Population Statistics for Explaining the Impacts of COVID-19: Unusual Time Call for Usual Measures

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NACDA The National Archive of Computerized Data on Aging

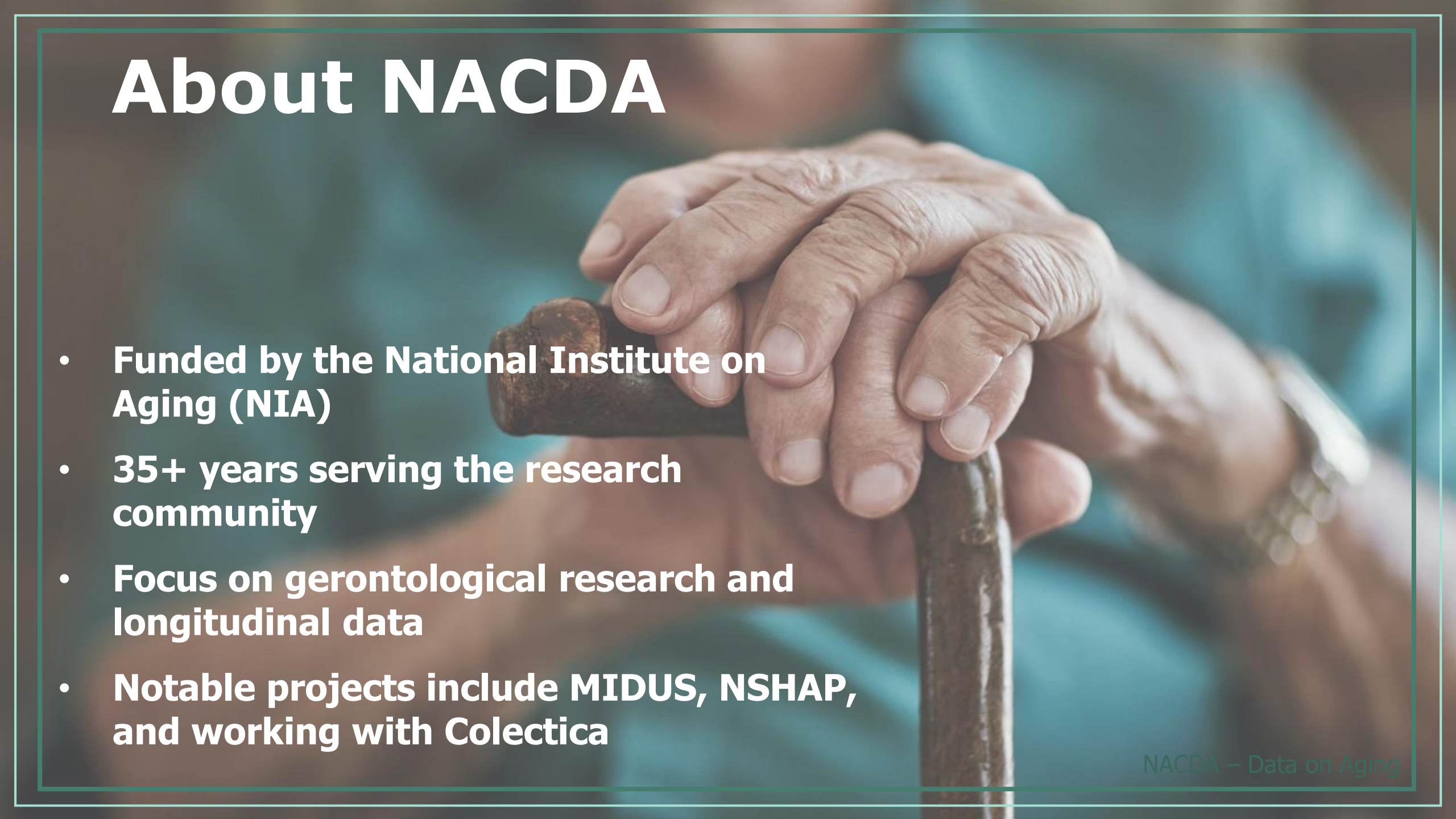
ICPSR

NIH National Institutes of Health
Turning Discovery Into Health

ABSTRACT

- Epidemics and other health crises impact the way we measure, understand, and teach population statistics. The discipline of demography has had a significant impact on the development of useful techniques in the rapid assessment of changing population dynamics.
- While the COVID 19 pandemic represents the current crisis impacting all nations in different ways, these tools are equally useful in the face of other health emergencies such as flooding, famine, and other types of population instability. Using measures of mortality, hospitalization, and infection for the current COVID 19 epidemic, concepts such as the difference between relative risk and absolute risk, measures that have caused considerable confusion reporting, will be explained, and guidelines provided to allow students to calculate these statistics in a classroom situation.
- The COVID 19 pandemic represents the latest in a long series of population health events. Still, the tools and techniques of demography play a vital role in understanding how these processes affect unique populations in different ways.

About NACDA



- Funded by the National Institute on Aging (NIA)
- 35+ years serving the research community
- Focus on gerontological research and longitudinal data
- Notable projects include MIDUS, NSHAP, and working with Colectica

Our Team

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NACDA Director

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Steering Committee:

- **Ken Ferraro, Ph.D.** - Committee Chair - Director of Center on Aging & the Life Course at Purdue University
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- **Margaret Gatz, Ph.D.** - Professor of Psychology, Gerontology & Preventive Medicine at the University of Southern California
- **Louise Hawkley, Ph.D.** - Senior Research Scientist at NORC
- **Peter A. Lichtenberg, Ph.D.** - Director of the Institute of Gerontology & the Merrill Palmer Skillman Institute at Wayne State University
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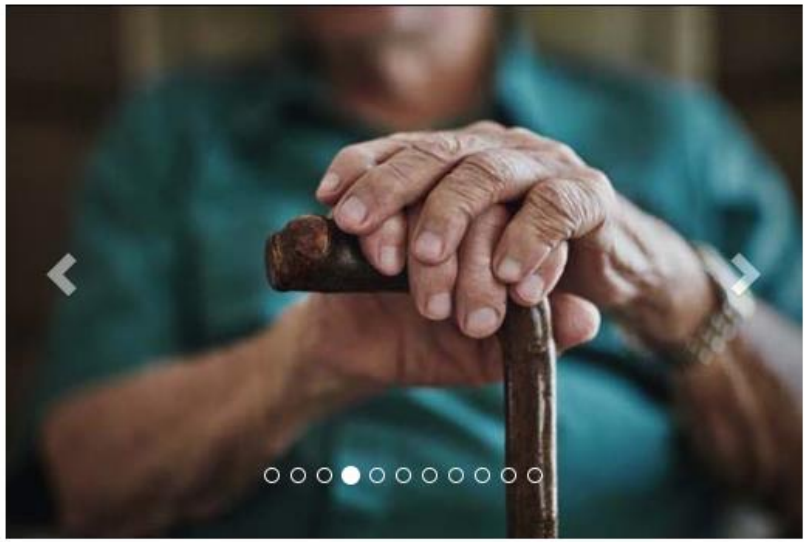


About Us

The National Archive of Computerized Data on Aging (NACDA), located within ICPSR, is funded by the National Institute on Aging. NACDA's mission is to advance research on aging by helping researchers to profit from the under-exploited potential of a broad range of datasets.

NACDA acquires and preserves data relevant to gerontological research, processing as needed to promote effective research use, disseminates them to researchers, and facilitates their use. By preserving and making available the largest library of electronic data on aging in the United States, NACDA offers opportunities for secondary analysis on major issues of scientific and policy relevance.

The NACDA staff represents a team of professional researchers, archivists and technicians who work together to obtain, process, distribute, and promote data relevant to aging research.

@NACDA_Aging

NACDA Program on Aging
@NACDA_Aging

Happening TODAY at 1EDT:
A summit virtual meeting series to engage the dementia care community
The series will take place via Zoom the afternoons of July 10, July 21, and August 13, 2020.
Learn more here: https://buff.ly/3eblTGx

NACDA Overview

News and Announcements

- NACDA Summer Newsletter 2020
- Email Us for an E-visit!
- ICPSR and NACDA closed for observance of Independence Day, Friday July 3

More Announcements >>

Subscribe to News

We live in a world of uncertainty

$$\text{Infection fatality ratio (IFR, in \%)} = \frac{Number\ of\ deaths\ from\ disease}{Number\ of\ infected\ individuals} \text{ x } 100$$

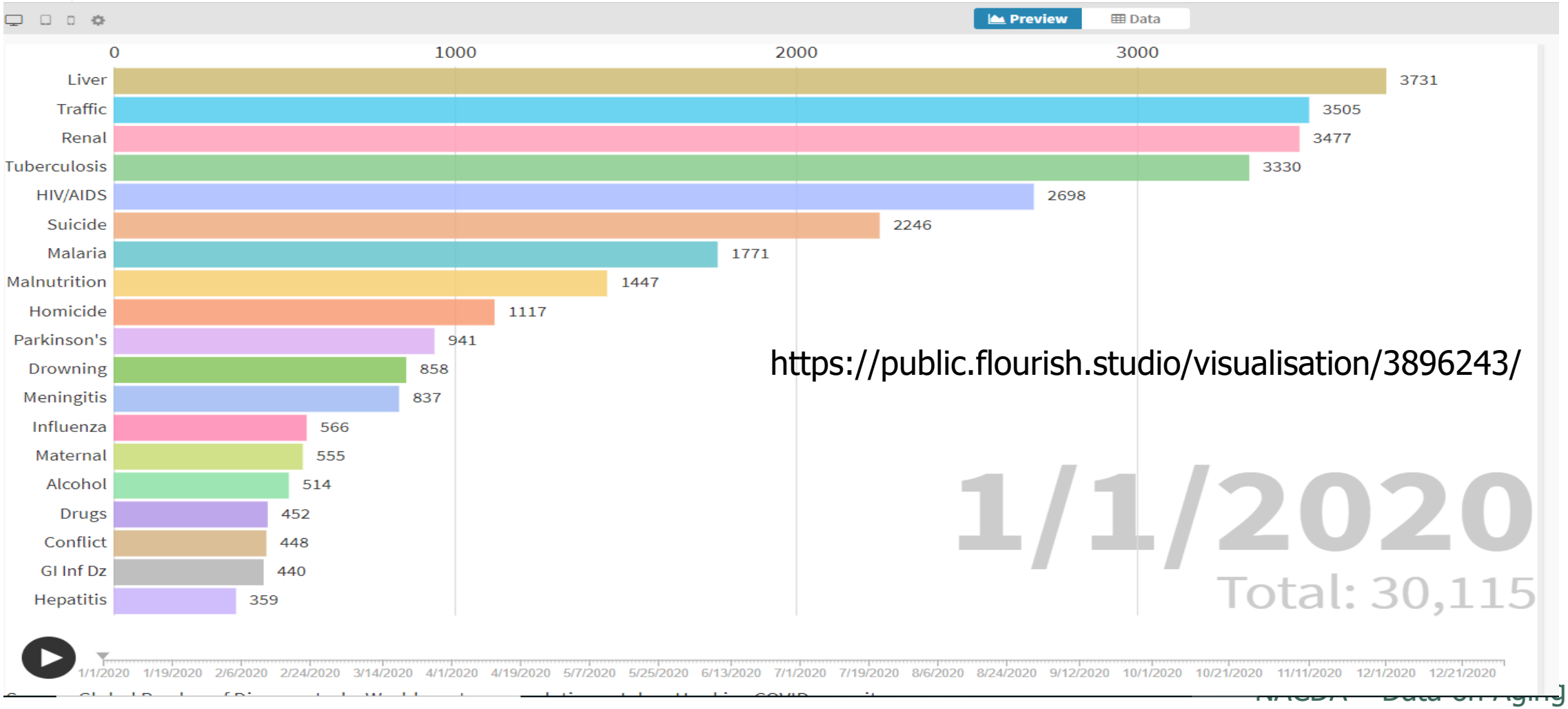
$$Case\ Fatality\ ratio\ (CFR, in\%) = \frac{Number\ of\ deaths\ from\ disease}{Number\ of\ confirmed\ cases\ of\ disease} \times 100$$

$$Case\ Fatality\ ratio\ (CFR, in\%) = \frac{Number\ of\ deaths\ from\ disease}{Number\ of\ deaths\ from\ disease\ +\ Number\ of\ recovered\ from\ disease} \times 100$$

AND THEN MULTIPLY BY 10 OR SO…

New York State conducted an antibody testing study. It estimated 19.9% of the population of New York City had COVID-19 antibodies. With a population of 8,398,748 people in NYC [source], this percentage would indicate that 1,671,351 people had been infected with SARS-CoV-2 and had recovered as of May 1 in New York City. The number of confirmed cases reported as of May 1 by New York City was 166,883, more than 10 times less.

Global Deaths Due to Various Causes and COVID-19 2020



Population assumptions (out of 1000 people)

% Population with Mask/Protection:

100 %

% Population practicing Social Distancing:

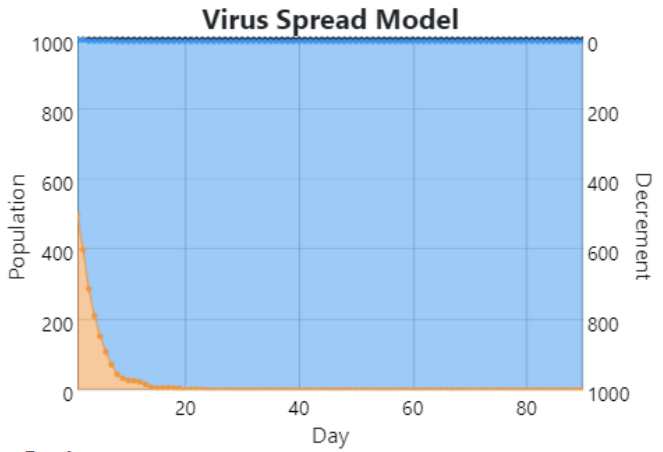
99 %

Initial # Affected:

500 People

Simulate!

Done! Please scroll down for results.



— Dead
— Healthy
— Infected

Day	Infected	Healthy	Dead
1	500	500	0
30	0	995	5
60	0	995	5
90	0	995	5

Click on the graph to look at additional details below!

https://apps.goldensoncenter.uconn.edu/Covid19/

COVID-19 Simulator
Developed by the Goldenson Center at the University of Connecticut

UCONN

The COVID Tracking Project

AT *The Atlantic*

The Data | About the Data | Race and COVID-19 | About Us | Analysis & Updates

The Data

Totals for the US | Racial Data Dashboard | Long-Term Care | Hospital Facilities | Our Charts | Data API | Download the Data

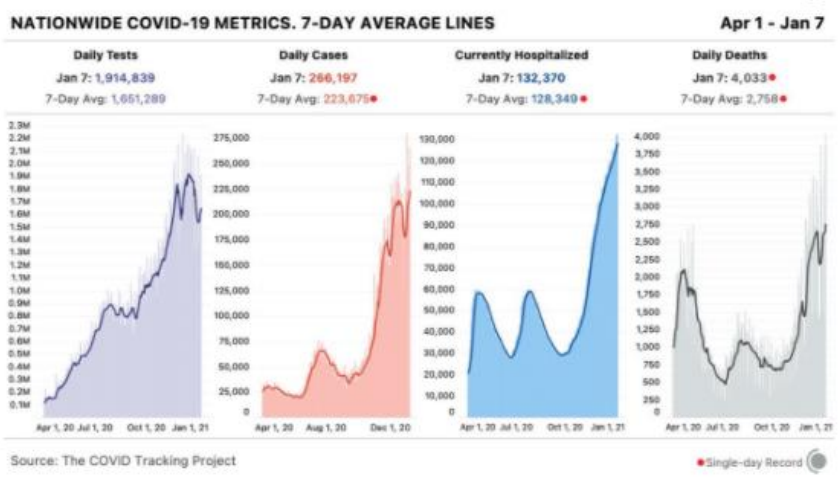
We update all our data each day between about 6pm and 7:30pm Eastern Time. We have recently begun publishing a bit later so as to capture Colorado and New Mexico data on the same day they update rather than on the following day.

Sign up for our newsletter to get our latest articles about this data by email.

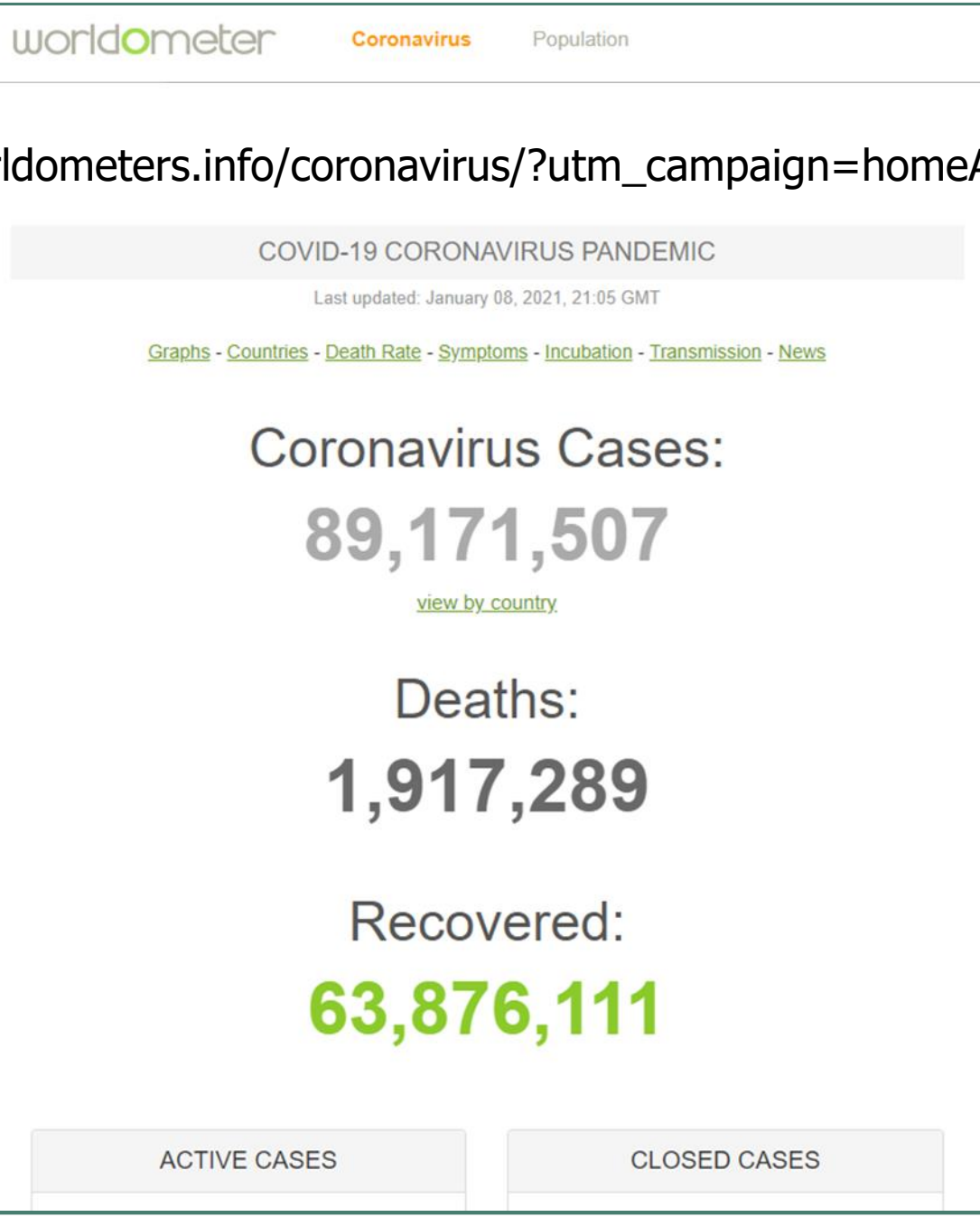
@COVID19Tracking

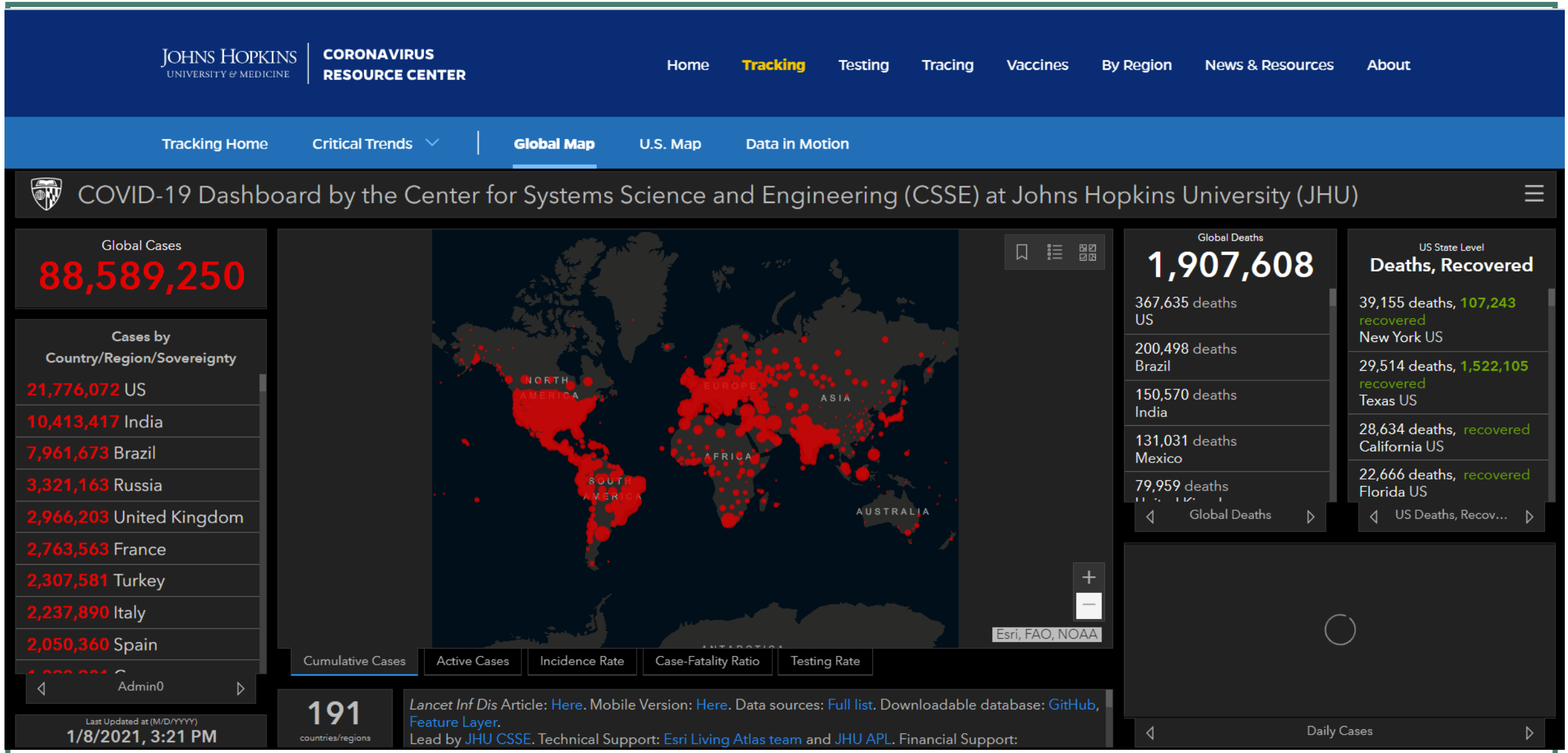
Our daily update is published. States reported 1.9M tests, 266k cases, 132,370 COVID-19 hospitalizations, and a record 4,033 deaths. The 7-day average for deaths is now over 2,750, also a record.

January 7, 2021



https://www.worldometers.info/coronavirus/?utm_campaign=homeAdvegas1?#countries





https://coronavirus.jhu.edu/map.html

COVID-19 https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/COVID-19/Race-Ethnicity.aspx

- CDPH COVID-19 Home
- Blueprint for a Safer Economy
- Guidance Documents
- Crisis Care Continuum
- COVID-19 Vaccines
- Communications Toolkits
- Data at the County-Level
- Contact Tracing
- COVID-19 Outbreak Data
- Multilingual Documents
- Data and Case Statistics for Hospitals
- School Waiver Consultations
- **Data on Racial Demographics**
- Skilled Nursing Facilities
- Find a COVID-19 Testing Site
- Visit COVID19.ca.gov

COVID-19 Race and Ethnicity Data

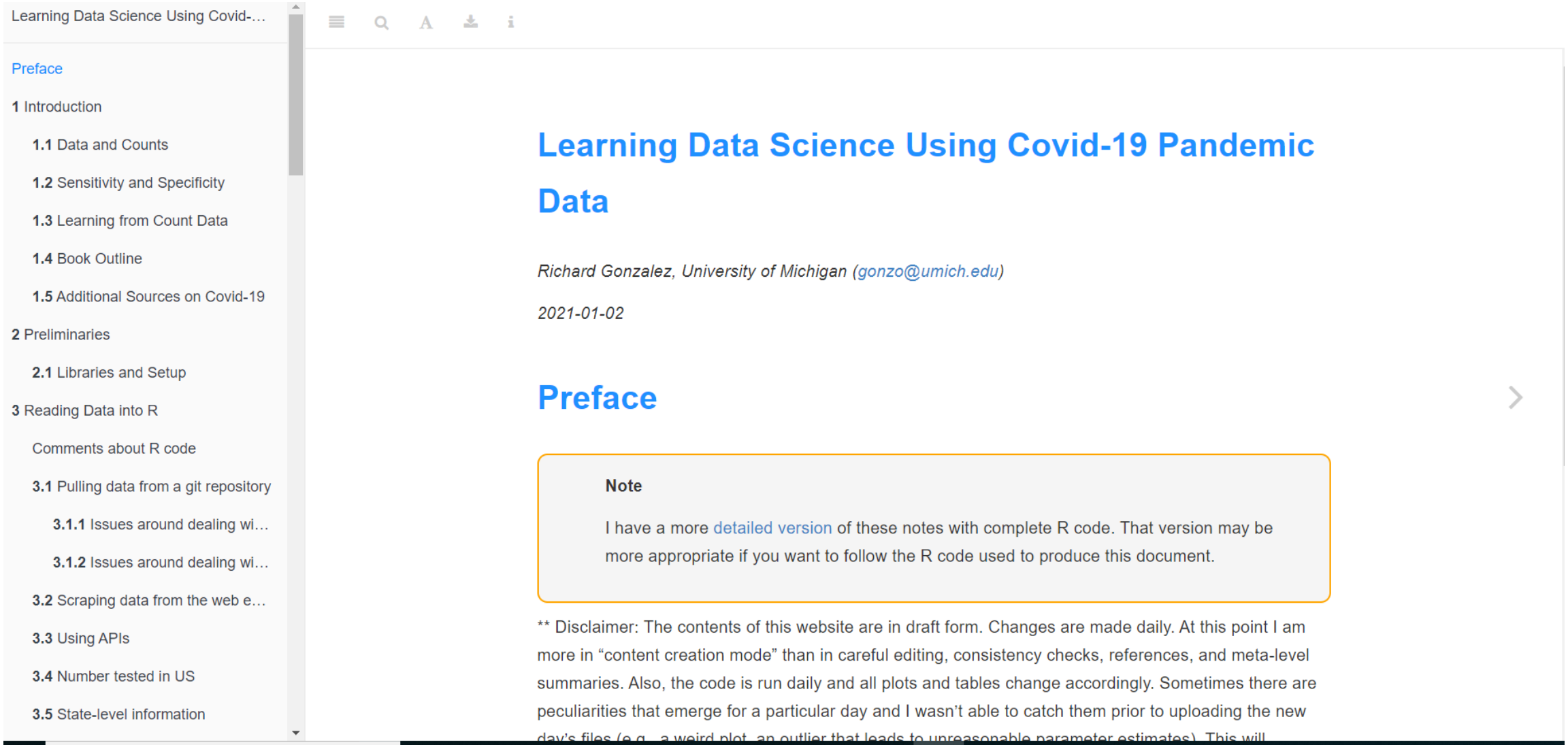
January 6, 2021

As part of its commitment to reduce health inequities, the state has launched a Health Equity Dashboard on www.covid19.ca.gov that tracks California's health equity measure and data by race and ethnicity, sexual orientation, and gender identity.

CDPH updates data tables on race/ethnicity weekly.

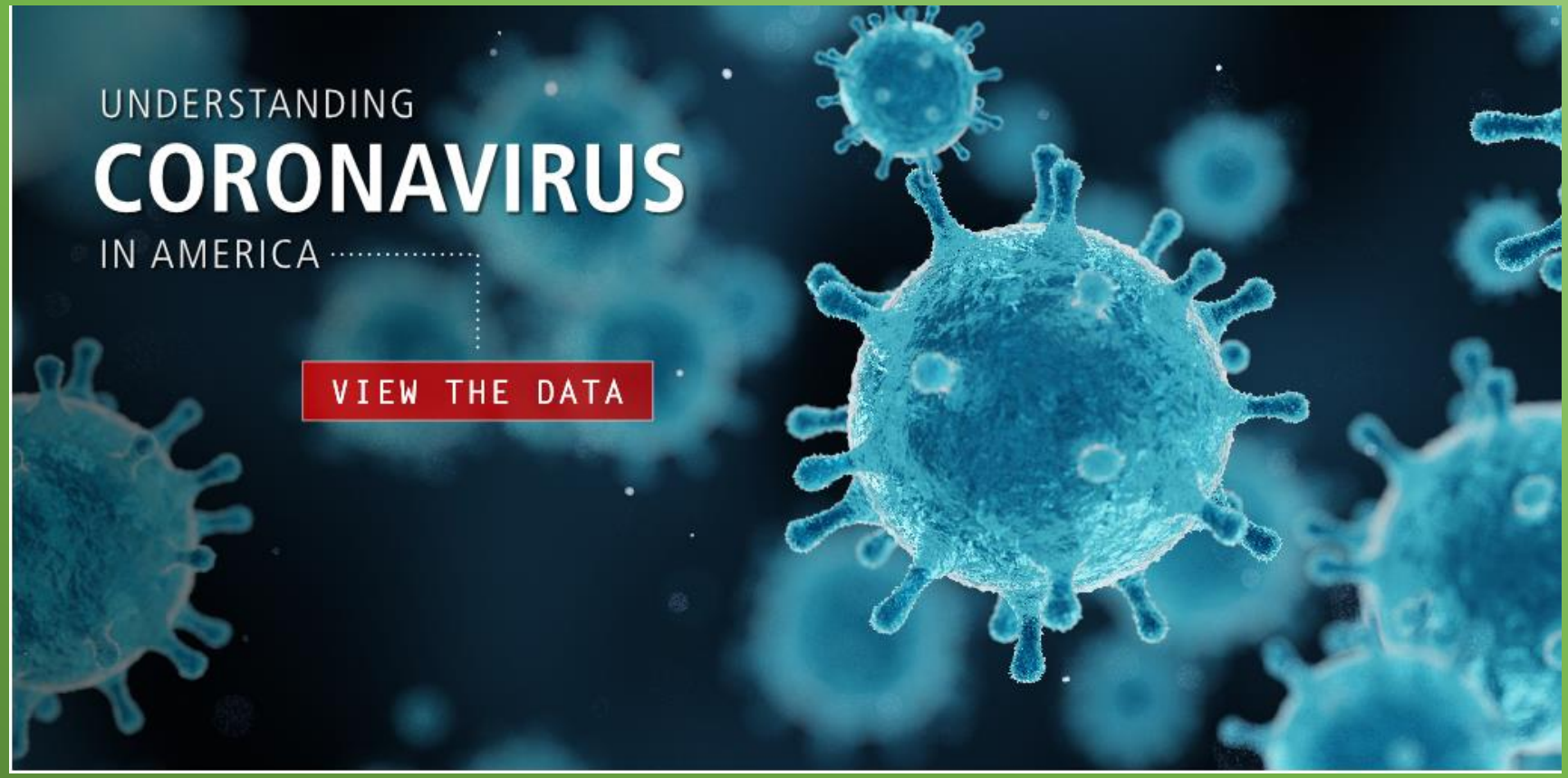
All Cases and Deaths associated with COVID-19 by Race and Ethnicity

Race/Ethnicity	No. Cases	Percent Cases	No. Deaths	Percent Deaths	Percent CA population
Latino	1,007,959	55.1	12,827	47.0	38.9
White	366,351	20.0	8,619	31.6	36.6
Asian	117,227	6.4	3,171	11.6	15.4
African American	73,573	4.0	1,853	6.8	6.0
Multi-Race	23,457	1.3	291	1.1	2.2
American Indian or Alaska Native	5,750	0.3	90	0.3	0.5
Native Hawaiian and other Pacific Islander	10,357	0.6	147	0.5	0.3
Other	224,198	12.3	316	1.2	0.0
Total with data	1,828,872	100.0	27,314	100.0	100.0



http://www-personal.umich.edu/~gonzo/covid19/public/

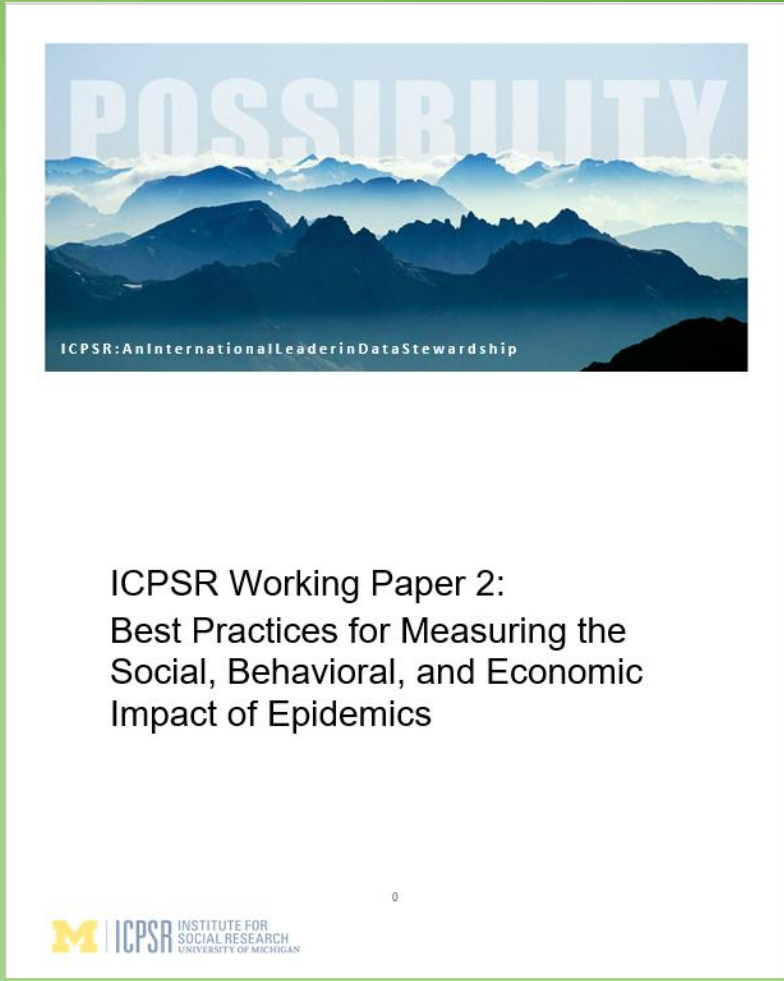
External Resources: Understanding America Study



UAS Covid-19 Survey National Sample Longitudinal File: Comprises the first 20 waves of the UAS COVID long form data (March 10, 2020 to January 6, 2021) with consistent variable naming.

https://uasdata.usc.edu/index.php

ICPSR Working Paper 2



ICPSR Working Paper 2:
Best Practices for measuring the social, behavioral, and economic impact of epidemics

This report reviews best practices for using data resources from ICPSR, its projects, and its collaborating partners for measuring the impact of epidemics. The report summarizes resources to identify measures of well-being, social connectedness, and other constructs to measure the social and behavioral effects of the COVID-19 epidemic on population health outcomes. The report suggests data resources to identify pre-crisis measures of social distancing, social networks, consumer confidence, unemployment, and the use of social media.

https://deepblue.lib.umich.edu/handle/2027.42/154682

Where the Data Process Stands Now

Pre-Test: Data before COVID-19

Research deferred due to COVID 19

Post-Test: Data after COVID-19

Areas of Focus

We identify studies that ask questions about

- "Quality of Life"
- "Happiness"
- "Crisis Management"
- "General Health"
- "Mental Health"
- "Healthy Aging
- "Life-course"

Examples of Variables Across Studies

	QoL	Happiness	Crisis/ Problems	Kessler 6	CESD	Health
MIDUS	X	X	X	X	X	X
NSHAP	X	X	X	*	X	X
ACL	X	X	X	-	X	X
NHIS	&	X	X	X	-	X
NHANES	#	X	X	X	X	X
Survey of Consumer Attitudes and Behavior	-	X	X	%	-	X

Monitoring the Future (MTF)

- There are a number of ongoing surveys that are in the field that have added questions addressing COVID-19. Monitoring the Future has a web-based survey of its panel respondents (the subset of panel member who respond on the web). Two items were added to the MTF Panel web-based surveys (ages 19-60) in March 2020 (data collection starting March 27, 2020). The two items are:

A. Have you been concerned about whether you have COVID19 (also known as the coronavirus) in 2020?	B. Have you been tested for COVID19 in 2020?
1) No 2) Somewhat 3) Yes	1) No 2) Yes, and test indicated that I do not have it 3) Yes, and test indicated that I do have it 4) Yes, and I am waiting for the results

Survey of Consumers

- The Survey of Consumers has also added COVID-19 related questions as of April 2020 data collection. The new questions are:

M1. How much has your life changed due to the coronavirus? Would you say to a great extent, somewhat, very little, or not at all?	•M2. Which of the following potential effects of the coronavirus concern you the most: the threat to your (family's) health, the required social isolation, or the impact on your personal finances?
•TO A GREAT EXTENT •SOMEWHAT •VERY LITTLE •NOT AT ALL •8. DON'T KNOW	•THREAT TO YOUR OR YOUR FAMILY'S HEALTH • REQUIRED SOCIAL ISOLATION • IMPACT ON YOUR PERSONAL FINANCES • 8. DON'T KNOW

User Support

Contact User Support at **ICPSR-help@umich.edu**

OR contact us at NACDA directly by emailing **icpsr-nacda@umich.edu**

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