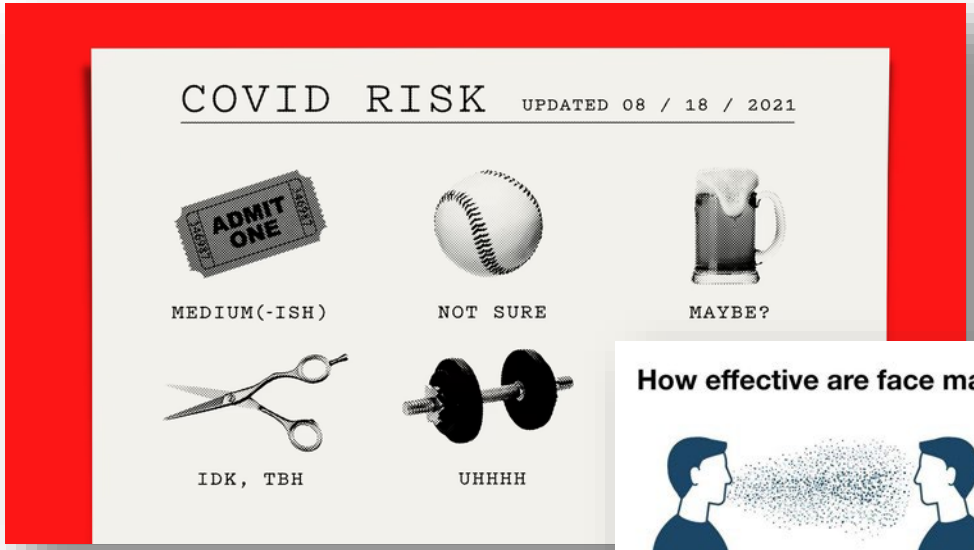
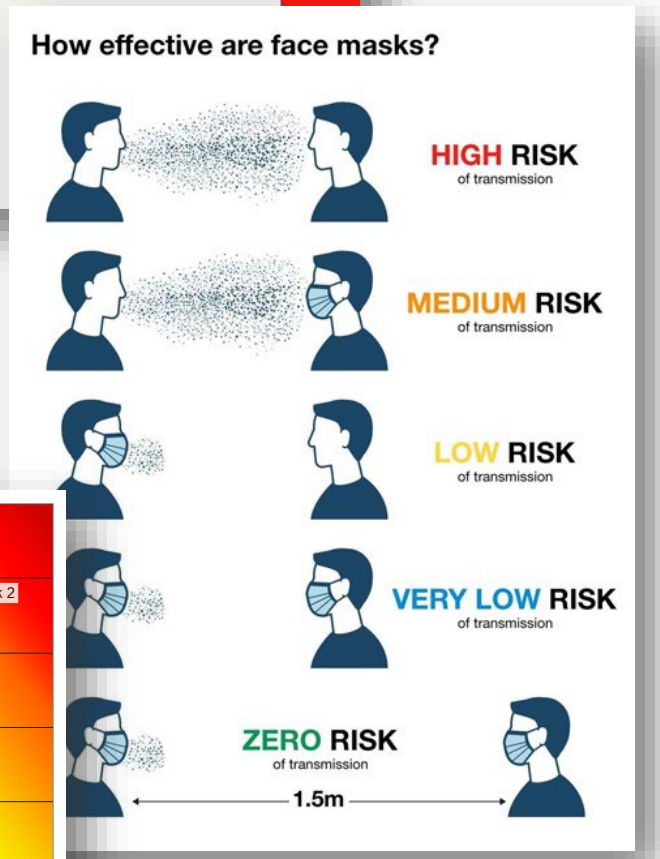
RE-EXAMINING THE COGNITIVE SCIENCE OF RISK IN THE COVID-19 PANDEMIC ERA

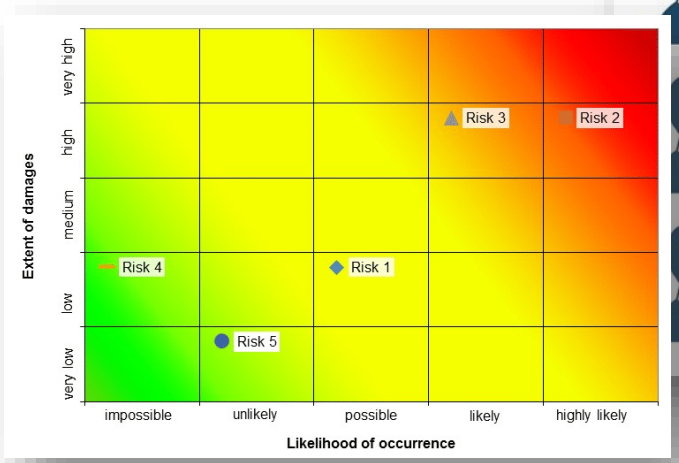
Gavin Huntley-Fenner, Ph.D.

January 21, 2022

HOW SHOULD WE THINK ABOUT RISK?







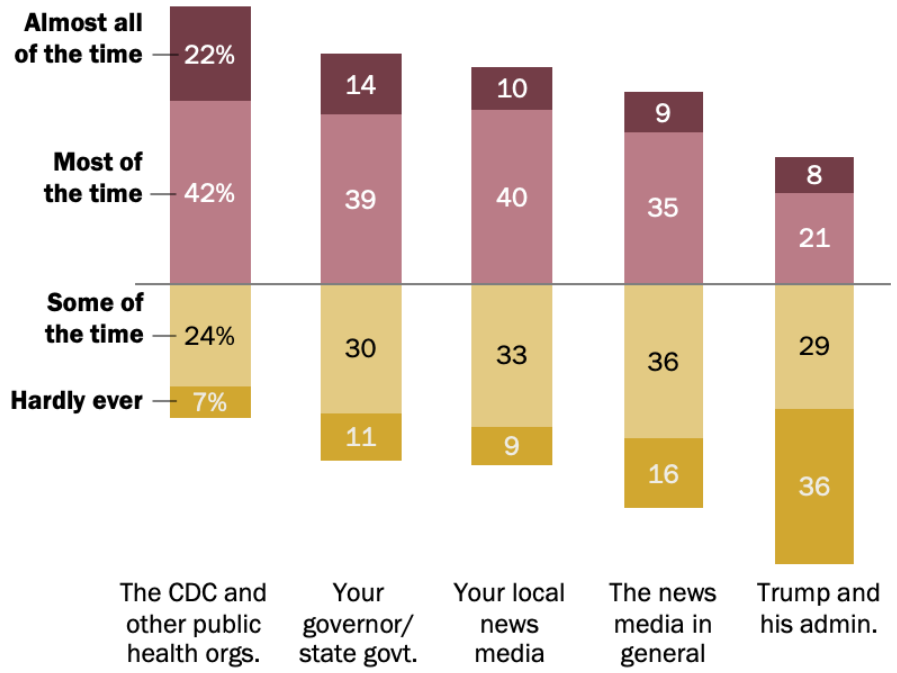
- Risk of transmission? illness? hospitalization?
- Risk of death?
- Risk of severe permanently disabling injury or accidental? or untimely? death
- Severity x Likelihood = Risk
- Uncertainty or volatility

Source: https://www.gannawarra.vic.gov.au/News-Media/Wear-a-mask-and-help-stop-the-spread-of-COVID-19; https://www.theatlantic.com/health/archive/2021/08/delta-variant-pandemic-risk-safety/619798/

WHOM DO WE TRUST FOR INFORMATION REGARDING HEALTH AND SAFETY RISK?

Majority says CDC and public health organizations largely getting the facts right about coronavirus

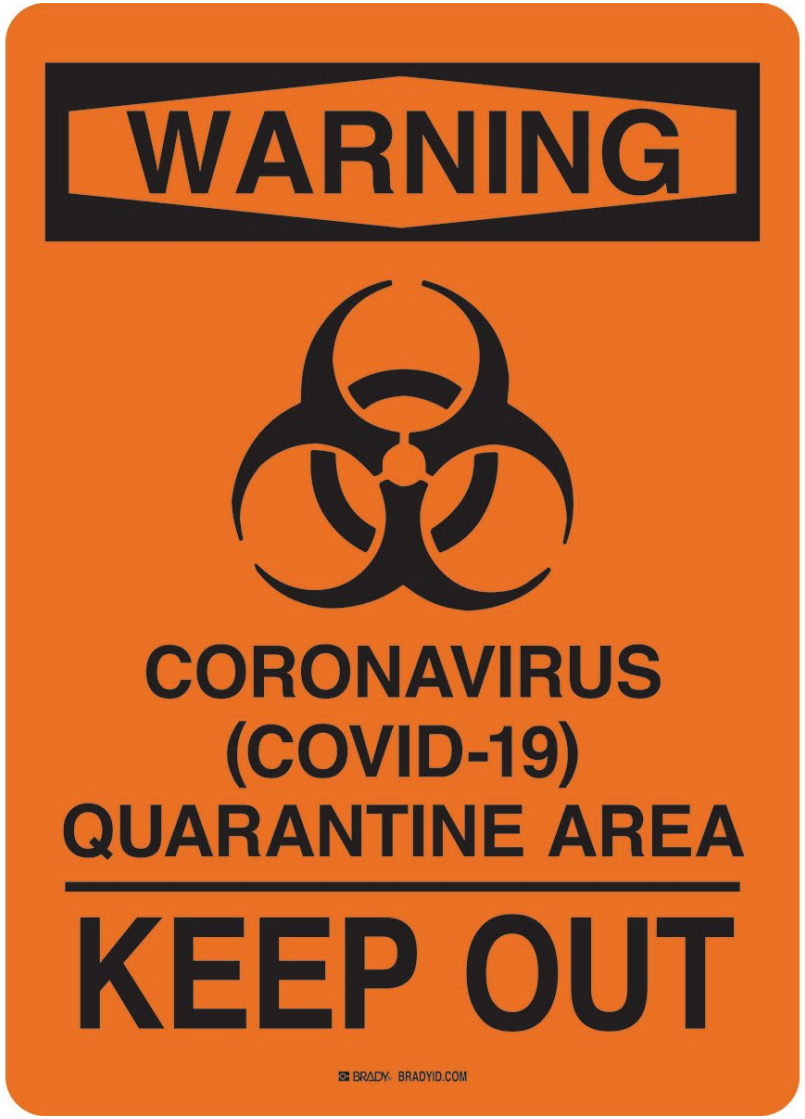
% of U.S. adults who say each gets the facts right when it comes to the coronavirus outbreak ...



Note: Respondents who did not give an answer not shown.
Source: Survey of U.S. adults conducted June 4-10, 2020.
"Three Months In, Many Americans See Exaggeration, Conspiracy Theories and Partisanship in COVID-19 News"

PEW RESEARCH CENTER

THE IDEA OF A WARNING IS FUNDAMENTAL TO THEORIES OF RISK COMMUNICATION



- The effectiveness of warnings depends on some underlying assumptions about the target person
  - Target is risk averse
  - Target is rational
  - Target has the ability to competently assess and choose to act
- Except for some populations (Smokers? Teens? Children?)
- What happens when these conditions don't apply?

ALL SIGNS WERE THAT THE COVID PANDEMIC WOULD LEAD TO INCREASED PUBLIC CONCERN AND RISK AVERSIVENESS

TABLE 1
Factors Important in Risk Perception and Evaluation

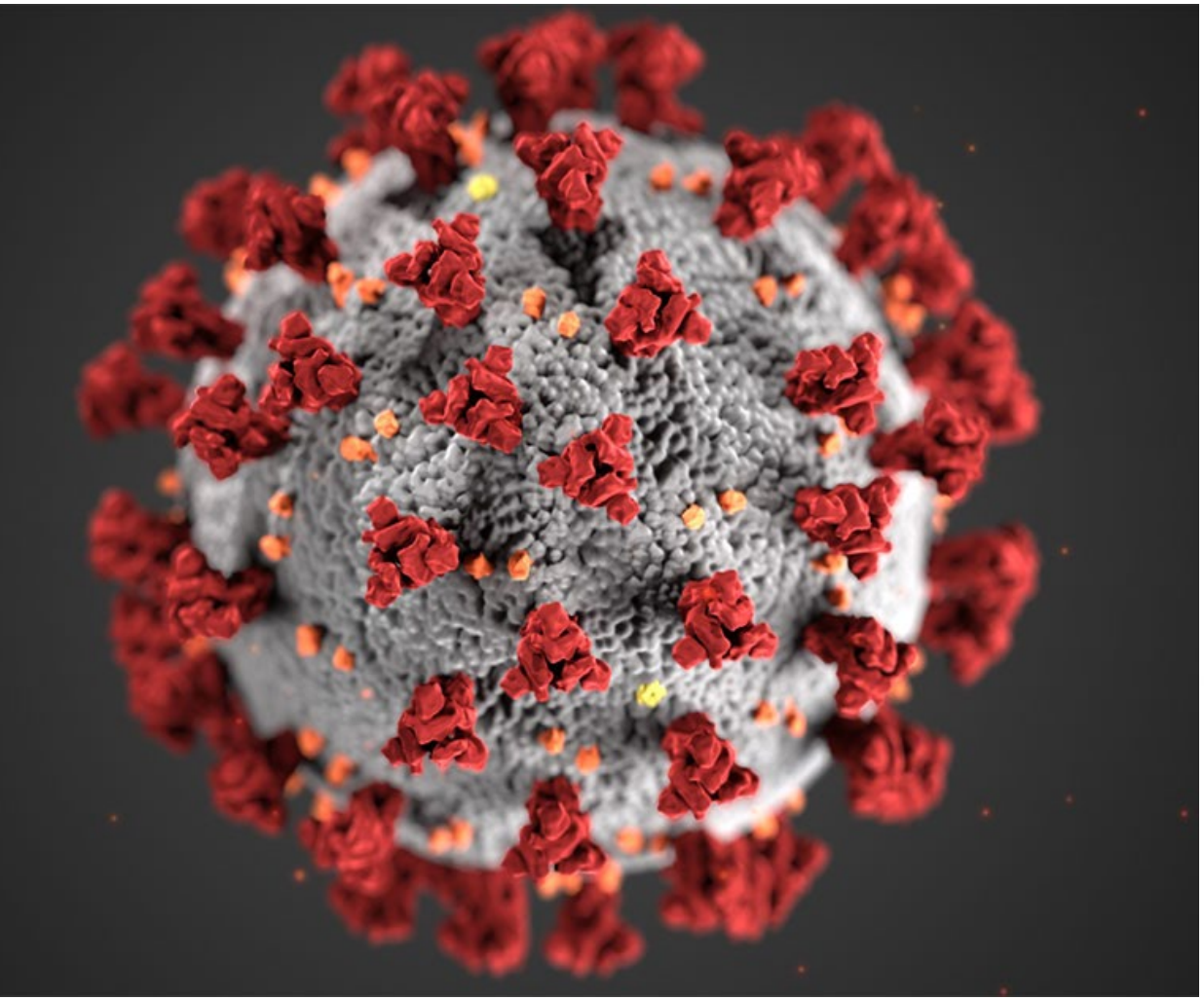
Factor	*Conditions Associated with Increased Public Concern*	*Conditions Associated with Decreased Public Concern*
Catastrophic potential	fatalities and injuries grouped in time and space	fatalities and injuries scattered and random
Familiarity	unfamiliar	familiar
Understanding	mechanisms or process not misunderstood	mechanisms or process understood
Uncertainty	risks scientifically unknown or uncertain	risks known to science
Controllability	uncontrollable	controllable
Voluntariness of exposure	involuntary	voluntary
Effects on children	children specifically at risk	children not specifically at risk
Effects manifestation	delayed effects	immediate effects
Effects on future generations	risk to future generations	no risk to future generations
Victim identity	identifiable victims	statistical victims
Dread	effects dreaded	effects not dreaded
Trust in institutions	lack of trust in responsible institutions	trust in responsible institutions
Media attention	much media attention	little media attention
Accident history	major and sometimes minor accidents	no major or minor accidents
Equity	inequitable distribution of risks and benefits	equitable distribution of risks and benefits
Benefits	unclear benefits	clear benefits
Reversibility	effects irreversible	effects reversible
Personal stake	individual personally at risk	individual not personally at risk
Origin	caused by human actions	caused by acts of nature or God

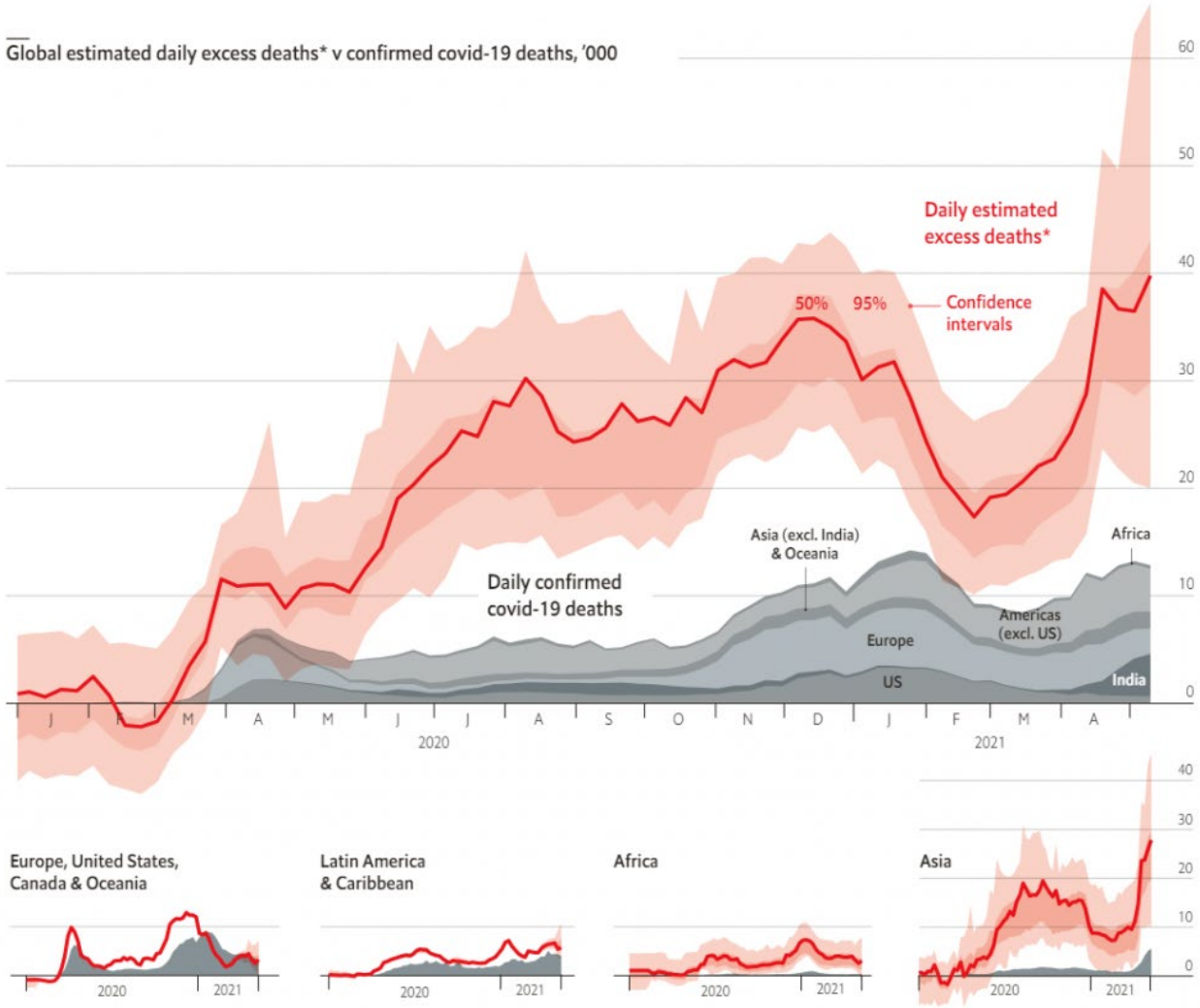
However …

- **The idea that the "weak" get sick (elderly, compromised, socially marginal) caused relief rather than empathy or horror**
- **Americans apparently resigned themselves to 1,000,000+ deaths without demanding fundamental systemic changes**
- **Individual perspectives on their own susceptibility and obligation to their neighbors appears to be partly driven by identity**

Source: Source Vincent T. Covello(1992) Risk Communication: An Emerging Area of Health. Communication Research, Annals of the International Communication Association, 15:1, 359-373, DOI: 10.1080/23808985.1992.11678816; https://www.cdc.gov/coronavirus/2019-ncov/vaccines/facts.html

DISEASE CAUSED BY THE SARS-COV-2 VIRUS MAY BE CONTRASTED WITH THE EFFECTS OF THE COVID PANDEMIC …

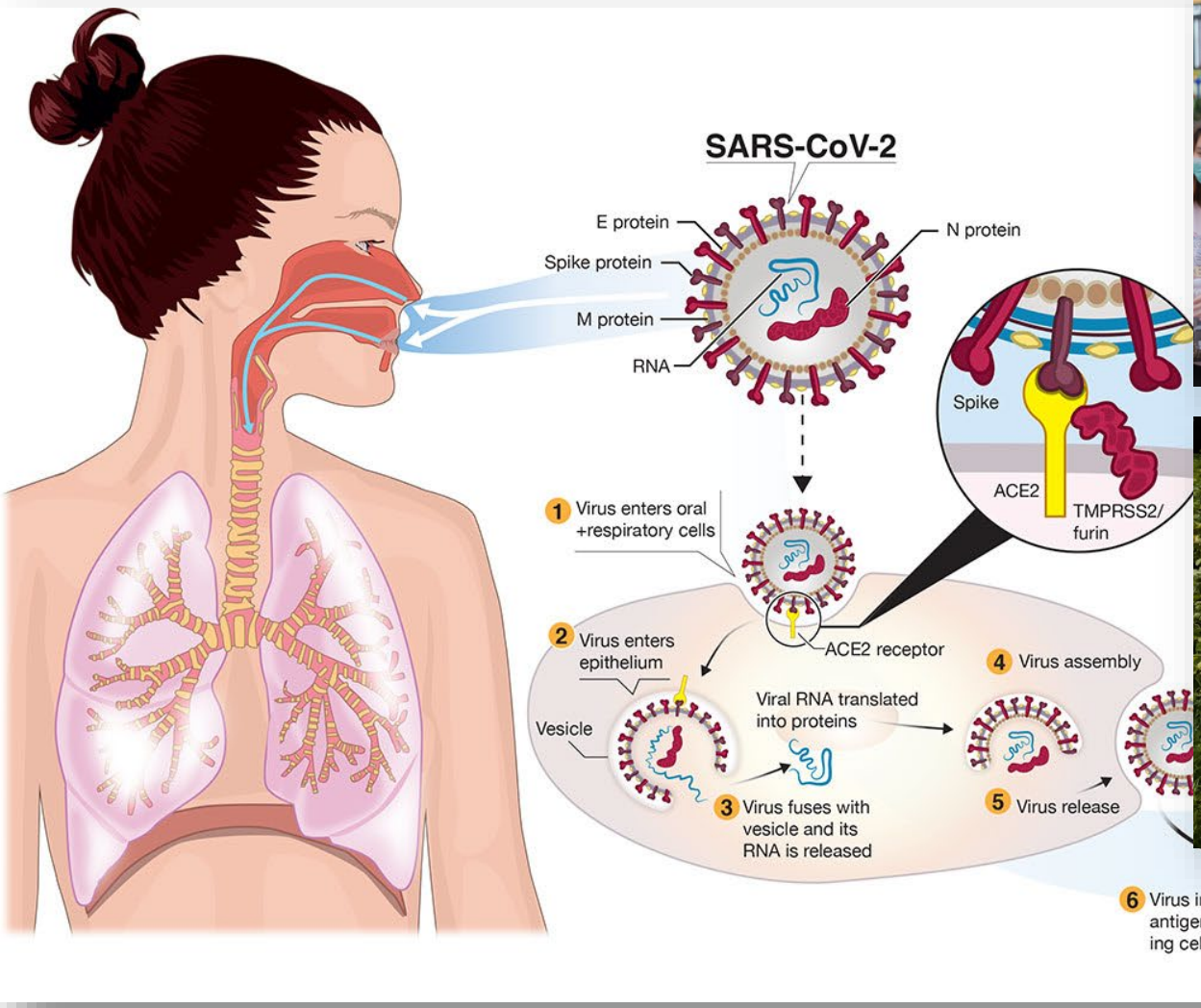




Nature made the virus, but the pandemic was man-made

Source: https://www.chicagotribune.com/coronavirus/ct-viz-coronavirus-how-it-was-drawn-20200403-ka4t4zyab5ejpcp5y7ukn2mb4u-story.html; There have been 7m-13m excess deaths worldwide during the pandemic https://www.economist.com/briefing/2021/05/15/there-have-been-7m-13m-excess-deaths-worldwide-during-the-pandemic; CORONA image created by Alyssa Eckert and Dan Higgins of the CDC

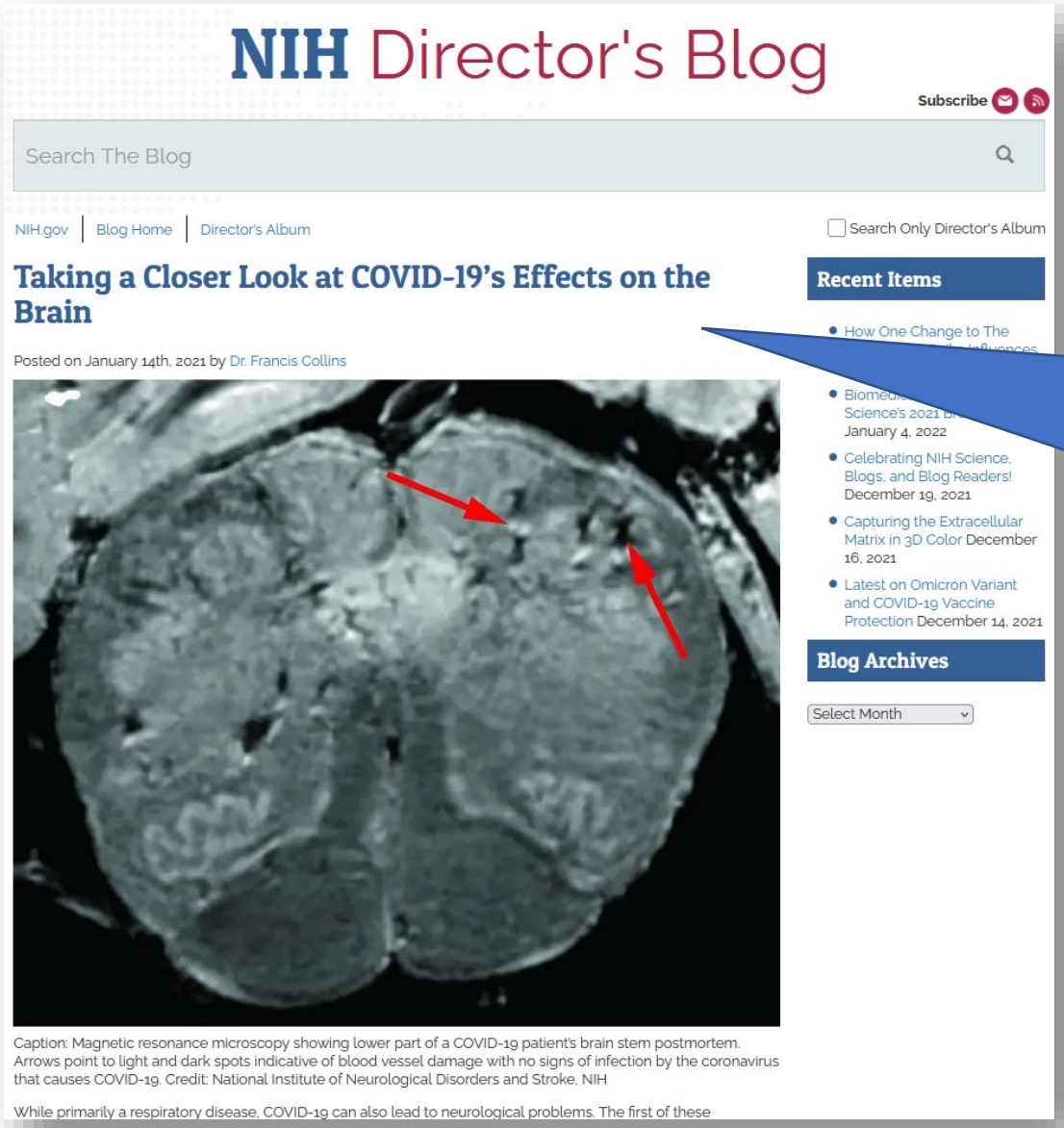
BIOLOGY OF SARS-COV-2 IS WELL UNDERSTOOD IN CONTRAST TO THE PUBLIC HEALTH, SOCIAL AND BEHAVIORAL CONSEQUENCES OF THE COVID PANDEMIC



Gavin Huntley-Fenner © 2022

Source: Figure is from Funk CD, Laferrière C and Ardakani A (2020) A Snapshot of the Global Race for Vaccines Targeting SARS-CoV-2 and the COVID-19 Pandemic. *Front. Pharmacol.* 11:937. doi: 10.3389/fphar.2020.00937 https://www.frontiersin.org/articles/10.3389/fphar.2020.00937/full

SARS-COV-2 IMPACTS THE CENTRAL NERVOUS SYSTEM (CNS), BUT DATA ARE STILL FORTHCOMING ON THE LONG-TERM CNS IMPACTS LET ALONE BEHAVIORAL CHANGE



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Taking a Closer Look at COVID-19's Effects on the Brain

Posted on January 14th, 2021 by Dr. Francis Collins

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Caption: Magnetic resonance microscopy showing lower part of a COVID-19 patient's brain stem postmortem. Arrows point to light and dark spots indicative of blood vessel damage with no signs of infection by the coronavirus that causes COVID-19. Credit: National Institute of Neurological Disorders and Stroke, NIH

While primarily a respiratory disease, COVID-19 can also lead to neurological problems. The first of these

"… The first of these symptoms might be the loss of smell and taste, while some people also may later battle headaches, debilitating fatigue, and trouble thinking clearly, sometimes referred to as "brain fog."

Whether there are any longer term behavioral impacts is still in question.

Source: Taking a Closer Look at COVID-19's Effects on the Brain Posted on January 14th, 2021 by Dr. Francis Collins https://directorsblog.nih.gov/2021/01/14/taking-a-closer-look-at-the-effects-of-covid-19-on-the-brain/

THE COVID-19 PANDEMIC HOWEVER HAS HEIGHTENED GLOBAL PERIL AND UNCERTAINTY CONTRIBUTING TO A RISE IN FEAR-BASED RISK TAKING

What Explains the COVID-19 Stock Market?*

Josue Cox — NYU
Daniel L. Greenwald — MIT Sloan
Sydney C. Ludvigson — NYU and NBER

First draft: July 1, 2020
This draft: March 4, 2021

Abstract

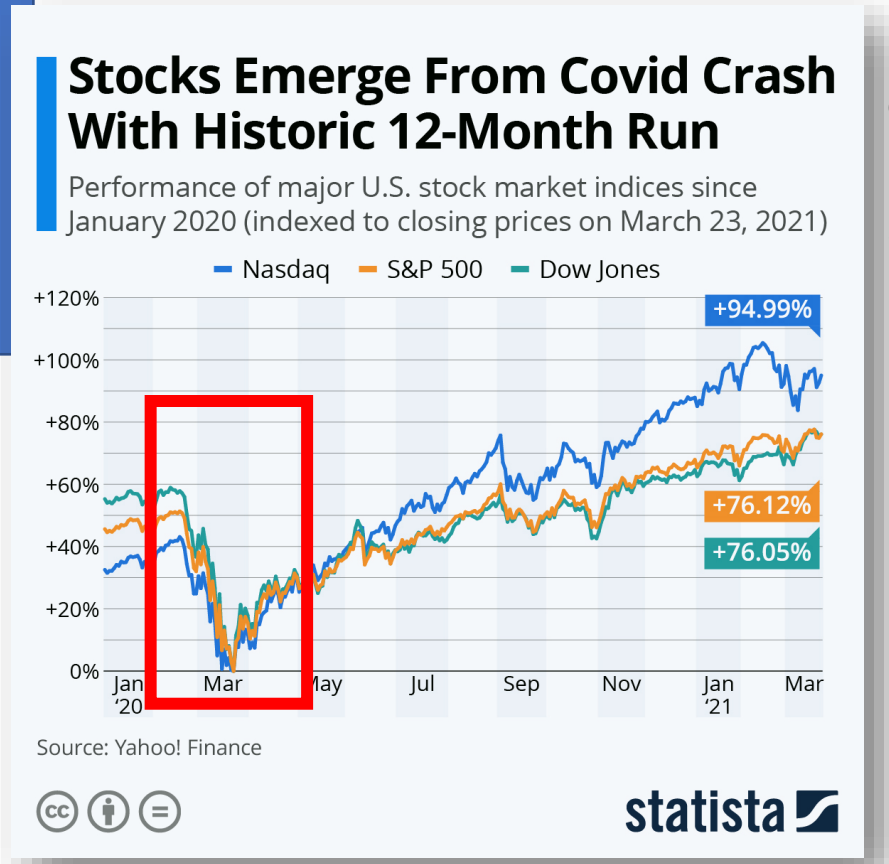
What explains stock market behavior in the early weeks of the coronavirus pandemic? Estimates from a dynamic asset pricing model point to wild fluctuations in the pricing of stock market risk, driven by shifts in risk aversion or sentiment. We find further evidence that the Federal Reserve played a role in these fluctuations, via a series of announcements outlining unprecedented steps to provide several trillion dollars in loans to support the economy. As of July 31 of 2020, however, only a tiny fraction of the credit that the central bank announced it stood ready to provide in early April had been extended, reinforcing the conclusion that market movements during COVID-19 have been more reflective of sentiment than substance.

JEL: G10, G12, G17.

*Cox: Department of Economics, New York University, 19 W. 4th Street, 6th Floor, New York, NY 10012; Email: josue.cox@nyu.edu; Greenwald: Finance Group, MIT Sloan School of Management, 100 Main Street, Building E62, Cambridge, MA 02142; Email: dlg@mit.edu. Ludvigson: Department of Economics, New York University, 19 W. 4th Street, 6th Floor, New York, NY 10012; Email: sydney.ludvigson@nyu.edu; www.sydneyludvigson.com.

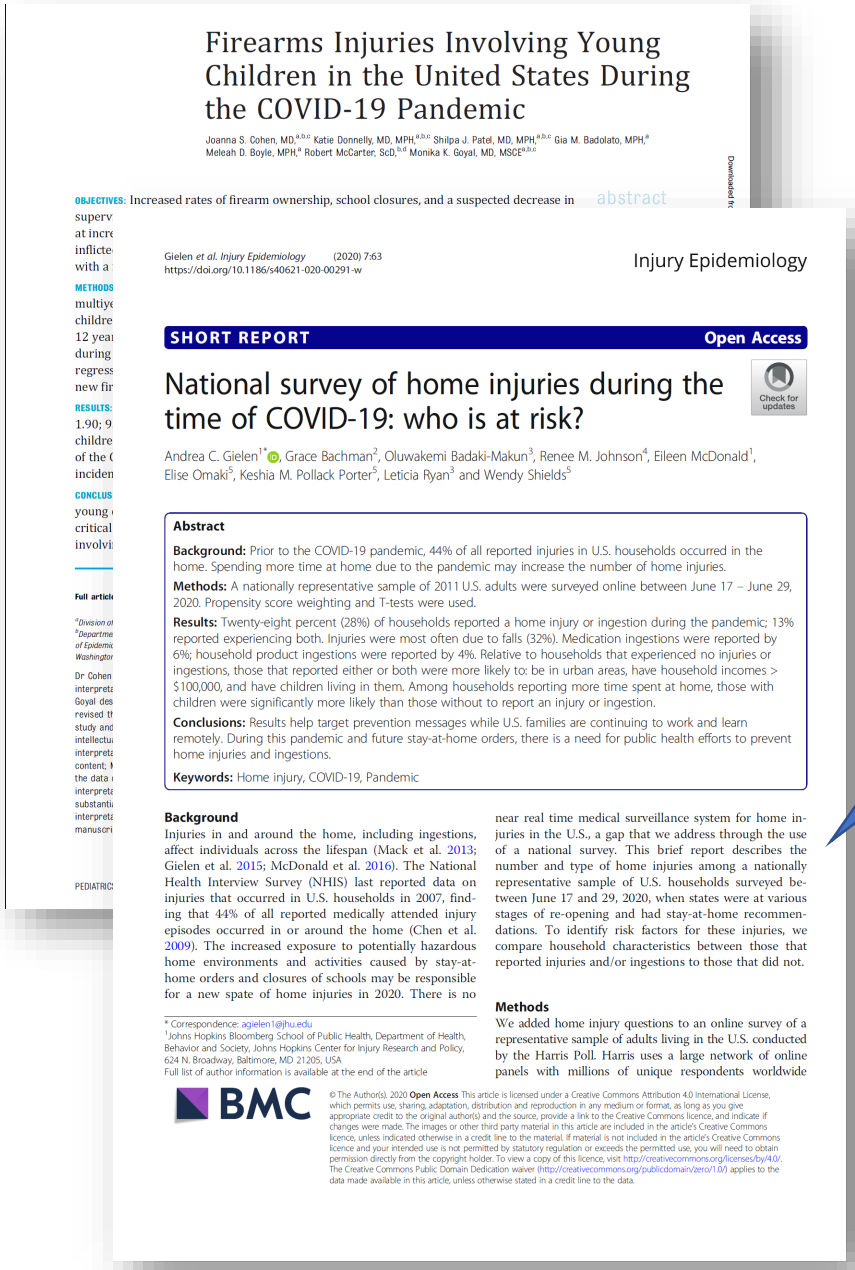
We are grateful to Aleksandra Alferova for excellent research assistance.

" The findings … point to a major role for fluctuations in effective risk aversion or sentiment in driving stock market volatility between February and April of 2020."



Source: Cox, J., Greenwald, D. L., & Ludvigson, S. C. (2020). *What Explains the COVID-19 Stock Market?* (No. w27784). National Bureau of Economic Research. ; Image of market ids from https://www.statista.com/chart/20939/year-to-date-performance-of-major-us-stock-market-indices/

THE RISK OF HOUSEHOLD INJURY INCREASED IN 2020



Firearms Injuries Involving Young Children in the United States During the COVID-19 Pandemic

Joanna S. Cohen, MD,[a,b,c] Katie Donnelly, MD, MPH,[a,b,c] Shilpa J. Patel, MD, MPH,[a,b,c] Gia M. Badolato, MPH,[a] Meleah D. Boyle, MPH,[a] Robert McCarter, ScD,[b,d] Monika K. Goyal, MD, MSCE[a,b,c]

OBJECTIVES: Increased rates of firearm ownership, school closures, and a suspected decrease in

abstract

Gielen et al. Injury Epidemiology (2020) 7:63
https://doi.org/10.1186/s40621-020-00291-w

Injury Epidemiology

SHORT REPORT Open Access

National survey of home injuries during the time of COVID-19: who is at risk?

Check for updates

Andrea C. Gielen[1*], Grace Bachman[2], Oluwakemi Badaki-Makun[3], Renee M. Johnson[4], Eileen McDonald[1], Elise Omaki[5], Keshia M. Pollack Porter[5], Leticia Ryan[3] and Wendy Shields[5]

Abstract

Background: Prior to the COVID-19 pandemic, 44% of all reported injuries in U.S. households occurred in the home. Spending more time at home due to the pandemic may increase the number of home injuries.

Methods: A nationally representative sample of 2011 U.S. adults were surveyed online between June 17 – June 29, 2020. Propensity score weighting and T-tests were used.

Results: Twenty-eight percent (28%) of households reported a home injury or ingestion during the pandemic; 13% reported experiencing both. Injuries were most often due to falls (32%). Medication ingestions were reported by 6%; household product ingestions were reported by 4%. Relative to households that experienced no injuries or ingestions, those that reported either or both were more likely to: be in urban areas, have household incomes > $100,000, and have children living in them. Among households reporting more time spent at home, those with children were significantly more likely than those without to report an injury or ingestion.

Conclusions: Results help target prevention messages while U.S. families are continuing to work and learn remotely. During this pandemic and future stay-at-home orders, there is a need for public health efforts to prevent home injuries and ingestions.

Keywords: Home injury, COVID-19, Pandemic

Background

Injuries in and around the home, including ingestions, affect individuals across the lifespan (Mack et al. 2013; Gielen et al. 2015; McDonald et al. 2016). The National Health Interview Survey (NHIS) last reported data on injuries that occurred in U.S. households in 2007, finding that 44% of all reported medically attended injury episodes occurred in or around the home (Chen et al. 2009). The increased exposure to potentially hazardous home environments and activities caused by stay-at-home orders and closures of schools may be responsible for a new spate of home injuries in 2020. There is no near real time medical surveillance system for home injuries in the U.S., a gap that we address through the use of a national survey. This brief report describes the number and type of home injuries among a nationally representative sample of U.S. households surveyed between June 17 and 29, 2020, when states were at various stages of re-opening and had stay-at-home recommendations. To identify risk factors for these injuries, we compare household characteristics between those that reported injuries and/or ingestions to those that did not.

Methods

We added home injury questions to an online survey of a representative sample of adults living in the U.S. conducted by the Harris Poll. Harris uses a large network of online panels with millions of unique respondents worldwide

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Full list of author information is available at the end of the article

BMC

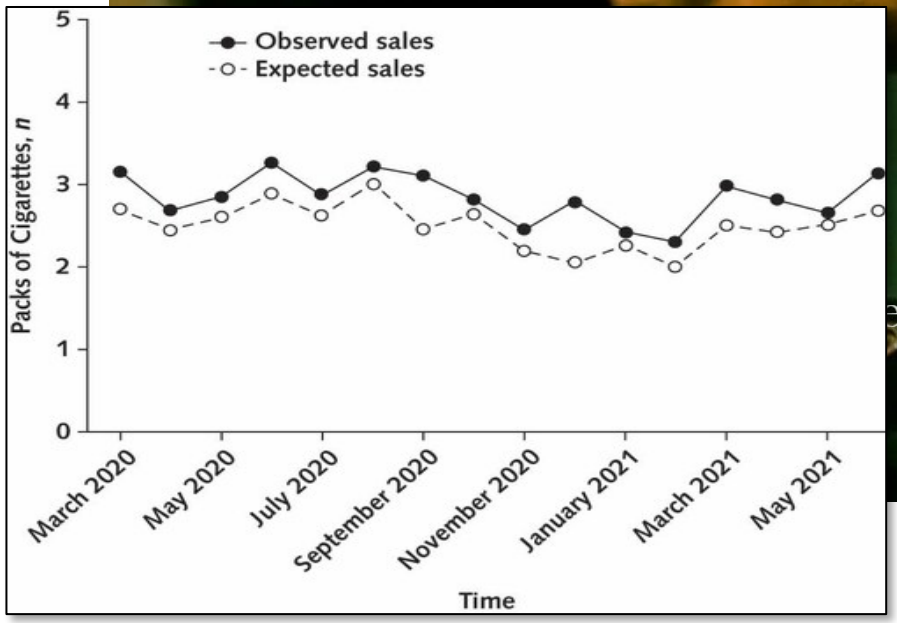
"28% of households reported a home injury or ingestion during the pandemic …"

Firearms
Falls
Medical ingestions

Risk-taking or Exposure? More people were at home longer

Source: Cox, J., Greenwald, D. L., & Ludvigson, S. C. (2020). *What Explains the COVID-19 Stock Market?* (No. w27784). National Bureau of Economic Research. ; Image of market ids from https://www.statista.com/chart/20939/year-to-date-performance-of-major-us-stock-market-indices/; Cohen J S, Donnelly K, Patel S J, et al. Firearms Injuries Involving Young Children in the United States During the COVID-19 Pandemic. Pediatrics. 2021;148(1):e2020042697

CIGARETTE SALES INCREASED IN 2020 FOR THE FIRST TIME IN TWO DECADES



Sources: "**That Cloud of Smoke Is Not a Mirage**" https://www.nytimes.com/2022/01/12/style/smoking-cigarettes-comeback.html "**FTC Report Finds Annual Cigarette Sales Increased for the First Time in 20 Years**" https://www.ftc.gov/news-events/press-releases/2021/10/ftc-report-finds-annual-cigarette-sales-increased-first-time-20; https://www.acpjournals.org/doi/full/10.7326/M21-3350 Changes in Cigarette Sales in the United States During the COVID-19 Pandemic

LESS TRAFFIC BUT MORE FATALITIES IN 2020 AS EJECTION RISK INCREASED

U.S. Department of Transportation
National Highway Traffic Safety Administration

TRAFFIC SAFETY FACTS
Research Note

NHTSA

DOT HS 813 135 | Behavioral Safety Research | June 2021

Update to Special Reports on Traffic Safety During the COVID-19 Public Health Emergency: Fourth Quarter Data

The National Highway Traffic Safety Administration continues to explore traffic safety during the COVID-19 public health emergency. This work is crucial to further understanding changes in dangerous driving behaviors and letting us expand or evolve countermeasures to meet current needs in States and across the country. This Research Note updates traffic safety during the COVID-19 public health emergency through the end of the 2020 calendar year with a focus on the fourth quarter (Q4) of 2020.

To date, NHTSA has released two reports synthesizing traffic safety data in the second and third quarters of 2020, and an interim report on research examining changes in the prevalence of drugs and alcohol in seriously or fatally injured road users, which noted increased prevalence of alcohol and some other drugs among these individuals. These reports provided context to data from NHTSA's National Center for Statistics and Analysis (NCSA) that showed increases in the number and rate of fatalities through the third quarter of 2020. Given the importance of these findings, NHTSA immediately convened workshops and meetings with national partners, State highway safety professionals, and researchers. In these meetings, NHTSA led conversations on how to address these increases in traffic fatalities, especially focusing on risky driving behaviors. NHTSA then continued to collect and synthesize data throughout Q4 of 2020, including alcohol and drug prevalence for road users admitted to participating trauma centers. Data sources not previously identified were sought. New findings where the research team identified additional confirmatory evidence are described below. Data limitations identified in the earlier reports also apply to the data reported here.

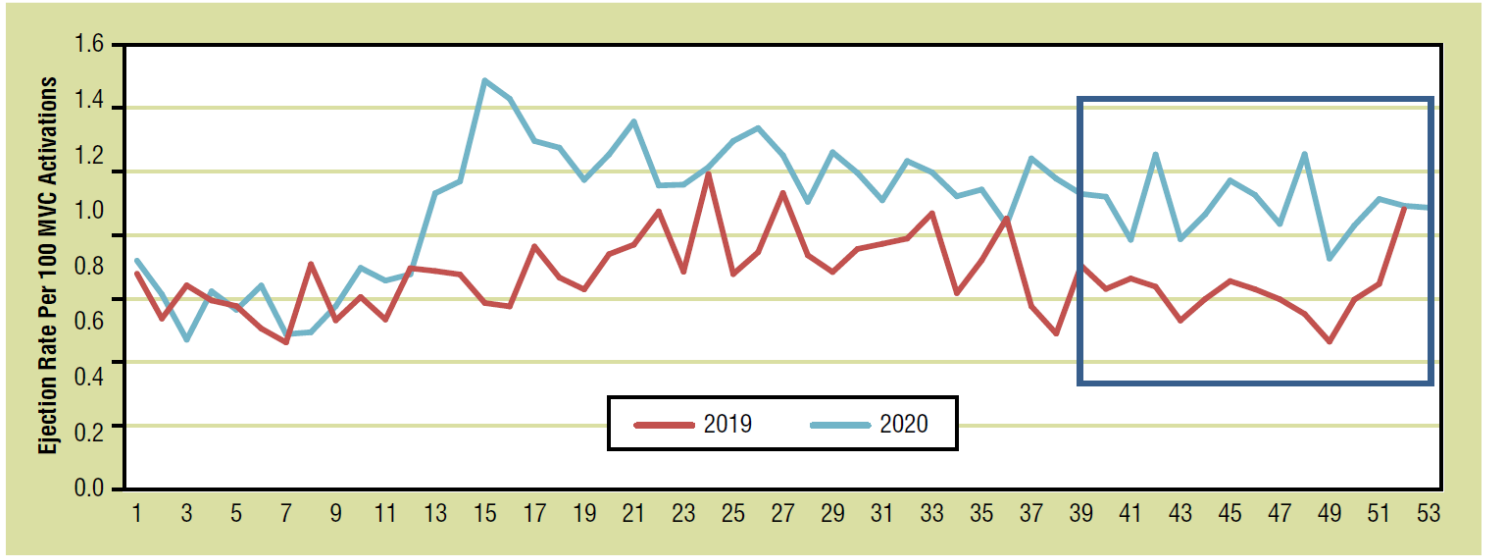
Background

During the first 9 months of 2020, driving patterns and behaviors in the United States changed significantly (Wagner et al., 2020; Office of Behavioral Safety Research, 2021). Of the drivers who remained on the roads, some engaged in riskier behavior, including speeding, failure to wear seat belts, and driving under the influence of alcohol or other drugs. Traffic data cited in those reports showed average speeds increased during the Q2 and Q3, and extreme speeds became more common. Other data suggested fewer people in crashes used their seat belts. NHTSA's study of seriously or fatally injured road users at five participating trauma centers (Thomas et al., 2020) found that almost two-thirds of drivers tested positive for at least one active drug, including alcohol, marijuana, or opioids between mid-March and mid-July. The proportion of drivers testing positive for opioids nearly doubled after mid-March, compared to the previous 6 months, while marijuana prevalence increased by about 50%.

This Research Note includes analyses from the Bureau of Transportation Statistics (BTS) and the Federal Highway Administration's (FHWA) National Performance Management Research Dataset (NPMRDS). These sources use telematic data that captures large volumes of information but does not permit analysis of individual performance. To address this limitation, researchers sought other data sources through traditional literature as well as "gray literature" such as blog posts to identify potential emerging behavioral safety trends that occurred during the public health emergency. They identified limited research reports documenting changes in distracted driving (Zendrive, 2020) and pedestrian travel patterns (StreetLight Data, 2021). These data sources use promising techniques to explore behavior; however, additional confirma-

NHTSA's Office of Behavioral Safety Research | 1200 New Jersey Avenue SE, Washington, DC 20590

Figure 6
Ejections per 100 Motor Vehicle Crash EMS Activations by Week of Year, 2019 and 2020



Source: NEMSIS

Source: Office of Behavioral Safety Research. (2021, June). Update to special reports on traffic safety during the COVID-19 public health emergency: Fourth quarter data (Report No. DOT HS 813 135). National Highway Traffic Safety Administration.

THESE SOCIAL AND BEHAVIORAL PANDEMIC EFFECTS MAY BE TEMPORARY

- Stock market is apparently recovered.
- Driver behavior is changing as people go back to work.
- Children went back to school … somewhat.
- Alcohol and tobacco or nicotine use?

UNCERTAINTY DROVE SHORT-TERM BEHAVIOR, BUT YEARS INTO THE PANDEMIC MISINFORMATION CONTINUES TO AFFECT US – VACCINE EXAMPLE

MYTH: COVID-19 vaccines cause variants.

FACT: COVID-19 vaccines do not create or cause variants of the virus that causes COVID-19. Instead, COVID-19 vaccines can help prevent new variants from emerging.

MYTH: It is safer for my child to build immunity by getting infected with COVID-19 than to build immunity by getting the vaccine.

FACT: Getting children ages 5 years and older vaccinated against COVID-19 is the best way to protect them from COVID-19.

MYTH: COVID-19 vaccines will affect my fertility.

FACT: Currently no evidence shows that any vaccines, including COVID-19 vaccines, cause fertility problems (problems trying to get pregnant) in women or men.

TABLE 1
Factors Important in Risk Perception and Evaluation

Factor	*Conditions Associated with Increased Public Concern*	*Conditions Associated with Decreased Public Concern*
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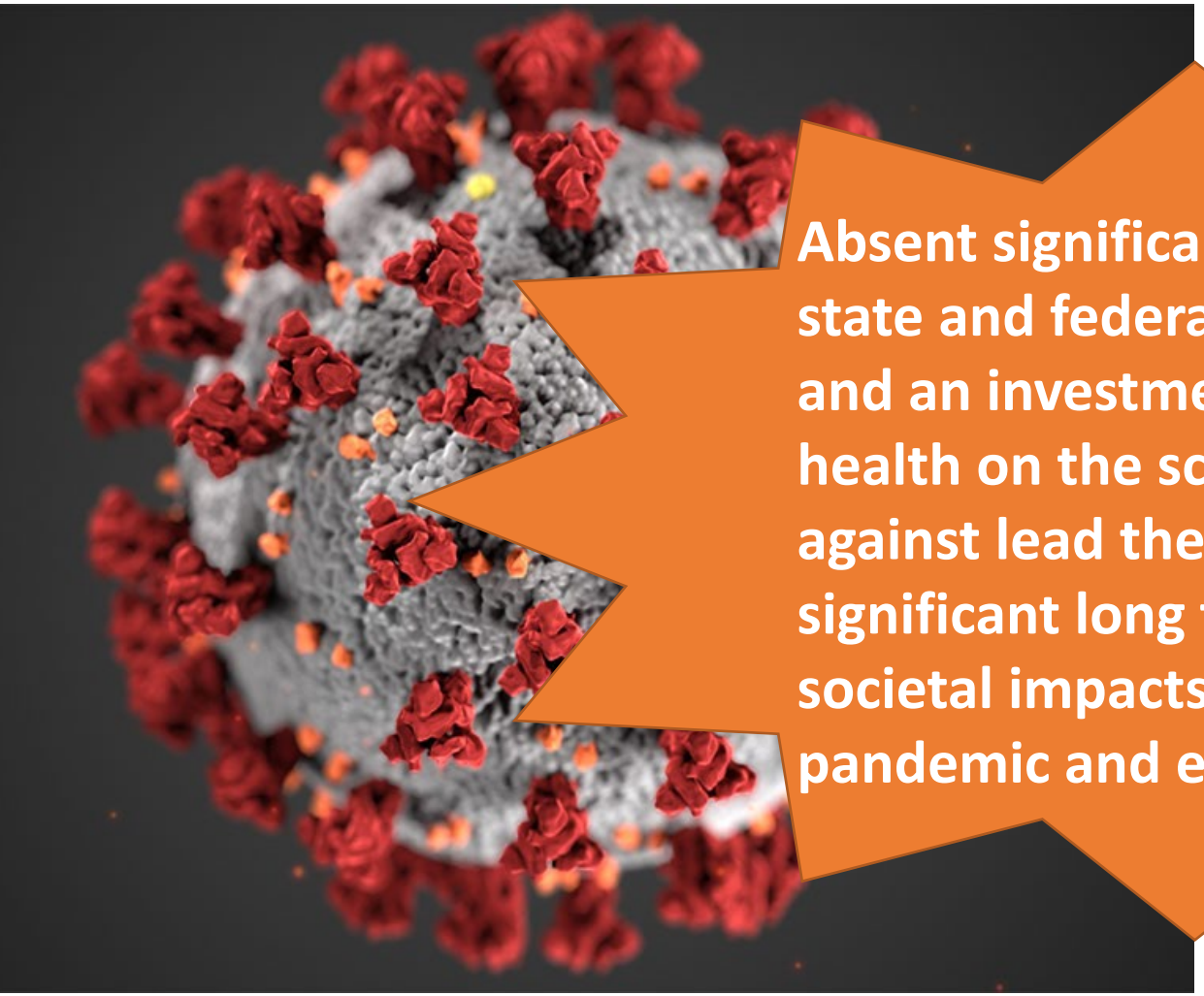
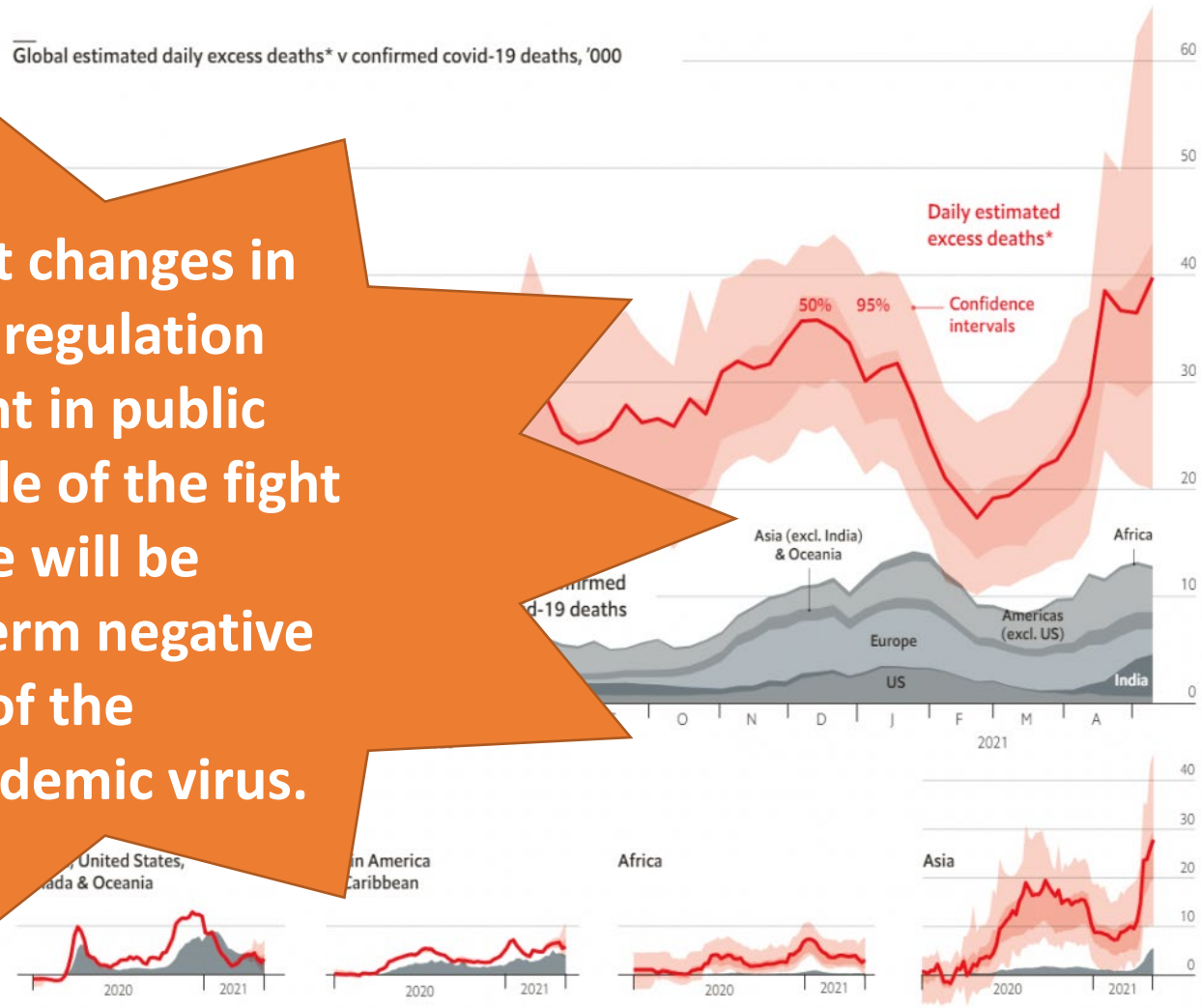
THE LONGER TERMS IMPACTS OF SARS-COV-2 ON THE CNS AND THE PANDEMIC EXPERIENCE IN THE USA AND BEYOND ARE TBD



Absent significant changes in state and federal regulation and an investment in public health on the scale of the fight against lead there will be significant long term negative societal impacts of the pandemic and endemic virus.



Source: https://www.chicagotribune.com/coronavirus/ct-viz-coronavirus-how-it-was-drawn-20200403-ka4t4zyab5ejpcp5y7ukn2mb4u-story.html; There have been 7m-13m excess deaths worldwide during the pandemic https://www.economist.com/briefing/2021/05/15/there-have-been-7m-13m-excess-deaths-worldwide-during-the-pandemic

LEAD WAS KNOWN AS A POISON IN ANTIQUITY, BUT UNTIL FAIRLY RECENTLY, AMERICANS LIVED WITH LEAD AND ITS ENDEMIC SOCIAL CONSEQUENCES

Lead takes part in many games

LEAD whistles back and forth in every play on the baseball diamond. It is at the bottom of every football scrimmage. It leaps back and forth across the tennis net. Lead influences every stroke the golfer takes, and is the fisherman's helper in making his catch.

How lead gets into these sports

Wherever toughness is required in rubber, lead is added to it. Thus lead in the form of litharge—or red-lead, that other lead oxide—is in the rubber cure which is in every high-grade baseball. It helps to make the rubber bladders of footballs and basketballs, and is in tennis and other rubber balls.

Lead is also in many baseball bats and in the heads of wooden golf clubs, because it adds weight and helps to balance them. Pulverized lead is used in some golf balls to give them the necessary weight.

Lead helps the fisherman

Lead sinkers are used in fishing to carry the hook down to the desired depth. The heavy weight of lead for its bulk makes it the proper metal to use. And it will not rust.

This metal often covers the shanks of fish-hooks and weights down large fishing nets.

Lead in the nursery

The little boy's eyes shine with excitement as he takes his new lead soldiers out of the box on Christmas Day. Made of lead, they will not rust or mold as did the toy soldier of Field's "Little Boy Blue."

His sister peacefully plays with her new dolls with their lead-weighted eyes and her miniature furniture and other toys often made of lead. Toy-makers use lead extensively because it can be easily shaped and moulded into many forms.

Lead for preservation

Despite the widespread use of lead in the sport and play of the world, perhaps it is in preserving and beautifying buildings, inside and out, that lead performs its most useful service. Dryness and decay deface and destroy. But white-lead paint protects from the ravages of weather.

It is false economy to put off painting houses until deterioration makes expensive repairs necessary. Hence, property owners are heeding the warning, "Save the surface and you save all."

The professional painter, careful of his reputation, uses what he calls "lead-in-oil," a mixture of pure white-lead and pure linseed oil, for outside work. He uses white-lead and flatting oil, with coloring matter added, to make a smooth, beautiful paint of any color, for interior work.

Look for the Dutch Boy

NATIONAL LEAD COMPANY makes white-lead of the highest quality and sells it, mixed with pure linseed oil, under the name and trade-mark of *Dutch Boy white-lead*. The figure of the Dutch Boy is reproduced on every keg of white-lead and is a guarantee of exceptional purity.

Dutch Boy products also include red-lead, linseed oil, flatting oil, babbitt metals, and solder.

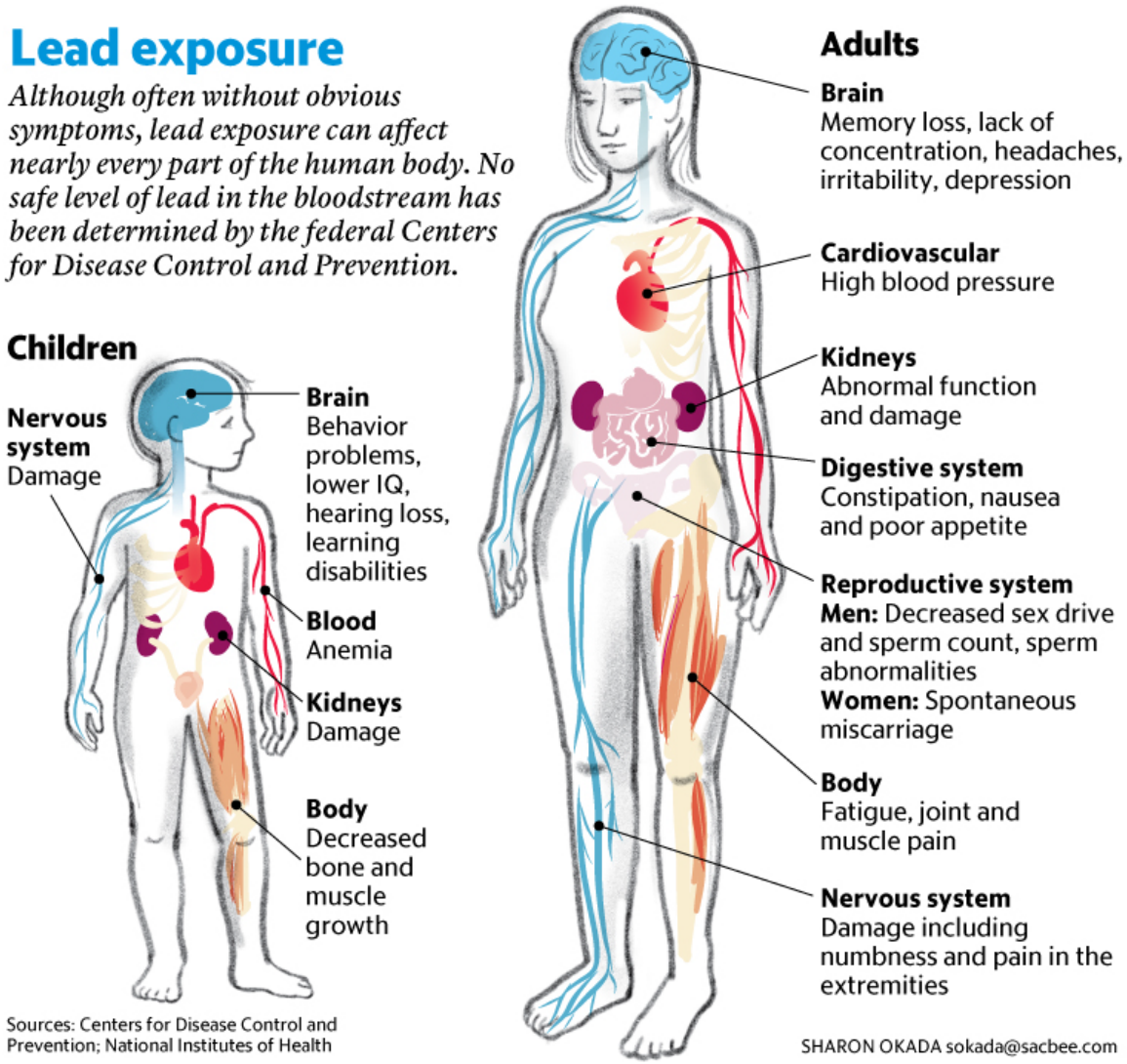
More about lead

If you use lead, or think you might use it in any form, write to us for specific information.

NATIONAL LEAD COMPANY

Source: Photos are from The Long, Ugly History of the Politics of Lead Poisonin https://www.bloomberg.com/news/articles/2016-02-09/the-politics-of-lead-poisoning-a-long-ugly-history

EXPOSURE TO LEAD CAN CAUSE SIGNIFICANT ILLNESS IN THE IMMEDIATE TERM AND NEGATIVE SOCIETAL IMPACTS IN THE LONG TERM

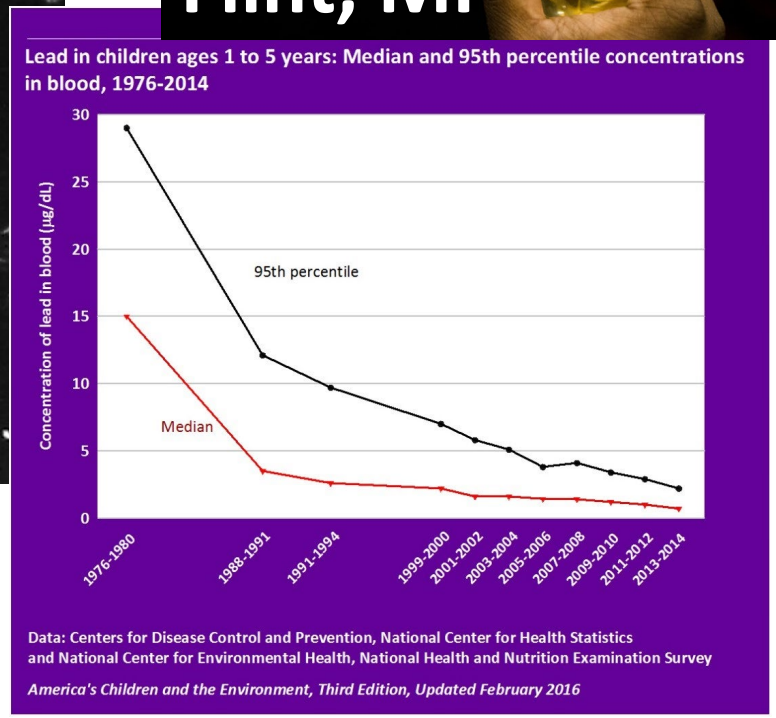


Acute lead poisoning has severe health impacts which cease as lead levels subside.

But low persistent blood lead is related to poor education outcomes and likely connected with broader societal impacts relating to impulsivity, crime & social aggression.

Source: Lead poisoning in kids: Sources, symptoms and precautions https://www.sacbee.com/news/local/health-and-medicine/article71355742.html

MOVEMENT TO SUPPORT AND IMPLEMENT AN EFFECTIVE PUBLIC HEALTH APPROACH TO LEAD WAS HIGHLY SUCCESSFUL AND IS ONGOING



The Student Organization for Urban Leadership formed in 1964 to combat lead poisoning. Members distributed pamphlets, gathered paint samples, and collected urine for testing.

Source: This Lead is Killing Us https://www.nlm.nih.gov/exhibition/thisleadiskillingus/collection.html; A Science-based Public Health Approach for Continued Progress in Reducing Lead Exposure https://www.epa.gov/sites/default/files/2017-01/documents/lead_a_public_health_approach_document_final_1-24-17.pdf; https://magazine.jhsph.edu/2004/fall/microcosmos/lead_spread.html; https://www.scientificamerican.com/article/flint-s-lead-tainted-water-may-not-cause-permanent-brain-damage/

WE HAVE NO CHOICE BUT TO LIVE WITH THE VIRUS

Feature

LISELOTTE SABROE/RITZAU SCANPIX/AFP/GETTY

Children in Copenhagen play during the SARS-CoV-2 pandemic. Endemic viruses are often first encountered in childhood.

THE CORONAVIRUS WILL BECOME ENDEMIC

A *Nature* survey shows many scientists expect SARS-CoV-2 is here to stay, but it could pose less danger over time. **By Nicky Phillips**

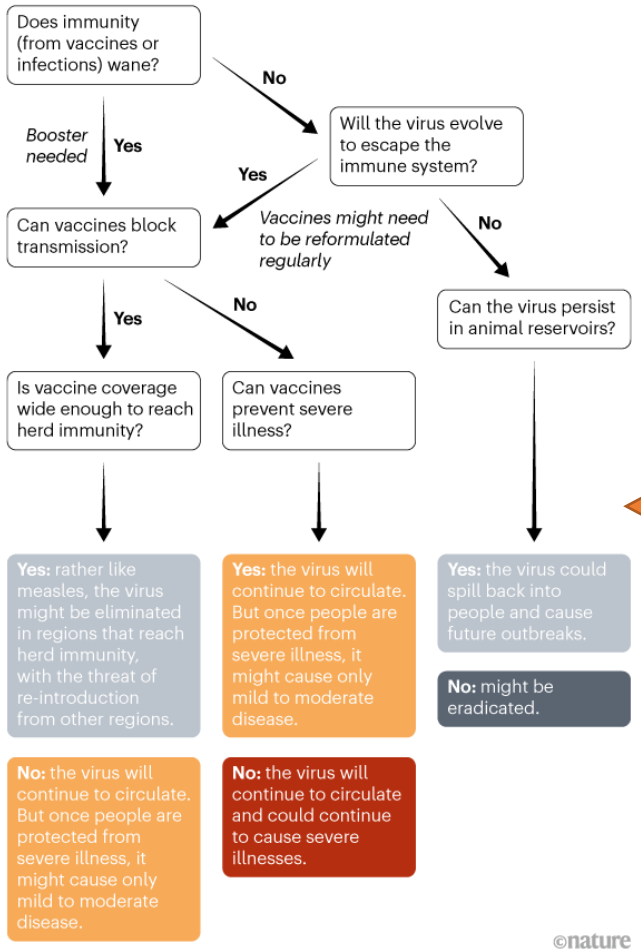
For much of the past year, life in Western Australia has been coronavirus-free. Friends gathered in pubs; people kissed and hugged their relatives; children went to school without temperature checks or wearing masks. The state maintained this enviable position only by placing heavy restrictions on travel and imposing lockdowns – some regions entered a snap lockdown at the beginning of the year after a security guard at a hotel where visitors were quarantined tested positive for the virus. But the experience in Western Australia has provided a glimpse into a life free from the SARS-CoV-2 coronavirus. If other regions, aided by vaccines, aimed for a similar zero-COVID strategy, then could the world hope to rid itself of the virus?

It's a beautiful dream but most scientists think it's improbable. In January, *Nature* asked more than 100 immunologists, infectious-disease researchers and virologists working on the coronavirus whether it could be eradicated. Almost 90% of respondents think that the coronavirus will become endemic – meaning that it will continue to circulate in pockets of the global population for years to come (see 'Endemic future').

"Eradicating this virus right now from the world is a lot like trying to plan the construction of a stepping-stone pathway to the Moon.

CORONAVIRUS: HERE TO STAY?

SARS-CoV-2 has spread so far around the world that it is very unlikely to be eradicated. Here are some of the key factors that are likely to lead to it becoming endemic.



"Herd immunity" and "Eradication" are highly unlikely

Source: *Nature* **590**, 382-384 (2021) *doi: https://doi.org/10.1038/d41586-021-00396-2*

WHAT DOES "LIVING" WITH THE SARS-COV-2 VIRUS (OR SIMILAR) MEAN OVER THE LONG TERM?


SCOTTISH DAILY EXPRESS

WE'RE BACKING THE UNITED KINGDOM www.scottishdailyexpress.co.uk TUESDAY, JANUARY 11, 2022 80p

SEX ASSAULT LEGAL FIGHT

Andrew settles £6.6m ski chalet debt

SEE PAGE 11

TENNIS STAR'S VISA BATTLE

ADVANTAGE DJOKOVIC ...FOR NOW

SEE PAGE 9 & SPORT

STURGEON: WE HAVE TO LIVE WITH THE VIRUS

By Mark Connor and Richard Percival

NICOLA Sturgeon last night admitted for the first time that the country will have to "learn to live with Covid in future.

The First Minister's comments immediately sparked calls for her to scrap the existing crippling coronavirus restrictions which she imposed on the country last month.

Her admission echoed another made hours earlier by Downing Street chiefs as they gave the clearest indications yet that the war against the pandemic is finally being won.

Scotland's approach to restrictions over the past few weeks

TURN TO PAGE 4

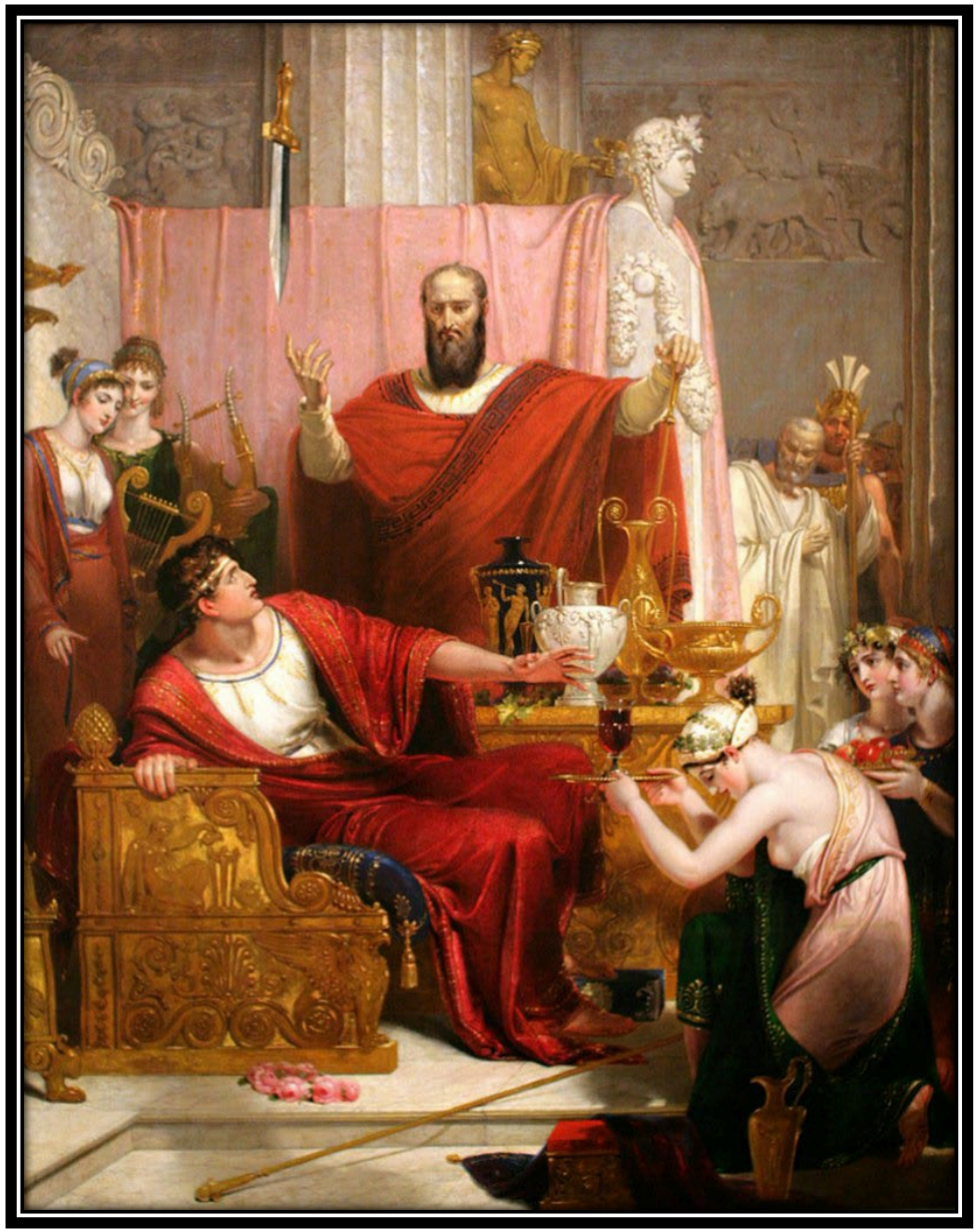
LEAKED EMAIL PLUNGES BORIS INTO NEW 'PARTYGATE'

SEE PAGES 4&5

- **Annual vaccination boosters**
- **Vaccination requirements for travel**
- **Increased mask-wearing**
- *Better global pandemic surveillance?*
- *Decentralized vaccine development and production?*
- *Increased public health investment (surveillance, tracing, testing, communication, research)?*

Source

WHAT DOES "LIVING" WITH THE COVID PANDEMIC MEAN ONCE HOSPITALS AND EMERGENCY ROOMS ARE "BACK TO NORMAL"?



Source *The Sword of Damocles*, 1812 by Richard Westall Ackland Museum, Chapel Hill, North Carolina, United States of America

- **Collapsed trust in government, academia, media**
- **Acceptance of mass death**
- **Increased sensitivity to identity in self protective behavior**
- *Accepting diminished investment in public health?*
- *Accommodating to decreased health-care worker capacity?*
- *Muddling through mental health consequences of mass death and trauma?*

WE HAVE LEARNED THAT IN A COVID PANDEMIC CONTEXT, A CLINICAL PERSPECTIVE MAY BE TOO NARROW (JUST LIKE WITH LEAD)

Question	Clinical Lens	Public Health Lens
What tests and when and whom to test?	Top quality professionally administered and reserved for highest risk persons	Speed and availability for as many in every settings
What type of mask?	N95 properly fitted	Any mask is good but N95 is best
Are masks helpful?	I may not be 100% protected	Even if I am not 100% protected, we're all somewhat safer
Should I vaccinate my child?	Risk/benefit to children is unclear	More vaccinated the better plus schools
How to proceed given uncertain science?	Above all, do no harm.	Gather information but do something!

Source: Op Ed by Aaron Carroll MD "To Fight Covid, We Need to Think Less Like Doctors" https://www.nytimes.com/2022/01/14/opinion/covid-america.html; Smith, C. M. (2005). Origin and uses of primum non nocere—above all, do no harm!. *The Journal of Clinical Pharmacology*, *45*(4), 371-377.

AMERICANS HAVE RALLIED FOR PUBLIC HEALTH IN THE PAST, BUT ARE WE POSITIONED TO SCALE UP TO SYSTEMIC CHANGE?

AJPH RESEARCH

Progress in Public Health Emergency Preparedness—United States, 2001–2016

Bhavini Patel Murthy, MD, MPH, Noelle-Angelique M. Molinari, PhD, Tanya T. LeBlanc, MS, PhD, Sara J. Vagi, MS, PhD, and Rachel N. Avchen, MS, PhD

Objectives. To evaluate the Public Health Emergency Preparedness (PHEP) program's progress toward meeting public health preparedness capability standards in state, local, and territorial health departments.

Methods. All 62 PHEP awardees completed the Centers for Disease Control and Prevention's self-administered PHEP Impact Assessment as part of program review measuring public health preparedness capability before September 11, 2001 (9/11), and in 2014. We collected additional self-reported capability self-assessments from 2016. We analyzed trends in con

Results. Be

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Conclusion

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S180–S185. d

advance public health to prevent, protect, respond, and rapidly recover from health emergencies (chemical, biological, radiological, nuclear, explosives, etc.) that threaten to overwhelm routine business and health security. Furthermore, PHEP supports the advancement of preparedness goals as out-

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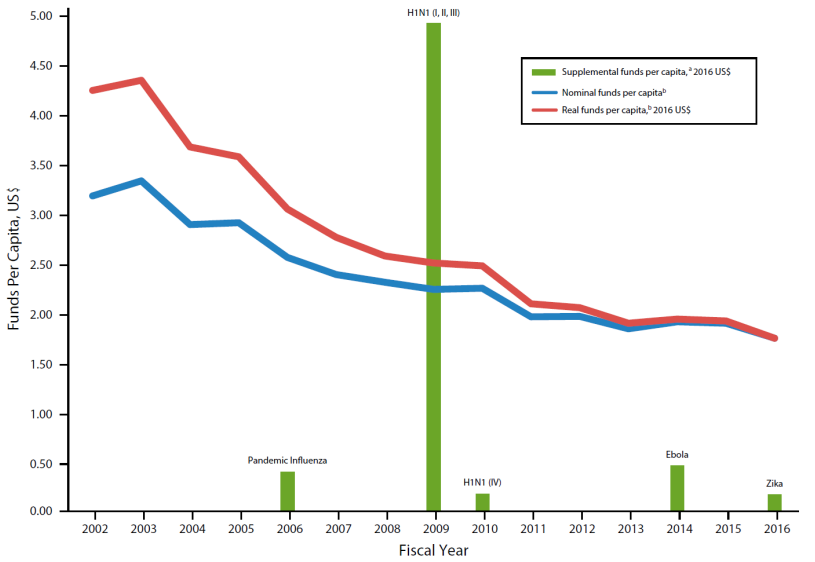

[a]Supplemental funding for H1N1 pandemic influenza was administered through the Public Health Emergency Response grant to upgrade state and local capacity for pandemic influenza preparedness and response. This funding was distributed in 4 phases (indicated in the figure as I, II, III, or IV) over 2009 to 2010.
[b]Nominal funding is unadjusted for inflation and reported in values according to funding year appropriated. Real funding is adjusted for inflation and reported in 2016 US dollars.

S180 Research

Public Health Infrastructure and Pandemic Preparedness Provisions in the Build Back Better Act

Jennifer Kates and Adam Wexler

Published: Nov 10, 2021

The Build Back Better Act, originally introduced in Congress on September 27, 2021, is a broad funding and programmatic package supported by President Biden. The bill, as first introduced by the House, was estimated to total $3.5 trillion. A more recent version now under consideration in the House is estimated to total significantly less, at $1.75 trillion, due to pressures to reduce the bill's cost.

Among the provisions in the bill are several designed to strengthen the public health infrastructure, including the workforce, and to support pandemic preparedness. While the original version of the bill provided $51.8 billion for these purposes (with $36 billion directed toward improving the public health infrastructure and $15.8 billion toward pandemic preparedness), the new version of the bill provides 63% less, or $19.2

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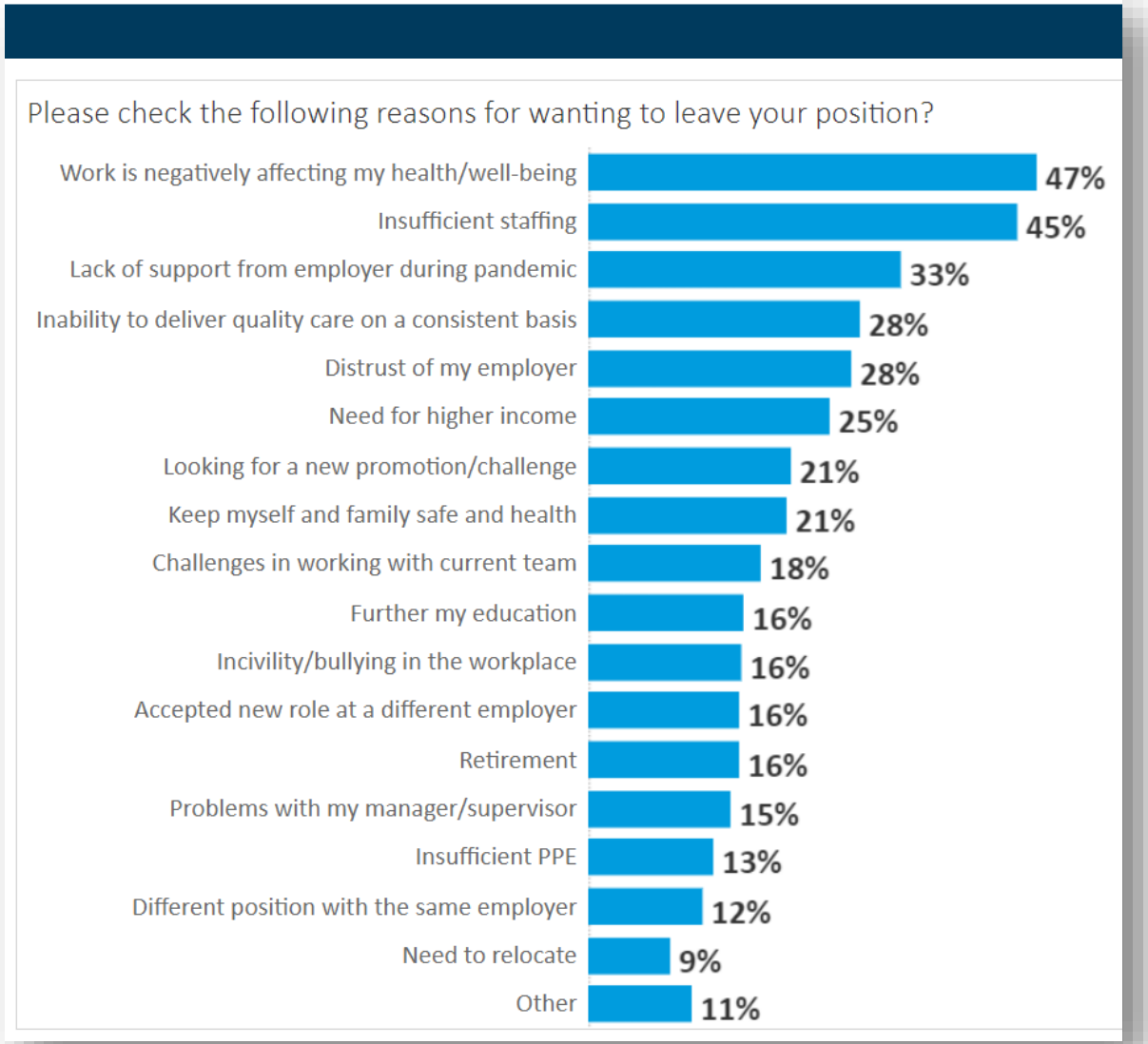
Current proposal is for $20Bn - less than half of original plan: *"Almost all public health and preparedness areas in the original [Build Back Better] bill saw reductions, and several were eliminated."*

Source: Murthy, B. P., Molinari, N. A. M., LeBlanc, T. T., Vagi, S. J., & Avchen, R. N. (2017). Progress in public health emergency preparedness—United States, 2001–2016. *American journal of public health*, *107*(S2), S180-S185. https://www.kff.org/coronavirus-covid-19/issue-brief/public-health-infrastructure-and-pandemic-preparedness-provisions-in-the-build-back-better-act/

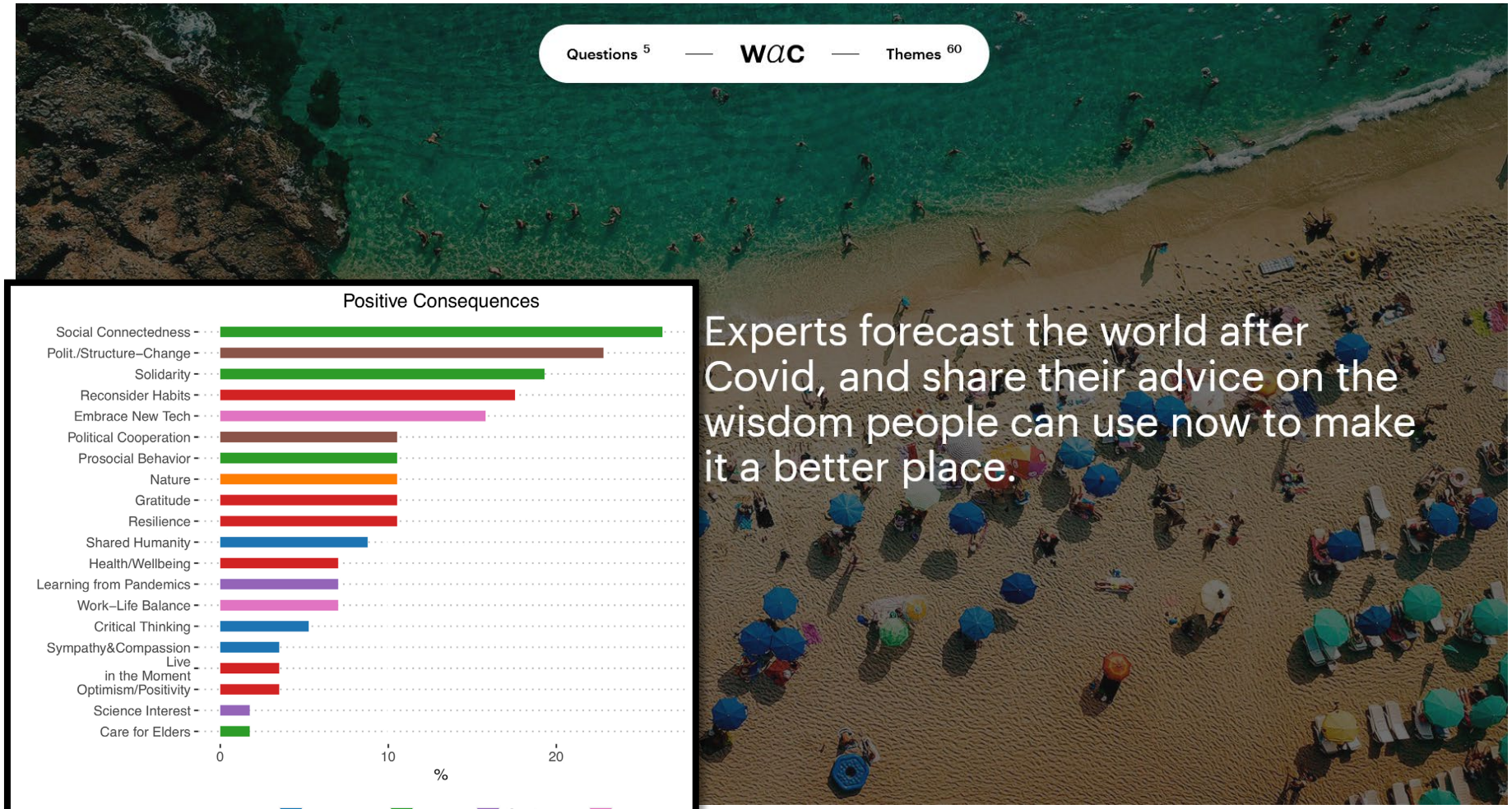
INVESTING IN PUBLIC HEALTH IN THE UNITED STATES STARTS WITH PEOPLE BUT SYSTEMIC AND INSTITUTIONAL CHANGE IS NEEDED AS WELL

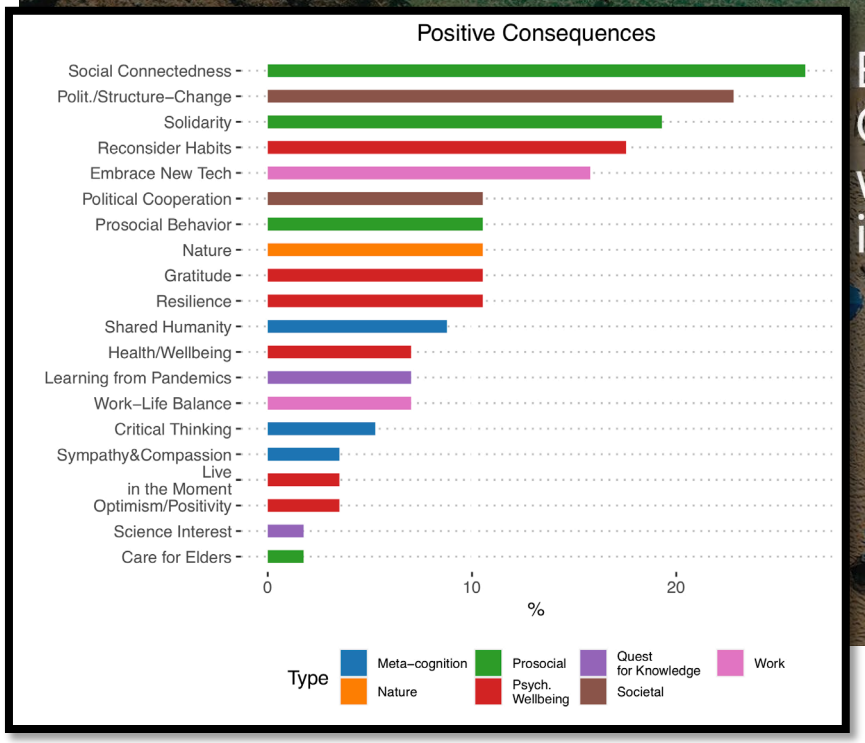
- **Many nurses driven to quit because of what the pandemic has revealed about our healthcare system and their place in it**
- **The clinical setting cannot compensate for a public health failure**



Source: See for example "Why Health-Care Workers Are Quitting in Droves" https://www.theatlantic.com/health/archive/2021/11/the-mass-exodus-of-americas-health-care-workers/620713 https://www.cnn.com/2021/02/22/health/black-nurses-mental-health-wellness/index.html/; American Nurses Foundation COVID-19 Impact Assessment Survey - The First Year https://www.nursingworld.org/practice-policy/work-environment/health-safety/disaster-preparedness/coronavirus/what-you-need-to-know/year-one-covid-19-impact-assessment-survey/

WE HAVE THE CAPACITY TO LEARN AND IMPROVE – UC BERKELEY *WORLD AFTER COVID PROJECT*





Whence optimism?

- **Re-investment in public health**
- **Investment in people (food, health, housing, social & political autonomy)**
- **Enhancement of global cooperation**

Source: **How Life Could Get Better (or Worse) After COVID https://greatergood.berkeley.edu/article/item/how_life_could_get_better_or_worse_after_covid**

ACKNOWLEDGEMENTS