



Clinical & Translational Science Institute  
*of Southeast Wisconsin*



# Fight COVID Milwaukee: Randomized COVID-19 testing in vulnerable communities and risk tool creation

NCATS RADxUP \$5M supplement  
September 2020 – May 2023

mPIs: Reza Shaker and John Meurer (MCW CTSI)  
Bernie Black (Northwestern)



## Aim 1: Recruitment and enrollment in study of COVID antibody tests, surveys, EHR, and Medicaid claims

- Recruitment letters/emails to 220,000 adult patients at 20 primary care health centers
- Community engagement and recruitment through local churches and Community Advisory Board
- Radio and news outreach to 250,000 Medicaid enrollees in Milwaukee
- 4,150 enrollees (low for desired population estimates)
  - 41% BIPOC
  - 27% Medicaid, 42% Medicare
  - Ages 18-89
  - 2/3 women
- Presenting accelerating community/academic partnerships for RADxUP equity evidence academy September 29



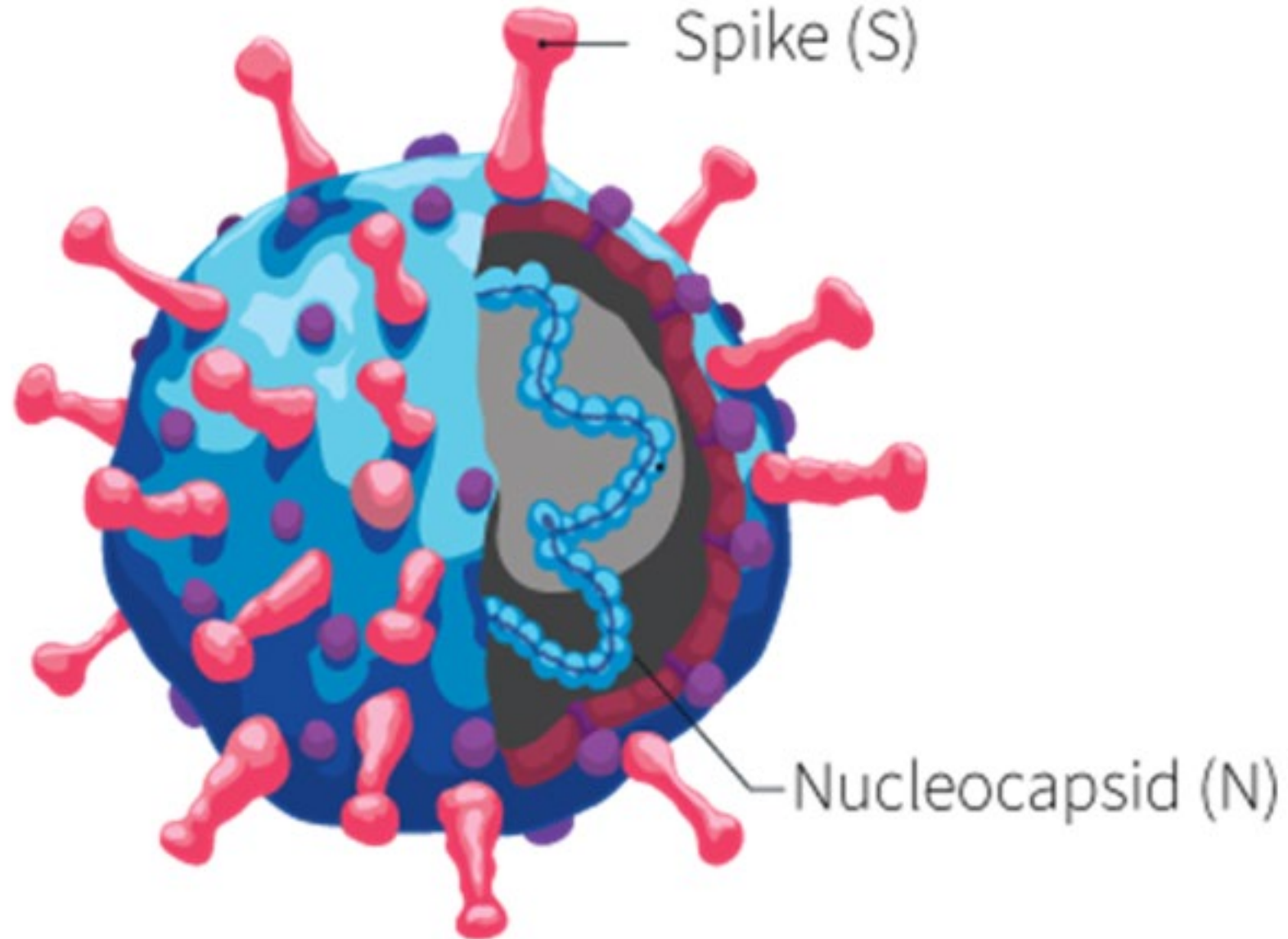
## Selected results from surveys

- 24% had a positive COVID PCR test
  - MKE (underestimated) PCR incidence 35% H, 25% B, 20% W
  - We proposed antibody tests for better prevalence estimate
- 11% have long COVID (e.g., fatigue, brain fog, anxiety, depression, insomnia, dyspnea)
- 47% had family member with COVID
- 7% had family member die of COVID
- 90% vaccinated at least once
  - MKE rate 80% > 55 years, 60% H & W, 45% B
  - Oversampled vaccinated and so Ab tests not good population estimate of unvaccinated
- 8% reported being immunocompromised (but many had COVID antibodies)



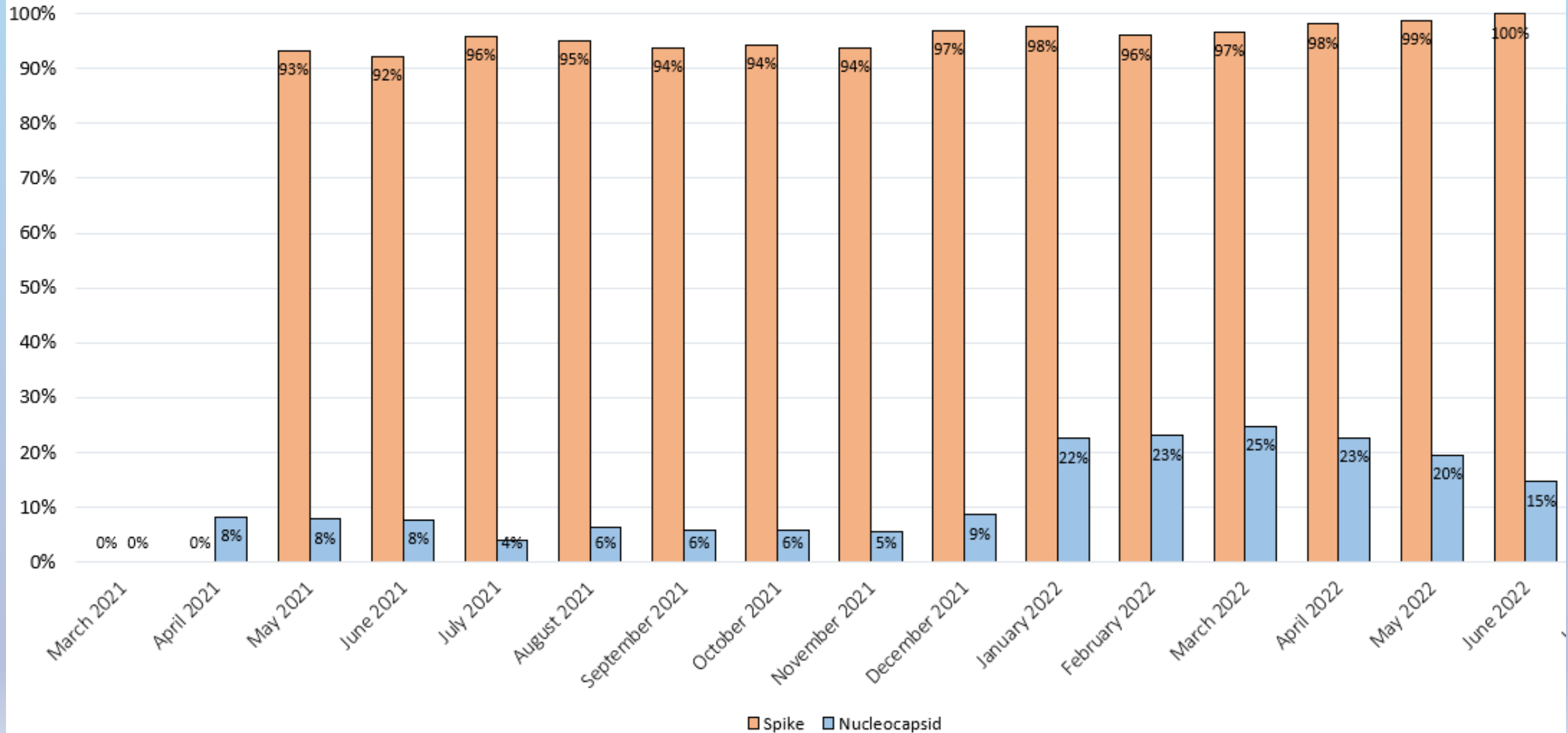


Labcorp





### SARS-CoV-2 IgG Ab Quantitative Spike & Antibody, Nucleocapsid - Percent Positive





## Aim 2: Individual COVID mortality risk estimator

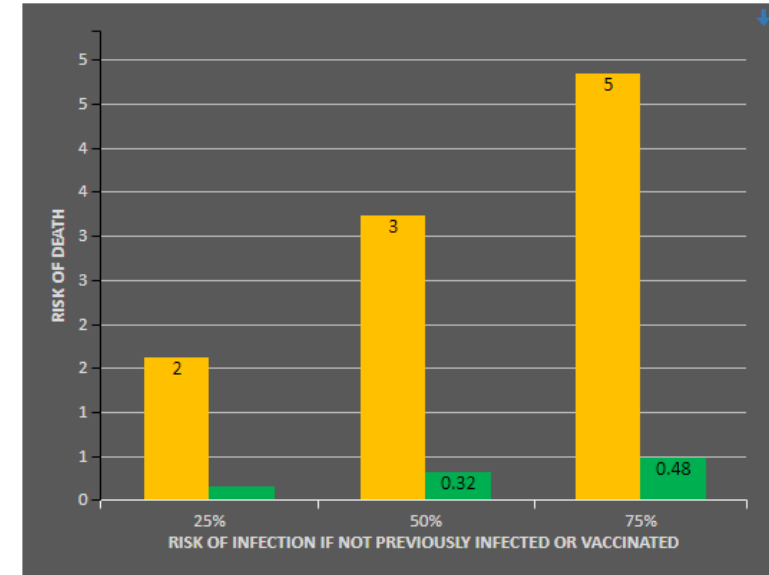
- 5% sample of Medicare national data, and death data from WI, IN, and Cook County IL
- Focus groups of 79 diverse community members recommended more charts, graphs, and video guidance of the web-based tool
- 41,000 uses of the Fight COVID MKE risk tool to date
- Adding death and vaccine data from January – June 2022 soon, then local press release and hopefully *USA Today* story

<https://fightcovidmilwaukee.org/individual-risk-estimator>

BASIC DATA (please fill in)	
Age (Years)	65
Sex	Male
Race/Ethnicity	Black
ZIP Code where you live	53206

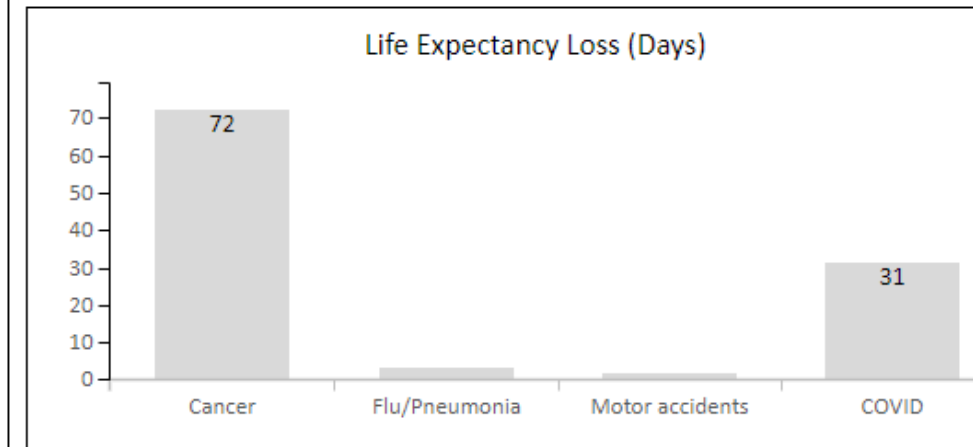
HEALTH DATA (please fill in)	
Height (feet and inches)	5 9
Weight (pounds)	200
Has a physician ever told you that you have:	
Diabetes	Yes
High Blood Pressure	Yes
Coronary Artery Disease	No
COPD or Other Lung Disease	No
Kidney Disease	No
Cancer	No
Heart Failure	No
Stroke	No
Dementia	No

RISK OF DEATH FROM COVID FOR PEOPLE LIKE YOU (OUT OF 1,000)



■ Not previously infected or vaccinated  
■ Maximally protected by vaccination and/or booster and/or previous infection

COMPARING COVID TO OTHER COMMON RISKS



Life expectancy loss for COVID is over Mar 1, 2020 - Dec 31, 2021

Life expectancy loss for other causes is risk over one year

### AIM 3: Big Data Analyses

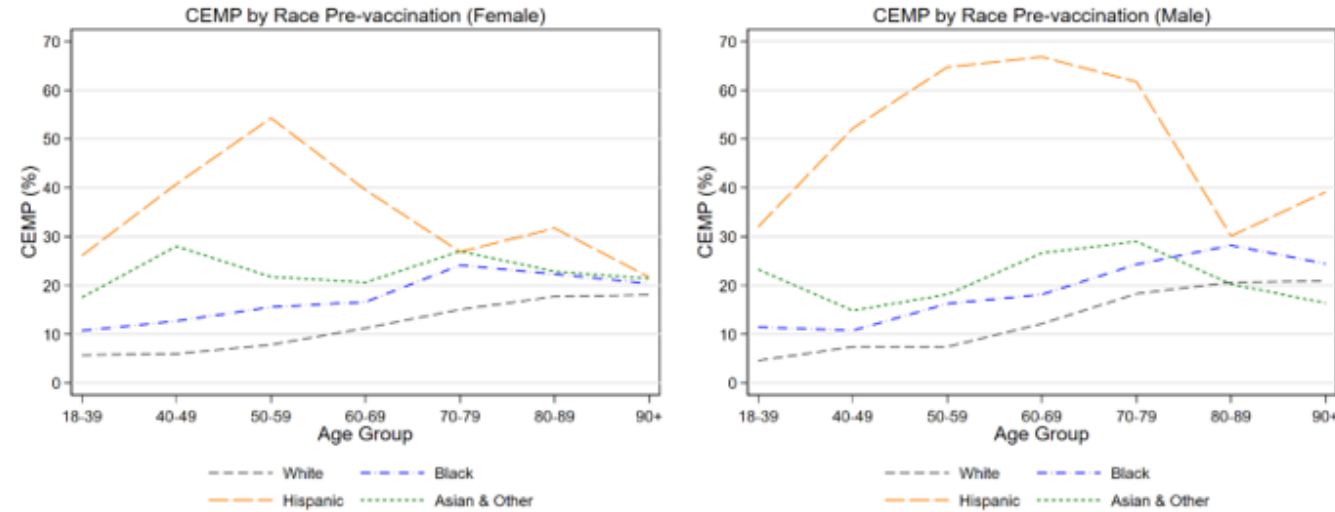
- COVID Excess Mortality % =  $\frac{\text{COVID deaths}}{\text{Non-COVID deaths from natural causes}}$

Non-COVID deaths from natural causes

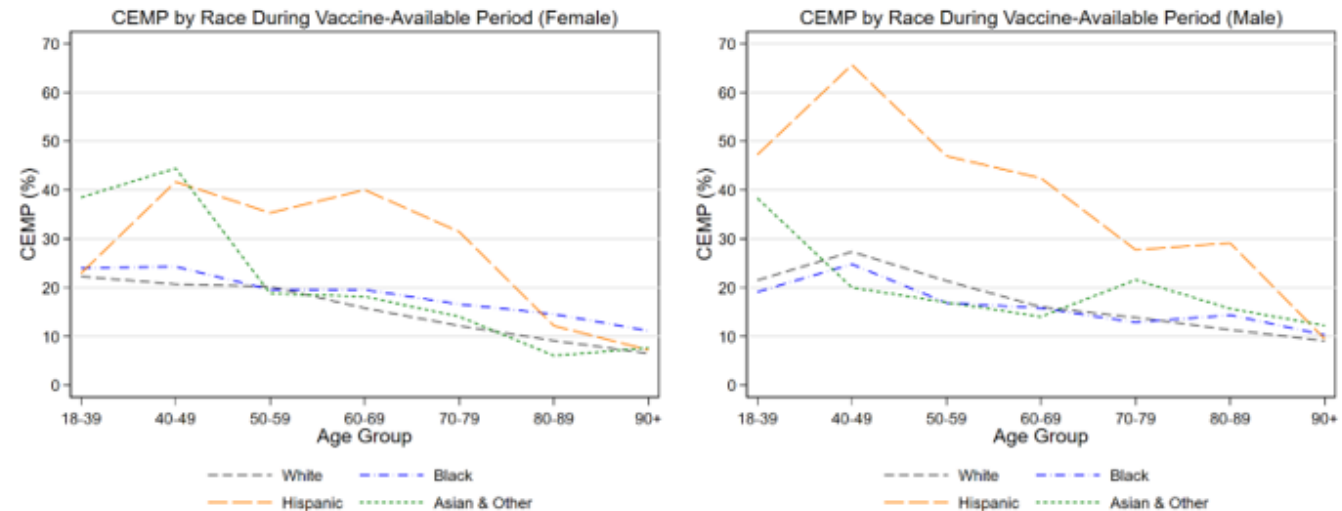
- Controls for general health status
- Wisconsin and Indiana death data
- High racial/ethnic disparities, especially for young Hispanic men and women
- Similar results with US county-level data
- Speculate older more vaccinated and younger have higher risk behaviors
- 3 manuscripts in review

Figure 1. COVID Excess Mortality Percentage (CEMP) Levels by Gender and Race/Ethnicity

Panel A. April 2020 – March 2021 (Pre-Vaccine)



Panel B. April 2021 – March 2022 (Vaccine-Available)







## Data Analyses in Progress

- Link all Milwaukee (and hopefully Wisconsin) adult COVID vaccine, PCR test results, and death data to analyze the effect of vaccinations (and compare Moderna and Pfizer) and past infections during variant phases on life expectancy loss, population fatality rates, and COVID excess mortality percentages by sociodemographics
- Several manuscripts in development



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