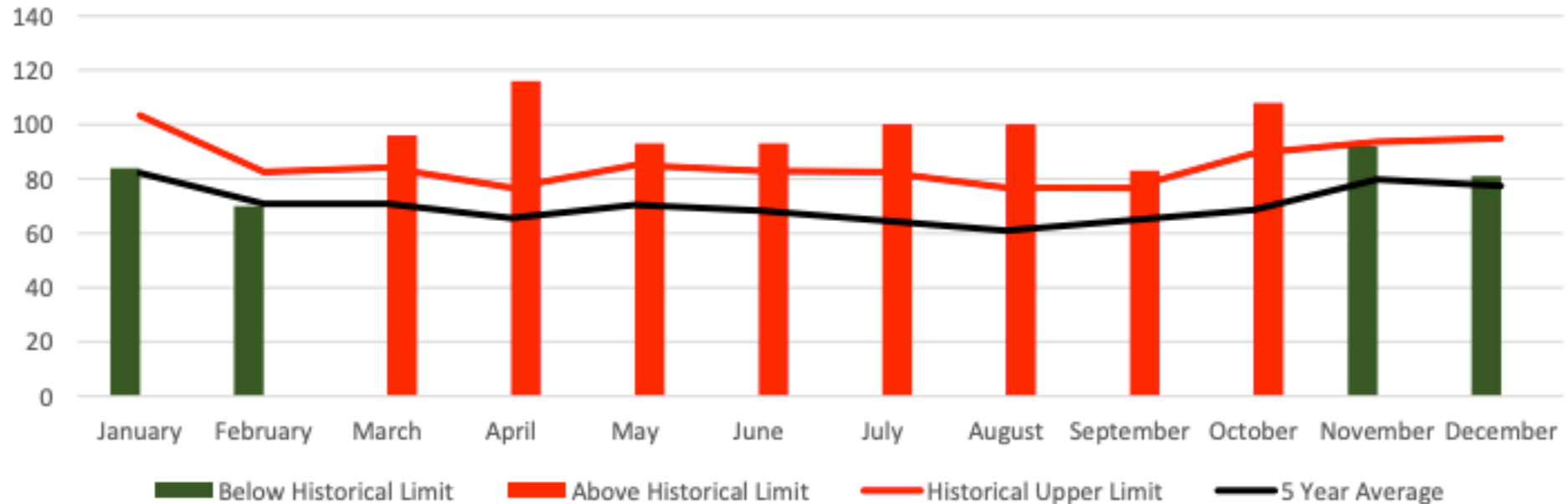
Source: CDC

Deaths in the Time of COVID

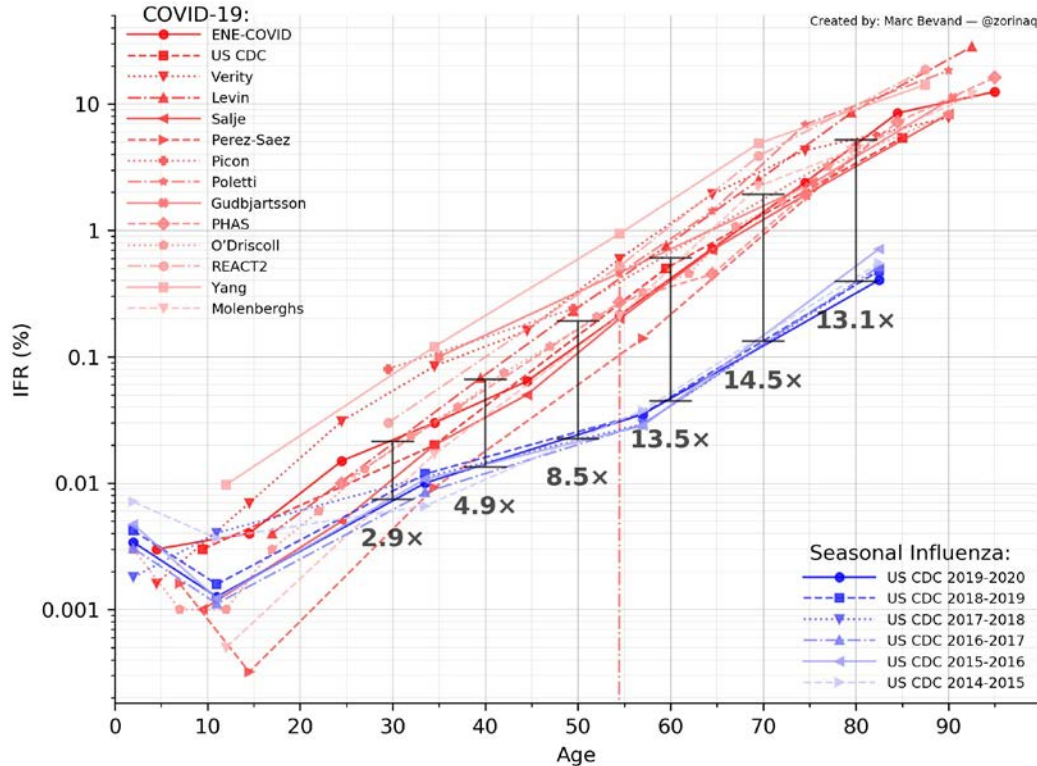
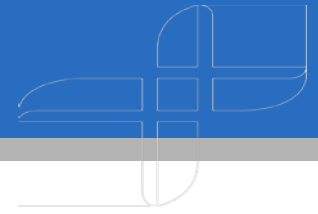


Coconino County

2020 All Deaths Aberration



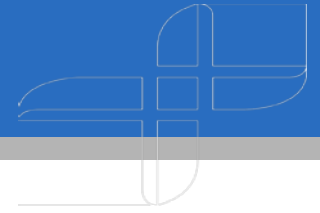
COVID vs FLU



Source: <https://github.com/mbevand/covid19-age-stratified-ifr>

Note: the vertical lines on one COVID-19 IFR curve (Poletti) are caused by the IFR being estimated to be zero for age groups 0-19 and 20-49.

My Observations



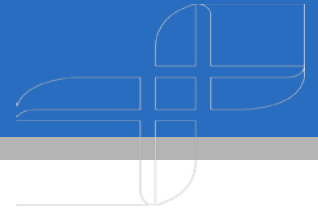
- COVID-19 is evolving and spreading faster than our ability to prevent it, but we still know who we have to protect
 - COVID-19 originally seems to cause serious disease like SARS and spread like the Flu
 - therefore shutdowns, and travel bans seemed appropriate
 - “COVID-20”, first seen in Italy in Feb 2020 then quickly throughout Europe and Americas, spread more like the common cold, allowing cases to grow exponentially
 - “COVID-21”, first seen in UK in Dec 2020, appears to be even more transmissible, and may become the new dominant global strain
- The only successful strategy for human coronaviruses has been to become more transmissible and less pathogenic – this may be happening
- The unseen mental health pandemic has been exacerbated by lockdown responses
- Vaccines will be our only way out of this dark tunnel – effect will be felt soon

My Recommended Strategy – Prevent Deaths, Limit Harm



- Public Health Emergency Response Maxim:
Use the least restrictive means necessary to achieve maximal positive effect
- Use both Best of Science and Intentional Humanity
 - Use science neither as a punchline nor as a weapon, but rather as a tool to illuminate the best way to serve humanity
- Only a balanced response strategy can work on a population-level
 - Focused Actions: Targeted tactics to stop spread to most vulnerable
 - General Actions: Broad-based tactics to slow spread in general public (not to stop)
- “The ends don’t justify the means” and “the means don’t justify the ends”

A Role for Everyone



If you are young and healthy,

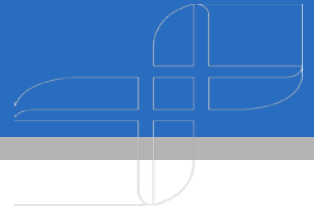
... you should act like you are a possible carrier and do things to limit spread to others (mask, distance, get vaccine)

If you are elderly or high risk,

... you should act like, everyone else is a carrier and protect yourself (shelter in place, very small social bubble, get vaccine)

As we are continuing to work hard to protect each other, let us treat each other like we are worth protecting!

The Current Big Questions



- Should schools be open?
- What about Surfaces and Fomite Transmission?
- What's up with masks?
- Do we need another lock down?
- What can we forecast for the next six months?
- Will the virus evolve enough to require new vaccines?

