# "130,000 – 210,000 **AVOIDABLE** COVID-19 DEATHS – AND COUNTING – IN THE U.S."

By Irwin Redlener, MD; Jeffrey D. Sachs, PhD; Sean Hansen, MPA; Nathaniel Hupert, MD, MPH

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**National Center for Disaster Preparedness**
EARTH INSTITUTE | COLUMBIA UNIVERSITY

ncdp.columbia.edu

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# Overview

This report looks at the staggering and disproportionate nature of COVID-19 fatalities in the United States, which now ranks first in the world in the total number of fatalities, to estimate how many deaths were "avoidable." With more than 217,000[1,2] lives lost, and a proportional mortality rate twice that of neighboring Canada and more than fifty times that of Japan -- a country with a much older population than the U.S. – the United States has turned a global crisis into a devastating tragedy.

Through comparative analysis and applying proportional mortality rates, **we estimate that at least 130,000 deaths and perhaps as many as 210,000 could have been avoided** with earlier policy interventions and more robust federal coordination and leadership.

Even with the dramatic recent appearance of new COVID-19 waves globally, the abject failures of U.S. government policies and crisis messaging persist. U.S. fatalities have remained disproportionately high throughout the pandemic when compared to even other high-mortality countries.[3] The inability of the U.S. to mitigate the pandemic is especially stark when contrasted with the response of high-income nations, such as South Korea, Japan, Australia, Germany, France, and Canada, as well as low- and middle-income countries as varied as Thailand, Pakistan, Honduras, and Malaysia. All of these nations have had greater success in protecting their populations from the impact of the coronavirus.

Given the United States' unique social and political realities, we recognize that it might have been particularly challenging to implement the same caliber of response as South Korea and Japan, both of which maintain centralized unitary governments. Nonetheless, the range of "avoidable deaths" outlined above stems from data illustrating how some of the best performing nations have achieved much greater results in protecting their populations.

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[1] as of October 16th, https://coronavirus.jhu.edu/map.html
[2] https://coronavirus.jhu.edu/map.html
[3] https://jamanetwork.com/journals/jama/fullarticle/2771841

## Introduction

Over the past nine months, the United States has witnessed an alarming jolt of vulnerability and anguish, as the novel coronavirus pandemic has wrought immense suffering and confusion in a country that only last year topped an international ranking of epidemic preparedness.[4] This year, American exceptionalism has manifested in the worst way: 217,000 Americans have lost their lives to COVID-19, the highest gross numerical toll of any country by more 65,000.[5] Over eight million Americans have tested positive for SARS-CoV-2, and millions more have been clinically diagnosed with COVID-19, without test confirmation.

Many of the underlying factors amplifying the pandemic's deadly impact have existed long before the novel coronavirus first arrived in Washington state on January 20th – a fractured healthcare system, inequitable access to care, and immense health, social and racial disparities among America's most vulnerable groups. Compounding this is an Administration that has publicly denigrated its own public health officials – and science more generally -- thereby hamstringing efforts by its vaunted public health service to curb the pandemic's spread.

The result has been a tragedy: for a country with just 4% of the world's population, U.S. citizens make up 20% of all global cases.[6]  More than 217,000 U.S. residents have lost their lives, accounting for *one-fifth* of all COVID-19 deaths worldwide.

This brief report will look at how many of those deaths can be considered as "avoidable," if only U.S. officials had undertaken appropriate public health policies, guidance, and leadership at the pace of other high-income nations such as South Korea, Japan, Australia, Germany, Canada, and France.

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[4] https://www.ghsindex.org/country/united-states/
[5] as of Oct. 16th, 2020.
[6] https://ourworldindata.org/coronavirus

## Comparative Analysis: Deaths per 100,000 population

When comparing U.S. fatalities with other high-income countries, the contrast becomes particularly stark. Beyond the total deaths of U.S. citizens – which officially stands at 217,717 but is likely much higher[7] – one informative way to compare total fatalities is using the proportional measure of the number of deaths per 100,000 people.

The United States currently has the 9th highest proportional mortality rate globally[8], with some 66 deaths per 100,000 population.[9] It is behind only Peru, Belgium, Bolivia, Brazil, Ecuador, Chile, Spain, and Mexico in this statistic.

When compared to a sample of other high-income nations, the U.S. fairs very poorly. As seen below, *Figure 1*, the U.S. mortality rate per 100,000 is fifty times higher than Japan's, and more than twice as high as our Canadian neighbors. Although both the U.S. and South Korea confirmed their first case of coronavirus on January 20th, South Korea was able to institute an aggressive diagnostic testing strategy and isolate infected patients, leading to a proportional mortality rate today that is 78 times smaller than that of the United States.

**Figure 1: Deaths per 100,000 Population**



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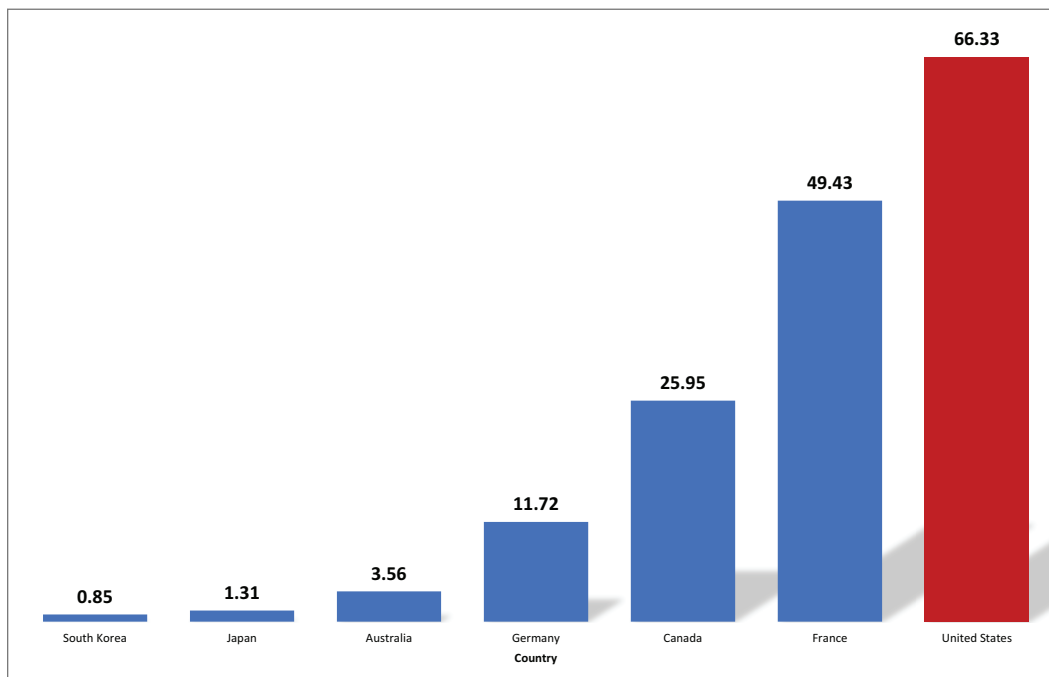
[7] Woolf SH, Chapman DA, Sabo RT, Weinberger DM, Hill L, Taylor DDH. Excess Deaths From COVID-19 and Other Causes, March-July 2020. JAMA. 2020 Oct 12. doi: 10.1001/jama.2020.19545. Epub ahead of print. PMID: 33044483.
[8] *Excluding micro states of San Marino and Andorra*
[9] https://coronavirus.jhu.edu/data/mortality

## Methodology: Calculating "Avoidable" Deaths

Using the data, we can estimate the number of "avoidable deaths," or the number of deaths that the U.S. could have prevented if it had mirrored the policies and responses of the six more proactive high-income countries listed above. By comparing the per-capita mortality, and assuming equal underlying risk of mortality on an individual basis, we calculated the total deaths as a percentage of the population, which is multiplied by the total U.S. population to determine the number of deaths that each specific nation would have encountered if its population were the size of the U.S. By finding the difference between this number of proportional deaths and the total of U.S. deaths, we are left with an estimate for a predicted number of "avoidable deaths."

## Results

By failing to implement the type of response strategies employed in the six comparison countries, our analysis shows that the United States may have incurred at least 130,000 avoidable deaths. As shown in *Table 1*, if the U.S. had followed Canadian policies and protocols, there might have only been 85,192 U.S. deaths – making more than 132,500 American deaths "avoidable." If the U.S. response had mirrored that of Germany, the U.S. may have only had 38,457 deaths – leaving 179,260 avoidable deaths. And in the unique case of South Korea -- which had one of the quickest and most robust intervention strategies – the U.S. might have seen just 2,799 deaths, leaving nearly 215,000 deaths avoidable.

**Table 1: Number of Avoidable Deaths**

| Country | Deaths/ 100K population | Deaths as % of population | Proportional deaths | "Avoidable deaths" |
|---|---|---|---|---|
| South Korea | 0.85 | 0.0009 | 2,799 | 214,918 |
| Japan | 1.31 | 0.0013 | 4,315 | 213,402 |
| Australia | 3.56 | 0.0036 | 11,699 | 206,018 |
| Germany | 11.72 | 0.0117 | 38,457 | 179,260 |
| Canada | 25.95 | 0.0260 | 85,192 | 132,525 |
| France | 49.43 | 0.0494 | 162,240 | 55,477 |
| United States | 66.33 | 0.0663 | - | - |
| Average | | | 50,784 | 166,933 |

## Results *(Continued)*

None of these estimates is without potential flaws. Crude mortality estimates such as these have clear limitations, despite their value for inter-country comparisons. Many additional factors (such as demographics, geographical distribution of population, and health indicator risk factors such as obesity and health care access) likely contribute to the unique mortality rate in each population. However, as shown in *Figure 2*, two-well documented factors associated with Covid-19 mortality – median population age, and obesity – do not explain the magnitude of the United States' disproportionate mortality rate. We therefore posit that had the U.S. government implemented an "averaged" approach that mirrored these countries, the U.S. might have limited fatalities to between 38,000 to 85,000 lives – suggesting that a minimum of 130,000 COVID-19 deaths might have been avoidable given alternate policies, implementation, and leadership. This discrepancy, which continues to grow daily, provides objective crude measure for assessing the government response to this unprecedented health emergency.

**Figure 2: 7-Country Comparison of COVID-19 Mortality Association with Median Age and Obesity**
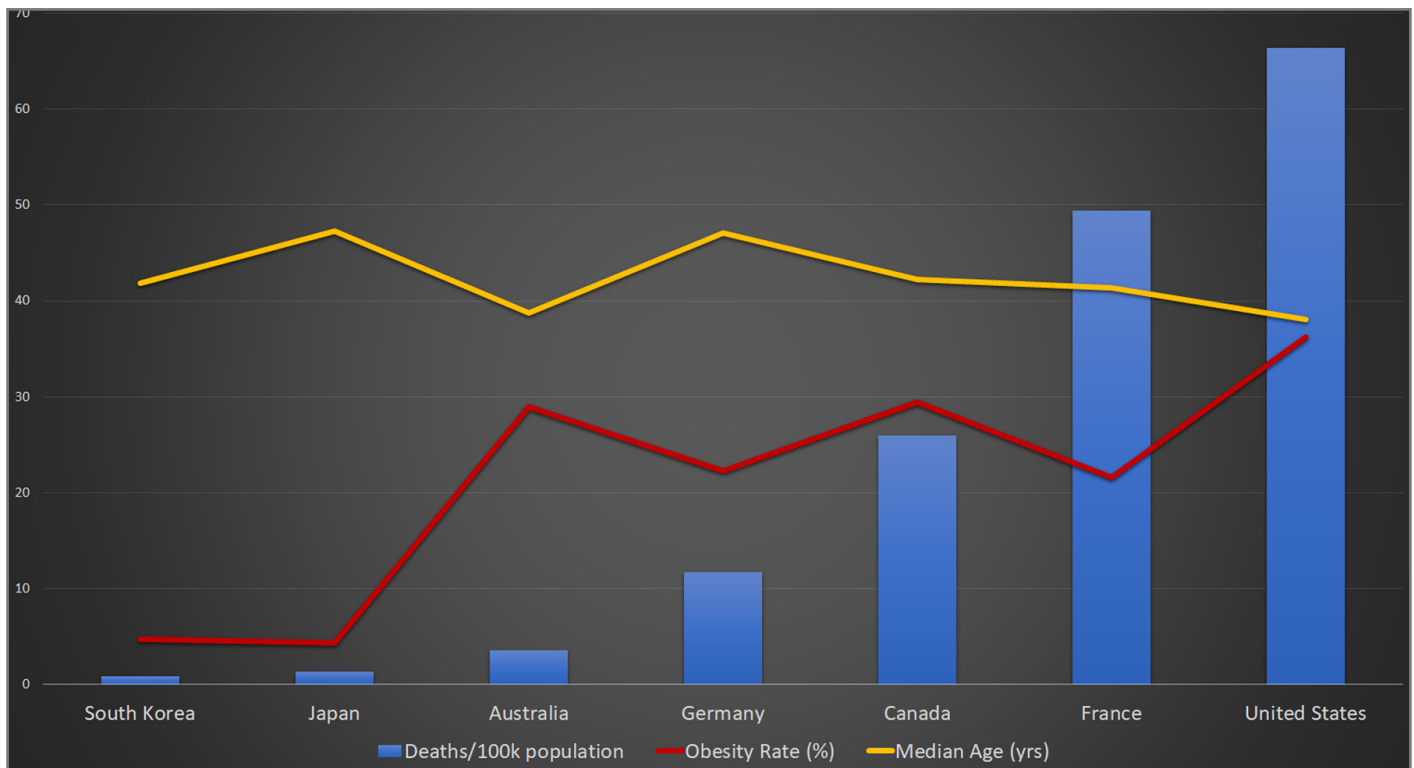
## Why are U.S. deaths disproportionately high?

Understanding why the COVID-19 mortality rate is significantly higher in the U.S. than nearly all high-income allies is challenging, primarily because it is a confluence of factors, stemming from delayed responses, to missed opportunities, to inadequate guidance, coordination, and leadership. Each action – or inaction – had a substantial role in distinguishing the U.S. response from the nations discussed above.

**Insufficient testing capacity.**

▸ From the start of the pandemic, the U.S. has lagged behind in virus testing efforts, which consequentially has led to an inability to rapidly identify and contain outbreaks through contact tracing efforts and targeted interventions.

▸ More than two months after the virus first emerged in the U.S., members of Congress wrote the Secretary of Health and Human Services on April 8th asking for a national strategy for testing which failed to materialize.[10]

▸ Meanwhile, South Korea – which had its first confirmed case on the same day as the U.S. – immediately "focused on rapid and widespread testing, and close tracking of all contacts between the exposed."[11]

   • By March 16th, over 250,000 South Koreans had been tested – or about one in every 200 citizens. The U.S. didn't reach the same proportional testing rate for several weeks until April 4th.[12]

▸ Still, once testing became more widespread and available in the U.S., significant problems remained in aggregating and streamlining state-wide data at the federal level.

   • Without clear guidance on testing metrics and protocols, states often reported inconsistent data that contributed to an incomplete picture of the pandemic in the United States – hampering the much-needed targeted interventions that were possible in places such as South Korea.[13]

▸ Similarly, contact tracing in the U.S. remains woefully inadequate. Insufficient contact tracing capacity impedes the ability of communities to control community spread of SARS-CoV-2 and consequently tamp down hospitalizations and fatalities.

   • According to data from NPR and the Fitzhugh Mullan Institute for Health Workforce Equity at George Washington University, 44 states still do not have a sufficient number of contact tracers. The total number of contact tracers in the U.S. is just over 53,000, which is far short of the 100,000 that public health experts say is needed.[14]

▸ These two major deficiencies, inadequate testing and insufficient contact tracing, have blunted the United States' capacity to stop the exponential spread of COVID-19.

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[10] https://bera.house.gov/media-center/press-releases/bera-urges-administration-to-develop-national-testing-strategy
[11] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7172645/
[12] https://covidtracking.com/data/national
[13] https://www.nejm.org/doi/full/10.1056/nejmp2014836
[14] https://www.npr.org/sections/health-shots/2020/10/14/923468159/covid-19-contact-tracing-workforce-barely-inching-up-as-cases-surge

## Why are U.S. deaths disproportionately high? *(Continued)*

**Delayed response.**

▸ Delayed interventions and lockdowns in the U.S. – along with a lack of federal guidance – exacerbated the rapid spread of the coronavirus in the U.S., and resulted in tens of thousands of avoidable deaths according to researchers from Columbia University disease modelers.

- • If social distancing guidelines and other control measures had been introduced just 1-2 weeks earlier in major metropolitan areas, researchers estimate that 62% of confirmed cases – and 55% of deaths – could have been averted.[15]

▸ Another study from the Institute for Health Metrics and Evaluation similarly estimates that earlier interventions – including federal guidance from the White House on social distancing -- could have prevented as much as 90% of deaths in the U.S. through April 14th if implemented just two weeks earlier than March 16th.[16]

**Lack of mask mandate or guidance.**

▸ The use of facemasks by the public has been demonstrated to have "a major contribution to reducing the impact of the COVID-19 pandemic," according to a study published in the Royal Society Publishing journal. We suggest, therefore, that the failure of the federal government to implement a national mask mandate – or at a minimum, the consistent encouragement of mask use – has contributed to the spread of the virus and avoidable deaths.

- • The same study found that if lockdowns are "combined with 100% adoption of facemask use by the public, the initial disease progress peak is dramatically flattened and delayed and subsequent waves are prevented."[17]

▸ According to Assistant Secretary for Preparedness and Response Robert Kadlec at the Department of Health and Human Services (HHS), thousands of lives could have been saved if the White House had approved the distribution of over six million masks that were prepared for delivery in late February.

▸ Other estimates put the cost of lives associated with mask mandates much higher. An analysis from the Institute for Health Metrics and Evaluation at the University of Washington predicts that without clear guidance on mask-wearing and social distancing, a worst-case scenario for the U.S. could eventually lead to – on average – a total of 620,029 American lives lost.[18]

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[15] https://www.medrxiv.org/content/10.1101/2020.05.15.20103655v2
[16] Institute for Health Metrics and Evaluation
[17] https://royalsocietypublishing.org/doi/10.1098/rspa.2020.0376
[18] http://www.healthdata.org/news-release/first-covid-19-global-forecast-ihme-projects-three-quarters-million-lives-could-be

## Why are U.S. deaths disproportionately high? *(Continued)*

**Politicization, leadership vacuum, and the failure of top officials to model best practices.**

▸ Many nations facing the pandemic crisis have put politics aside and orchestrated a response led by public health experts and global coordination. Canada, for instance, has witnessed a unique period of political unity surrounding COVID-19 this year.

• According to Canadian researchers, "Unlike in the United States, response to the coronavirus is not constructed by partisanship," but rather that "Canadian political elites and the public are in a unique period of cross-partisan consensus on important questions related to the COVID-19 pandemic, such as its seriousness and the necessity of social distancing."[19]

▸ Unfortunately, the Trump Administration has shown hostility to much of the critical guidance and recommendations put forth by its own health agencies, with the President at times misleading the public on the scope of the threat, attempting to "downplay" the extent of the crisis, and advocating for unproven therapeutical or unsafe treatments.[20]

• Rather than presenting honest information about the state of the pandemic and elevating best practices as stated by the Centers for Disease Control and Prevention (CDC), this Administration has actively mocked basic, well-established public health guidelines (such as the use of masks, social distancing, etc.) and damaged the impartial reputation of key federal health agencies.

• At the same time, this Administration has chosen to castigate foreign nations and organizations, including China and the World Health Organization, and blame those entities for the scope of the crisis.

## Collateral Grief: The wide circle of tragedy with every COVID-19 death

It's important to remember that no death is ever just "a number" or simply part of a large database for disease tracking purposes. The people who have died of COVID-19 were mothers, fathers, grandparents, friends, and even children. They leave behind people who grieve and families that must struggle to regain economic stability. Here are some of the more important secondary consequences of pandemic deaths that affected many of those who are left behind:

▸ **Children:** While children are among the least susceptible to the physical effects of COVID-19, the impacts felt by U.S. children have been significant. In New York State alone, it's estimated that 325,000 children have been pushed into or near poverty as a result of the economic impacts of the pandemic. Other reports estimate that at least 4,200 children in New York have lost a parent to the disease, leaving thousands at risk of foster care placement that had been under the care of a single parent.

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[19] https://www.cambridge.org/core/services/aop-cambridge-core/content/view/14238F14B2E3B0536813583ED0A4A833/S0008423920000311a.pdf/rare_moment_of_crosspartisan_consensus_elite_and_public_response_to_the_covid19_pandemic_in_canada.pdf

[20] https://www.nytimes.com/2020/04/24/health/sunlight-coronavirus-trump.html

## Collateral Grief: The wide circle of tragedy with every COVID-19 death
*(Continued)*

▸ **Bereavement:** Researchers at Penn State University have created a "bereavement multiplier" which allowed them to estimate that "every [U.S.] death from COVID-19 will leave approximately 9 bereaved." Assuming an average of some 167,000 avoidable COVID-19 deaths means that well over 1.5 million Americans are grieving the death of a loved one that might have been avoided.[21]

▸ **Long-term impacts and disabilities:** Researchers are only beginning to study the long-term health implications of COVID-19, which has been shown to leave long-term damage to patients' lungs, heart, immune system, and brain. An early observational study found that 78 out of 100 recovered COVID-19 patients had "abnormal findings on cardiovascular MRI", with 36 also reporting difficulty breathing and unusual fatigue months after their diagnosis.[22]

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[21] https://www.pnas.org/content/117/30/17695
[22] https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(20)30701-5/fulltext

## Conclusion

By contrasting the U.S. proportional mortality rate with that of six other high-income countries, this report highlights the stark reality that is the United States' continued mismanagement of the pandemic response. Particularly, it is the inability or unwillingness of U.S. officials to adapt or improve the federal response over the course of the pandemic that has strongly contributed to the nation's uniquely high Covid-19 fatality rate.[23] The U.S. should have – and could have – done better to protect the nation, and particularly its most vulnerable populations, from a threat that was identified and recognized early in 2020.

*The failure of the federal government to (a) create a rigorous national strategy for testing and contact tracing, (b) coordinate data collection and coordination among U.S. states, or (c) recognize the scientific validity of non-pharmaceutical interventions like face coverings and social distancing reflect a deeply inadequate national response when contrasted to other high-income countries. Our comparative analysis estimates that somewhere between 130,000 and 210,000 American deaths to date could have been avoided.*

The weight of this enormous failure ultimately falls to the leadership at the White House – and among a number of state governments – which consistently undercut the efforts of top officials at the CDC and HHS. Further, there is little evidence to suggest that science-based policies will prevail going forward with Donald Trump as President given his continued attacks on science and government scientists. A pandemic is not a time for a decentralized and combative national response. It requires strong leadership and coordination across states towards a common purpose of defeating the threat with the might of the whole nation. The cases of South Korea, Japan, Australia, Canada, Germany, and France demonstrate that the scope of the crisis and suffering did not need to reach the levels seen in the U.S.

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[23] https://jamanetwork.com/journals/jama/fullarticle/2771841

## Authors

**Irwin Redlener, MD**

Founding Director, National Center for Disaster Preparedness

Director, Pandemic Resource and Response Initiative

Senior Research Scholar

Earth Institute, Columbia University

**Sean Hansen, MPA**

Project Coordinator, National Center for Disaster Preparedness, Earth Institute, Columbia University

**Jeffrey D. Sachs, PhD**

University Professor and Director of the Center for Sustainable Development, Columbia University

Director of the U.N. Sustainable Development Solutions Network

**Nathaniel Hupert, MD, MPH**

Associate Professor of Population Health Sciences and of Medicine

Weill Cornell Medical College

Co-Director, Cornell Institute for Disease and Disaster Preparedness

**Reviewed by:**

**Jeffrey Schlegelmilch, MBA, MPH**

Director, National Center for Disaster Preparedness, Earth Institute, Columbia University

**Jeff Shaman, PhD**

Professor of Environmental Health Sciences; Director, Climate and Health Program, Columbia University Mailman School of Public Health

**Karen Redlener, MS**

Co-Founder, Children's Health Fund; Founding Co-Director, Healthy and Ready to Learn

**For more information:**

For media inquiries, please contact Bridget Bartol at bbartol@skdknick.com or 202-827-9719.

For report inquiries, please contact Irwin Redlener at ir2110@columbia.edu or Sean Hansen at s.hansen@columbia.edu.