



COVID 19 in the United States: Health Equity and Policy Considerations

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BRIEF REPORT

A Novel Coronavirus from Patients with Pneumonia in China, 2019

Na Zhu, Ph.D., Dingyu Zhang, M.D., Wenling Wang, Ph.D., Xingwang Li, M.D.,
Bo Yang, M.S., Jingdong Song, Ph.D., Xiang Zhao, Ph.D., Baoying Huang, Ph.D.,
Weifeng Shi, Ph.D., Roujian Lu, M.D., Peihua Niu, Ph.D., Faxian Zhan, Ph.D.,
Xuejun Ma, Ph.D., Dayan Wang, Ph.D., Wenbo Xu, M.D., Guizhen Wu, M.D.,
George F. Gao, D.Phil., and Wenjie Tan, M.D., Ph.D., for the China Novel
Coronavirus Investigating and Research Team

Zhu et al, NEJM January 24, 2020

BRIEF REPORT

First Case of 2019 Novel Coronavirus in the United States

Michelle L. Holshue, M.P.H., Chas DeBolt, M.P.H., Scott Lindquist, M.D.,
Kathy H. Lofy, M.D., John Wiesman, Dr.P.H., Hollianne Bruce, M.P.H.,
Christopher Spitters, M.D., Keith Ericson, P.A.-C., Sara Wilkerson, M.N.,
Ahmet Tural, M.D., George Diaz, M.D., Amanda Cohn, M.D., LeAnne Fox, M.D.,
Anita Patel, Pharm.D., Susan I. Gerber, M.D., Lindsay Kim, M.D.,
Suxiang Tong, Ph.D., Xiaoyan Lu, M.S., Steve Lindstrom, Ph.D.,
Mark A. Pallansch, Ph.D., William C. Weldon, Ph.D.,
Holly M. Biggs, M.D., Timothy M. Uyeki, M.D., and Satish K. Pillai, M.D.,
for the Washington State 2019-nCoV Case Investigation Team*

NATIONWIDE COVID-19 METRICS. 7-DAY AVERAGE LINES

Apr 1 - Dec 6

Daily Tests

Dec 6: **1,634,532**

7-Day Avg: **1,840,620** ●

Daily Cases

Dec 6: **176,771**

7-Day Avg: **191,736** ●

Currently Hospitalized

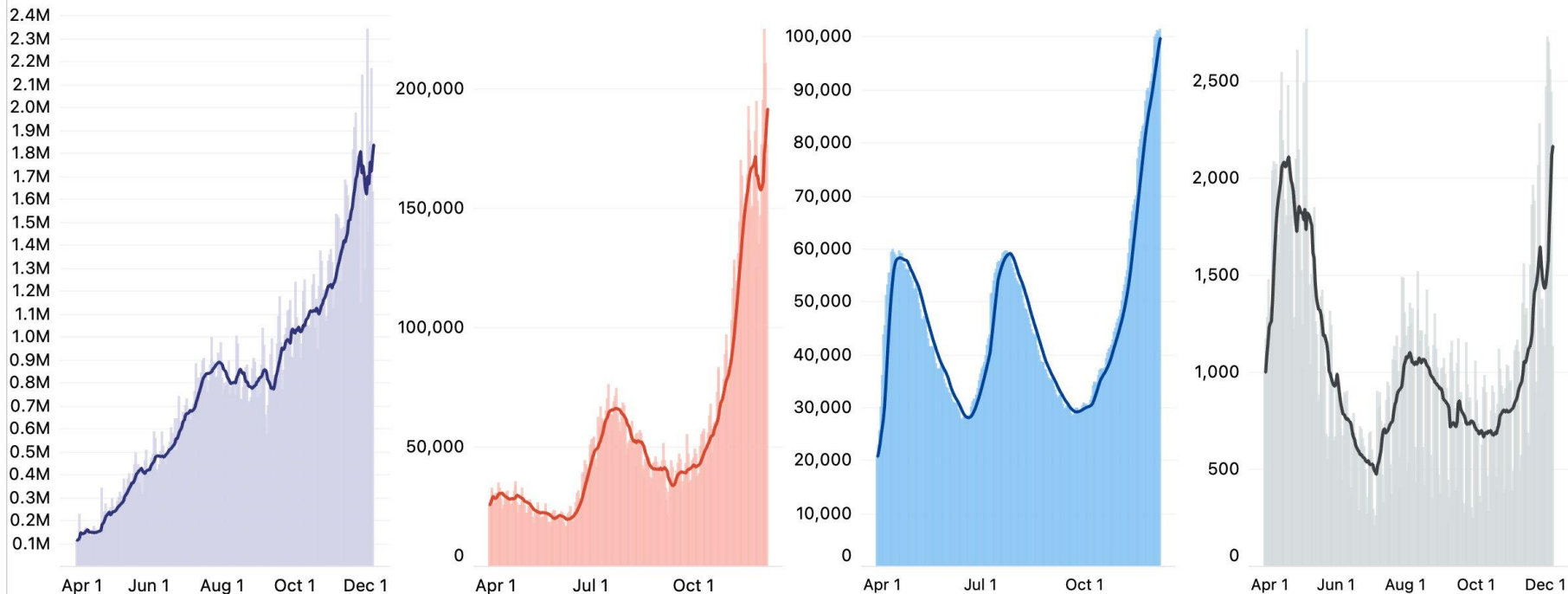
Dec 6: **101,487** ●

7-Day Avg: **99,939** ●

Daily Deaths

Dec 6: **1,138**

7-Day Avg: **2,171** ●



Source: The COVID Tracking Project

● Single-day Record

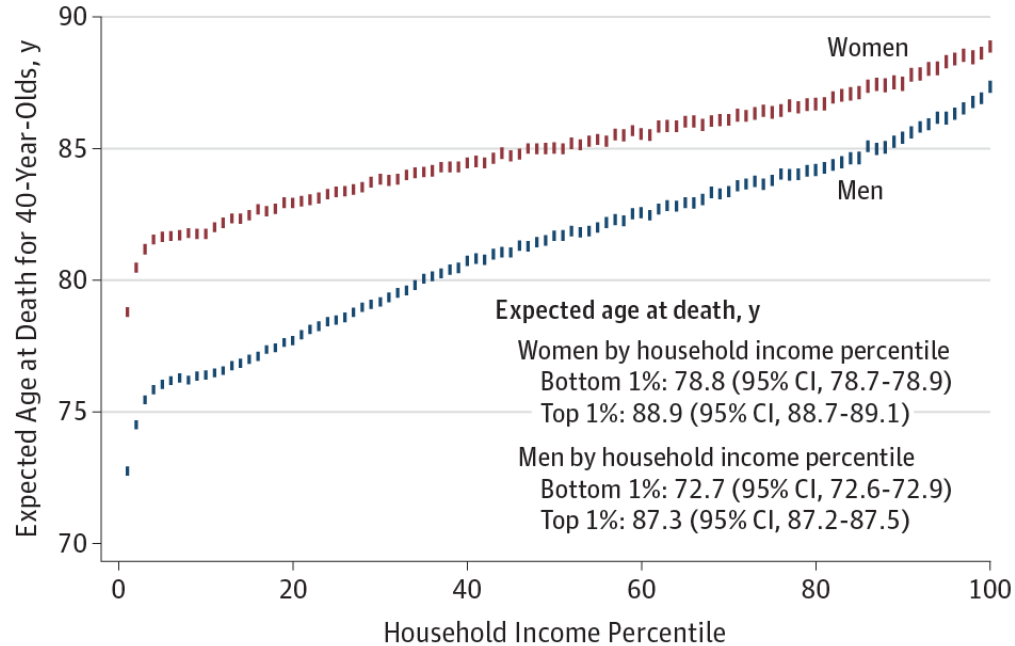
The Association Between Income and Life Expectancy in the United States, 2001-2014

Raj Chetty, PhD; Michael Stepner, BA; Sarah Abraham, BA; Shelby Lin, MPhil; Benjamin Scuderi, BA; Nicholas Turner, PhD; Augustin Bergeron, MA; David Cutler, PhD

CONCLUSIONS AND RELEVANCE In the United States between 2001 and 2014, higher income was associated with greater longevity, and differences in life expectancy across income groups increased over time. However, the association between life expectancy and income varied substantially across areas; differences in longevity across income groups decreased in some areas and increased in others. The differences in life expectancy were correlated with health behaviors and local area characteristics.

JAMA 2016;315(16):1750-1766.

The Association Between Income and Life Expectancy in the US, 2001-2014

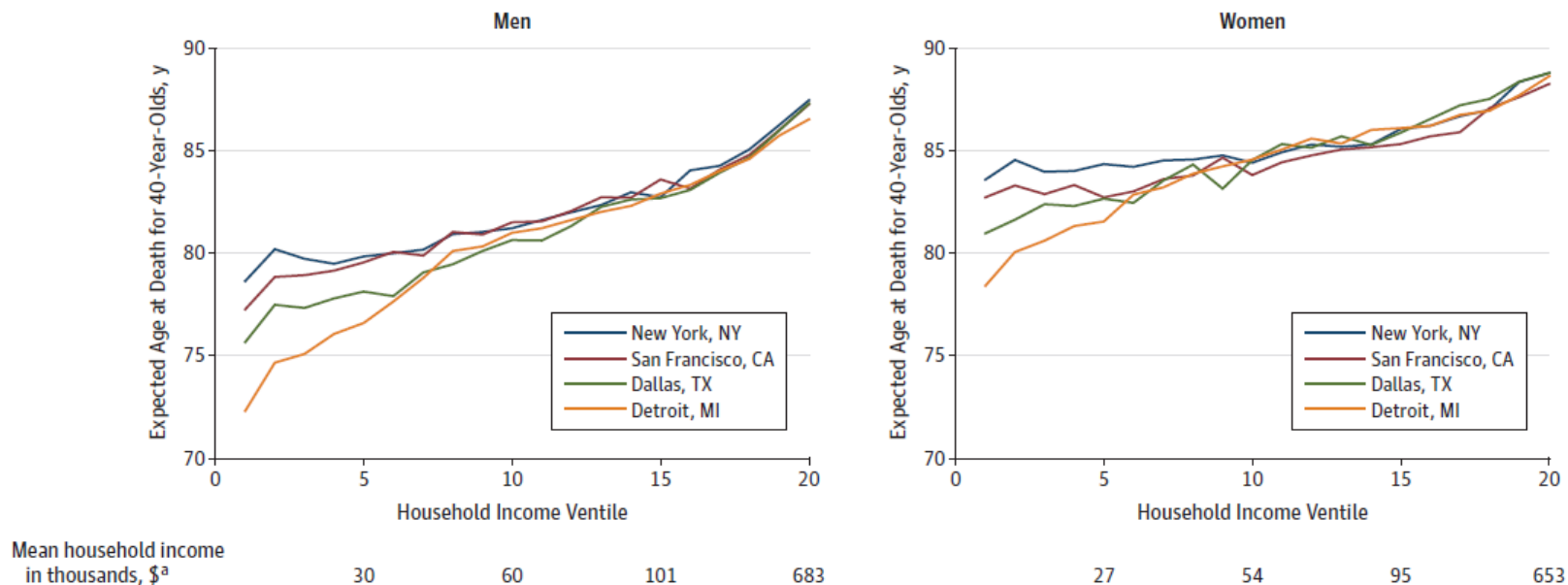


Mean household income
in thousands, \$^a

Women	24	45	71	112	1.9 million
Men	26	50	77	119	2.0 million

JAMA 2016;315(16):1750-1766.

Figure 4. Race- and Ethnicity-Adjusted Life Expectancy by Income Ventile in Selected Commuting Zones, 2001-2014



Estimates of race- and ethnicity-adjusted expected age at death for 40-year-olds computed by income ventile (5 percentile point bins).

^a Averaged across years and ages.

JAMA 2016;315(16):1750-1766.

ORIGINAL ARTICLE

Epidemiology of Covid-19 in a Long-Term Care Facility in King County, Washington

Temet M. McMichael, Ph.D., Dustin W. Currie, Ph.D., Shauna Clark, R.N.,
Sargis Pogojans, M.P.H., Meagan Kay, D.V.M., Noah G. Schwartz, M.D.,
James Lewis, M.D., Atar Baer, Ph.D., Vance Kawakami, D.V.M.,
Margaret D. Lukoff, M.D., Jessica Ferro, M.P.H., Claire Brostrom-Smith, M.S.N.,
Thomas D. Rea, M.D., Michael R. Sayre, M.D., Francis X. Riedo, M.D.,
Denny Russell, B.S., Brian Hiatt, B.S., Patricia Montgomery, M.P.H.,
Agam K. Rao, M.D., Eric J. Chow, M.D., Farrell Tobolowsky, D.O.,
Michael J. Hughes, M.P.H., Ana C. Bardossy, M.D., Lisa P. Oakley, Ph.D.,
Jesica R. Jacobs, Ph.D., Nimalie D. Stone, M.D., Sujana C. Reddy, M.D.,
John A. Jernigan, M.D., Margaret A. Honein, Ph.D., Thomas A. Clark, M.D.,
and Jeffrey S. Duchin, M.D., for the Public Health–Seattle and King County,
EvergreenHealth, and CDC COVID-19 Investigation Team*

McMichael TM et al, NEJM March 27, 2020

Outbreak Investigation of COVID-19 Among Residents and Staff of an Independent and Assisted Living Community for Older Adults in Seattle, Washington

Alison C. Roxby, MD, MSc; Alexander L. Greninger, MD, PhD, MS, MPhil; Kelly M. Hatfield, MSPH; John B. Lynch, MD, MPH; Timothy H. Dellit, MD; Allison James, PhD, DVM, MPH; Joanne Taylor, PhD; Libby C. Page, MPH; Anne Kimball, MD, MPH; Melissa Arons, MSc; Albert Munanga, DrBH, MSN, RN; Nimalie Stone, MD; John A. Jernigan, MD; Sujan C. Reddy, MD; James Lewis, MD; Seth A. Cohen, MD, MS; Keith R. Jerome, MD, PhD; Jeffrey S. Duchin, MD; Santiago Neme, MD, MPH

Invited Commentary

Preventing COVID-19 in Assisted Living Facilities—A Balancing Act

Grace Y. Jenq, MD; John P. Mills, MD; Preeti N. Malani, MD, MSJ

Table 1. COVID-19 Mortality in the US Compared With That of Other Countries^a

Country	Date COVID-19 cases surpassed 1 per million	COVID-19 deaths per 100 000			Excess US COVID-19 deaths (% of reported deaths)		
		Since the start of the pandemic	Since May 10, 2020	Since June 7, 2020	Since the start of the pandemic	Since May 10, 2020	Since June 7, 2020
Low mortality (COVID-19 deaths, <5/100 000)							
South Korea	2/20/20	0.7	0.2	0.2	196 161 (99)	120 625 (61)	88 771 (45)
Japan	2/23/20	1.2	0.7	0.5	194 711 (98)	119 090 (60)	87 939 (44)
Australia	3/1/20	3.3	2.9	2.9	187 661 (94)	111 747 (56)	79 849 (40)
Moderate mortality (COVID-19 deaths, 5-25/100 000)							
Norway	2/29/20	5.0	1.0	0.5	182 099 (92)	118 074 (59)	87 655 (44)
Finland	3/2/20	6.1	1.4	0.3	178 373 (90)	116 698 (59)	88 432 (45)
Austria	3/1/20	8.6	1.7	1.0	170 247 (86)	115 874 (58)	86 066 (43)
Denmark	3/4/20	10.9	2.1	0.8	162 600 (82)	114 438 (58)	86 669 (44)
Germany	3/1/20	11.3	2.4	0.9	161 393 (81)	113 422 (57)	86 521 (44)
Israel	3/2/20	14.0	11.2	10.6	152 393 (77)	84 676 (43)	54 529 (27)
Switzerland	2/29/20	20.6	2.8	1.2	130 654 (66)	112 205 (57)	85 402 (43)
Canada	3/6/20	24.6	12.4	4.0	117 622 (59)	80 631 (41)	76 235 (38)
High mortality (COVID-19 deaths, >25/100 000)							
The Netherlands	3/3/20	36.2	5.2	1.5	79 318 (40)	104 177 (52)	84 514 (43)
France	3/1/20	46.6	7.5	3.2	45 142 (23)	96 763 (49)	78 947 (40)
Sweden	2/29/20	57.4	23.5	10.3	9581 (5)	44 210 (22)	55 607 (28)
Italy	2/23/20	59.1	9.1	3.1	4136 (2)	91 604 (46)	79 120 (40)
United Kingdom	3/3/20	62.6	16.3	5.0	-7459 (-4)	67 927 (34)	73 103 (37)
Spain	2/29/20	65.0	8.6	4.6	-15 204 (-8)	93 247 (47)	74 163 (37)
Belgium	3/2/20	86.8	12.4	4.2	-87 057 (-44)	80 475 (41)	75 572 (38)
United States	3/7/20	60.3	36.9	27.2			

Bilinski, Emanuel, JAMA October 12, 2020

Factors Associated With Death in Critically Ill Patients With Coronavirus Disease 2019 in the US

Shruti Gupta, MD, MPH; Salim S. Hayek, MD; Wei Wang, PhD; Lili Chan, MD, MSCR; Kusum S. Mathews, MD, MPH, MSCR; Michal L. Melamed, MD, MHS; Samantha K. Brenner, MD, MPH; Amanda Leonberg-Yoo, MD, MS; Edward J. Schenck, MD, MS; Jared Radbel, MD; Jochen Reiser, MD, PhD; Anip Bansal, MD; Anand Srivastava, MD, MPH; Yan Zhou, MD; Anne Sutherland, MD; Adam Green, MD, MBA; Alexandre M. Shehata, MD; Nitender Goyal, MD; Anitha Vijayan, MD; Juan Carlos Q. Velez, MD; Shahzad Shaefi, MD, MPH; Chirag R. Parikh, MD, PhD; Justin Arunthamkun, MD; Ambarish M. Athavale, MBBS, MD; Allon N. Friedman, MD; Samuel A. P. Short, BA; Zoe A. Kibbelaar, BA; Samah Abu Omar, MD; Andrew J. Admon, MD, MPH, MSc; John P. Donnelly, PhD; Hayley B. Gershengorn, MD; Miguel A. Hernán, MD, DrPH; Matthew W. Semler, MD; David E. Leaf, MD, MMSc; for the STOP-COVID Investigators

 [Supplemental content](#)

IMPORTANCE The US is currently an epicenter of the coronavirus disease 2019 (COVID-19) pandemic, yet few national data are available on patient characteristics, treatment, and outcomes of critical illness from COVID-19.

OBJECTIVES To assess factors associated with death and to examine interhospital variation in treatment and outcomes for patients with COVID-19.

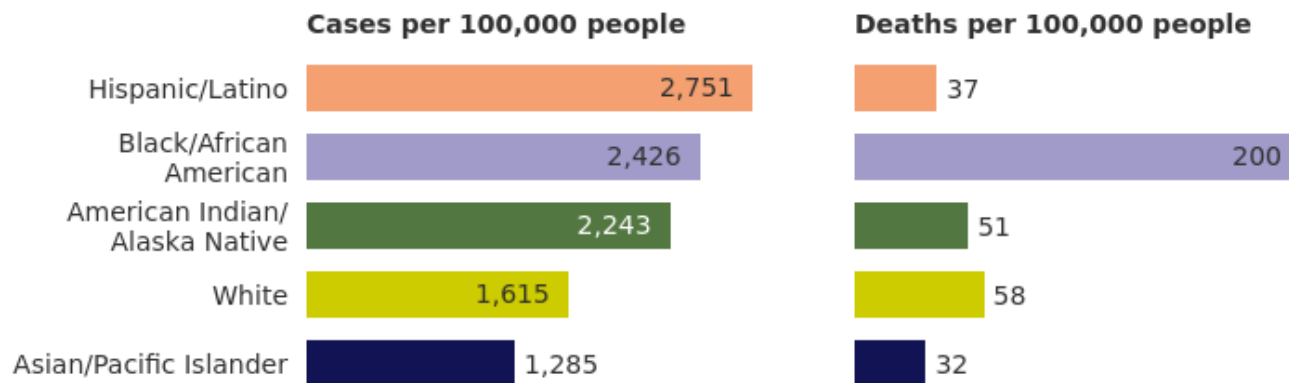
DESIGN, SETTING, AND PARTICIPANTS This multicenter cohort study assessed 2215 adults with laboratory-confirmed COVID-19 who were admitted to intensive care units (ICUs) at 65 hospitals across the US from March 4 to April 4, 2020.

EXPOSURES Patient-level data, including demographics, comorbidities, and organ dysfunction, and hospital characteristics, including number of ICU beds.

Table 1. Patient Characteristics at Baseline^a

Characteristic	All patients (N = 2215)	Day 28	
		Alive (n = 1431)	Died (n = 784)
Demographics			
Age, mean (SD), y	60.5 (14.5)	57.4 (14.2)	66.0 (13.3)
Male	1436 (64.8)	900 (62.9)	536 (68.4)
Race/ethnicity			
White	837 (37.8)	549 (38.4)	288 (36.7)
Black	669 (30.2)	436 (30.5)	233 (29.7)
Asian	133 (6.0)	86 (6.0)	47 (6.0)
Other	576 (26.0)	360 (25.2)	216 (27.6)
Hispanic	445 (20.1)	288 (20.1)	157 (20.0)
BMI, median (IQR) ^b	30.5 (26.6-36.2)	30.7 (26.7-36.3)	29.9 (26.2-35.9)
Homeless	13 (0.6)	9 (0.6)	4 (0.5)

In **Michigan**, through November 9, Hispanic/Latino people were most likely to have contracted COVID-19. Black/African American people were most likely to have died.

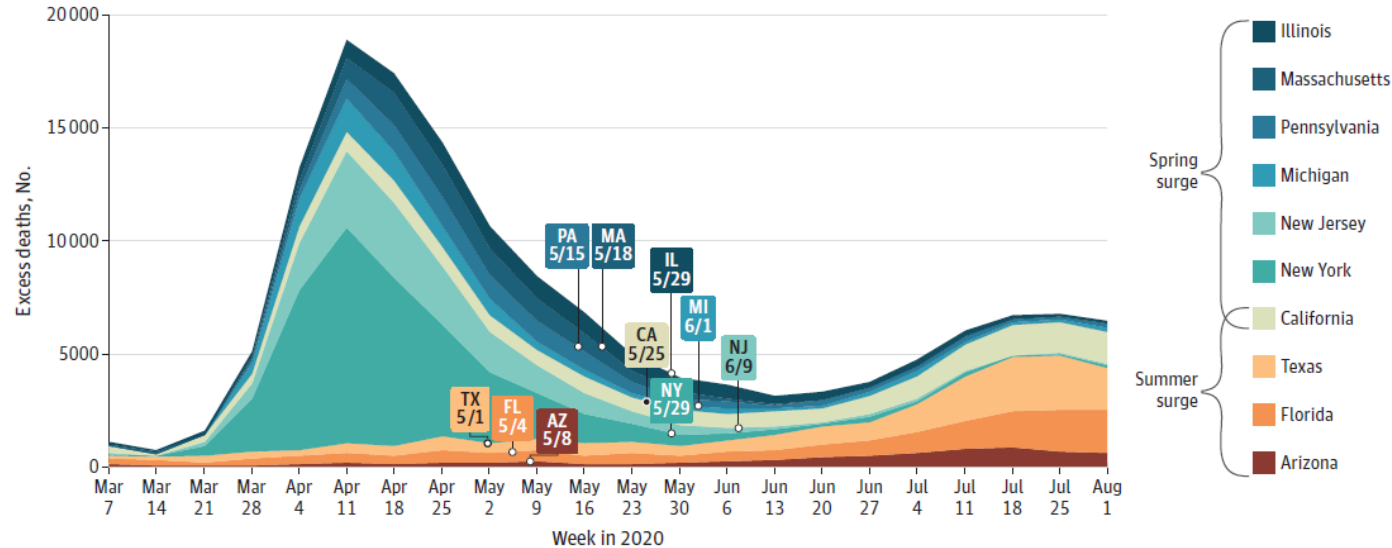


Notes: Michigan has reported race data for 83% of cases and 97% of deaths, and ethnicity data for 71% of cases and 84% of deaths. Graphic only includes demographic groups reported by the state. Race categories are mutually exclusive and include both Hispanic/Latino and non-Hispanic/Latino ethnicity.



Excess Deaths From COVID-19 and Other Causes, March-July 2020

Figure. Excess Deaths From March to July 2020 in Selected States



The figure plots weekly excess deaths for the 10 states with the largest number of excess deaths during March-July 2020. Reopening dates refer to the lifting of broad coronavirus disease 2019 restrictions, as reported by the *New York Times*.⁶

VIEWPOINT

David M. Cutler, PhD
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Economics, Harvard
University, Cambridge,
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**Lawrence H.
Summers, PhD**
Harvard Kennedy
School, Cambridge,
Massachusetts.

The COVID-19 Pandemic and the \$16 Trillion Virus

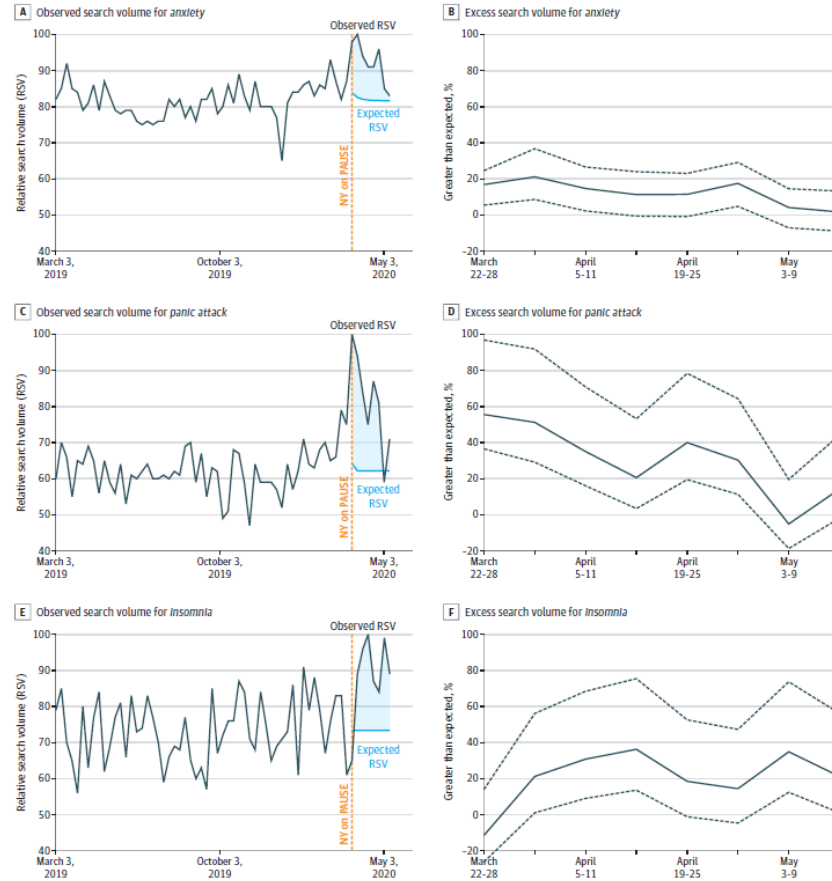
The SARS-CoV-2 (severe acute respiratory syndrome coronavirus 2) pandemic is the greatest threat to prosperity and well-being the US has encountered since the Great Depression. This Viewpoint aggregates mortality, morbidity, mental health conditions, and direct economic losses to estimate the total cost of the pandemic in the US on the optimistic assumption that it will be substantially contained by the fall of 2021. These costs far exceed those associated with conventional recessions and the Iraq War, and are similar to those associated with global climate change. However, increased investment

jectories continue, an estimated 625 000 cumulative deaths associated with the pandemic will occur through next year in the US.

Although putting a value on a given human life is impossible, economists have developed the technique of valuing “statistical lives”; that is, measuring how much it is worth to people to reduce their risk of mortality or morbidity. This approach has been used as a standard in US regulatory policy and in discussions of global health policy.²

There is a lengthy economic literature assessing the value of a statistical life; for example, in environmental

Figure 1. Internet Searches for Anxiety, Panic Attack, and Insomnia During New York State on PAUSE



The orange dotted line in panels A, C, and E indicates the implementation of New York State on PAUSE (a statewide lockdown) on March 22, 2020.

Changes in Adult Alcohol Use and Consequences During the COVID-19 Pandemic in the US

Michael S. Pollard, PhD; Joan S. Tucker, PhD; Harold D. Green Jr, PhD

Results

The current analytic sample includes 1540 adults (87.0%; mean [SD] age, 56.6 [13.5] years; 825 [53.6%] were in the age range of 30-59 years; and 883 [57.3%] were female) from the baseline survey who, approximately 1 year later, completed the wave 2 survey (**Table 1**). Frequency of alcohol consumption increased (1) overall, 0.74 days (95% CI, 0.33-1.15 days), representing an increase of 14% over the baseline of 5.48 days in 2019; (2) for women, 0.78 days (95% CI, 0.41-1.15 days), representing an increase of 17% over the 2019 baseline of 4.58 days; (3) for adults age 30 to 59 years, 0.93 days (95% CI, 0.36-1.51 days), an increase of 19%; and (4) for non-Hispanic White individuals, 0.66 days (95% CI, 0.14 to 1.17 days), an increase of 10% over the 2019 baseline of 6.46 days (**Table 2**). On average, alcohol was consumed 1 day more per month by 3 of 4 adults. For women, there was also a significant increase of 0.18 days of heavy drinking (95% CI, 0.04-0.32 days), from a 2019 baseline of 0.44 days, which represents an increase of 41% over baseline. This equates to an increase of 1 day for 1 in 5 women. For women there was an average increase in the Short Inventory of Problems scale of 0.09 (95% CI, 0.01-0.17 items), over the 2019 average baseline of 0.23, representing a 39% increase, which is indicative of increased alcohol-related problems independent of consumption level for nearly 1 in 10 women.

Centers for Disease Control and Prevention

MMWR

Morbidity and Mortality Weekly Report

Weekly / Vol. 69 / No. 32

August 14, 2020

Mental Health, Substance Use, and Suicidal Ideation During the COVID-19 Pandemic — United States, June 24–30, 2020

Mark É. Czeisler^{1,2}; Rashon I. Lane MA³; Emiko Petrosky, MD³; Joshua F. Wiley, PhD¹; Aleta Christensen, MPH³; Rashid Njai, PhD³;
Matthew D. Weaver, PhD^{1,4,5}; Rebecca Robbins, PhD^{4,5}; Elise R. Facer-Childs, PhD¹; Laura K. Barger, PhD^{4,5}; Charles A. Czeisler, MD, PhD^{1,4,5};
Mark E. Howard, MBBS, PhD^{1,2,6}; Shantha M.W. Rajaratnam, PhD^{1,4,5}

Changes in loneliness and social contacts, 2018 to 2020

AMONG ADULTS AGE 50-80



October 2018

March–June 2020

34% felt a lack of companionship **41%**

27% felt isolated from others **56%**

28% had infrequent social contact **46%**

VIEWPOINT

Carlos del Rio, MD

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Lauren F. Collins, MD

Division of Infectious Diseases, Department of Internal Medicine, Emory University School of Medicine, Atlanta, Georgia.

Preeti Malani, MD, MSJ

Division of Infectious Diseases, Department of Internal Medicine, University of Michigan, Ann Arbor; and Associate Editor, *JAMA*.

Long-term Health Consequences of COVID-19

With more than 30 million documented infections and 1 million deaths worldwide, the coronavirus disease 2019 (COVID-19) pandemic continues unabated. The clinical spectrum of severe acute respiratory syndrome coronavirus (SARS-CoV) 2 infection ranges from asymptomatic infection to life-threatening and fatal disease. Current estimates are that approximately 20 million people globally have “recovered”; however, clinicians are observing and reading reports of patients with persistent severe symptoms and even substantial end-organ dysfunction after SARS-CoV-2 infection. Because COVID-19 is a new disease, much about the clinical course remains uncertain—in particular, the possible long-term health consequences, if any.

Epidemiology

Currently, there is no consensus definition of postacute COVID-19. Based on the COVID Symptom Study, in which more than 4 million people in the US, UK and Sweden have entered their symptoms after a COVID-19 diagnosis, postacute COVID-19 is defined as the presence of

tion among a random sample of 292 adults (≥ 18 years) who had a positive outpatient test result for SARS-CoV-2 by reverse transcriptase-polymerase chain reaction, 35% of 274 symptomatic respondents reported not having returned to their usual state of health 2 weeks or more after testing, including 26% among those aged 18-34 years ($n = 85$), 32% among those aged 35-49 years ($n = 96$), and 47% among those aged 50 years or older ($n = 89$).⁴ Older than 50 years and the presence of 3 or more chronic medical conditions were associated with not returning to usual health within 14 to 21 days after receiving a positive test result. Notwithstanding, 1 in 5 individuals aged 18-34 years without chronic medical conditions had not yet achieved baseline health when interviewed at a median of 16 days from the testing date.

Manifestations

The most commonly reported symptoms after acute COVID-19 are fatigue and dyspnea. Other common symptoms include joint pain and chest pain.³ In addition to

del Rio et al, JAMA, October 5, 2020

Outcomes of Cardiovascular Magnetic Resonance Imaging in Patients Recently Recovered From Coronavirus Disease 2019 (COVID-19)

Valentina O. Puntmann, MD, PhD; M. Ludovica Carerj, MD; Imke Wieters, MD; Masia Fahim; Christophe Arendt, MD; Jędrzej Hoffmann, MD; Anastasia Shchendrygina, MD, PhD; Felicitas Escher, MD; Mariuca Vasa-Nicotera, MD; Andreas M. Zeiher, MD; Maria Vehreschild, MD; Eike Nagel, MD

CONCLUSIONS AND RELEVANCE In this study of a cohort of German patients recently recovered from COVID-19 infection, CMR revealed cardiac involvement in 78 patients (78%) and ongoing myocardial inflammation in 60 patients (60%), independent of preexisting conditions, severity and overall course of the acute illness, and time from the original diagnosis. These findings indicate the need for ongoing investigation of the long-term cardiovascular consequences of COVID-19.

Letters

RESEARCH LETTER

Cardiovascular Magnetic Resonance Findings in Competitive Athletes Recovering From COVID-19 Infection

Myocarditis is a significant cause of sudden cardiac death in competitive athletes and can occur with normal ventricular function.¹ Recent studies have raised concerns of myocardial inflammation after recovery from coronavirus disease 2019 (COVID-19), even in asymptomatic or mildly symptomatic patients.² Our objective was to investigate the use of cardiac magnetic resonance (CMR) imaging in competitive athletes recovered from COVID-19 to detect myocardial inflammation that would identify high-risk athletes for return to competitive play.

Methods | We performed a comprehensive CMR examination including cine, T1 and T2 mapping, extracellular volume fraction, and late gadolinium enhancement (LGE), on a 1.5-T scanner (Magnetom Sola; Siemens Healthineers) using standardized protocols,³ in all competitive athletes referred to the sports medicine clinic after testing positive for COVID-19 (reverse transcriptase-polymerase chain reaction) between June and August 2020. The Ohio State University institutional review board approved the study, and informed consent in writing was obtained from participating athletes. Cardiac magnetic resonance imaging was performed after recommended quarantine (11-53 days). Electrocardiogram, serum troponin I, and transthoracic echocardiogram were performed on day of CMR imaging.

Rajpal et al, JAMA Cardiol, Sept 11, 2020

VIEWPOINT

Michelle M. Mello, JD, PhD

Stanford Law School and Stanford Health Policy, Department of Medicine, Stanford University School of Medicine, Stanford, California.

Jeremy A. Greene, MD, PhD

Department of Health Policy and Management, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland; and Department of the History of Medicine, Johns Hopkins School of Medicine, Baltimore, Maryland.

Joshua M. Sharfstein, MD

Department of Health Policy and Management, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland.

Attacks on Public Health Officials During COVID-19

On June 24, 2020, California Governor Gavin Newsom remarked on a disturbing phenomenon: health officers are “getting attacked, getting death threats, they’re being demeaned and demoralized.”¹ At least 27 health officers in 13 states (including Nichole Quick of Orange County in southern California, Ohio Health Director Amy Acton, and West Virginia Health Officer Cathy Slemple) have resigned or been fired since the start of the coronavirus disease 2019 (COVID-19) pandemic. Across the US, health officers have been subject to doxing (publishing private information to facilitate harassment), angry and armed protesters at their personal residences, vandalism, and harassing telephone calls and social media posts, some threatening bodily harm and necessitating private security details.¹

The present harassment of health officials for proposing or taking steps to protect communities from COVID-19 is extraordinary in its scope and nature, use of social media, and danger to the ongoing pandemic response. It reflects misunderstanding of the pandemic, biases in human risk perception, and a general decline in public civility. Some of these causes resist easy fixes, but elected officials and health officials can take certain actions to help address the problem.

Today’s increasingly routine harassment and threats against health officials have much in common with grow-

erence for risks associated with doing nothing (ie, letting the virus spread) over those linked to affirmative acts, such as public health orders. Distance bias and optimism bias may be operating for those who believe COVID-19 will not seriously affect them or their loved ones. In an information space flooded with conflicting information, confirmation bias allows some people to dismiss evidence that does not comport with their pre-existing beliefs.

These forces help explain resistance to COVID-19 orders, but the shape and ferocity the resistance has assumed can be traced to other factors. The general decline in civility in political discourse in the US has made ad hominem attacks commonplace and hollowed out traditional ways of grappling with value conflicts. Social media amplifies such attacks, with the #FireFauci campaign providing an early template. Joining these attacks may be an easy outlet for people under stress from economic disruption and social isolation. One Facebook network of 22 000 users organized protests on the front lawns of health officers.

The environment deteriorates further when elected leaders attack their own public health officials. Members of the current presidential administration, and various members of Congress, have displayed hostility toward experts inside and outside of government. In July,

Factors Associated With US Adults' Likelihood of Accepting COVID-19 Vaccination

Sarah Kreps, PhD; Sandip Prasad, MD; John S. Brownstein, PhD; Yulin Hswen, PhD; Brian T. Garibaldi, MD, MEHP; Baobao Zhang, PhD; Douglas L. Kriner, PhD

RESULTS A total of 1971 US adults responded to the survey (median age, 43 [interquartile range, 30-58] years); 999 (51%) were women, 1432 (73%) White, 277 (14%) were Black, and 190 (10%) were Latinx. An increase in efficacy from 50% to 70% was associated with a higher probability of choosing a vaccine (coefficient, 0.07; 95% CI, 0.06-0.09), and an increase from 50% to 90% was associated with a higher probability of choosing a vaccine (coefficient, 0.16; 95% CI, 0.15-0.18). An increase in protection duration from 1 to 5 years was associated with a higher probability of choosing a vaccine (coefficient, 0.05 95% CI, 0.04-0.07). A decrease in the incidence of major adverse effects from 1 in 10 000 to 1 in 1 000 000 was associated with a higher probability of choosing a vaccine (coefficient, 0.07; 95% CI, 0.05-0.08). An FDA emergency use authorization was associated with a lower probability of choosing a vaccine (coefficient, -0.03; 95% CI, -0.04 to -0.01) compared with full FDA approval. A vaccine that originated from a non-US country was associated with a lower probability of choosing a vaccine (China: -0.13 [95% CI, -0.15 to -0.11]; UK: -0.04 [95% CI, -0.06 to -0.02]). Endorsements from the US Centers for Disease Control and Prevention (coefficient, 0.09; 95% CI, 0.07-0.11) and the World Health Organization (coefficient, 0.06; 95% CI, 0.04-0.08), compared with an endorsement from President Trump were associated with higher probabilities of choosing a vaccine. Analyses of participants' willingness to receive each vaccine when assessed individually yielded similar results. An increase in efficacy from 50% to 90% was associated with a 10% higher marginal mean willingness to receive a vaccine (from 0.51 to 0.61). A reduction in the incidence of major side effects was associated with a 4% higher marginal mean willingness to receive

Views on Getting a COVID-19 Vaccine

AMONG ADULTS AGE 50-80

