

RISK AND SOCIAL POLICY GROUP

**COVID-19
TECHNICAL REPORT
WAVE ONE**

JUNE 22, 2020

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PROJECT BACKGROUND

The COVID-19 pandemic has upended life in the United States, infecting over two million and killing over 100,000 people, slowing the economy, and halting social interaction. State and local governments have been tasked with many emergency management responsibilities, from allocating hospital beds to acquiring personal protective equipment. They have also responded in the wake of this unprecedented crisis by implementing risk reduction policies, such as stay-at-home orders and school and business closures. While these kinds of risk reduction policies have slowed the spread of COVID-19 in many states, the challenges for governments associated with the pandemic will persist in the coming months, especially as they make decisions around the easing of restrictions. Furthermore, many public health officials are anticipating an increase in cases in Fall 2020, coinciding with the start of the influenza season, regardless of restrictions.

Against this backdrop, the [Risk and Social Policy Working Group](#) was established.

Our group aims to study the effect of COVID-19 risk messaging strategies and existing public policies on individual behavior across the various stages of the pandemic. We are scholars from a diverse array of fields, including public policy, communications, public health, psychology, political science, economics, and others. Our work is funded by the National Science Foundation, as well as the Natural Hazards Center, University of Colorado, Boulder and University of Colorado, Denver.

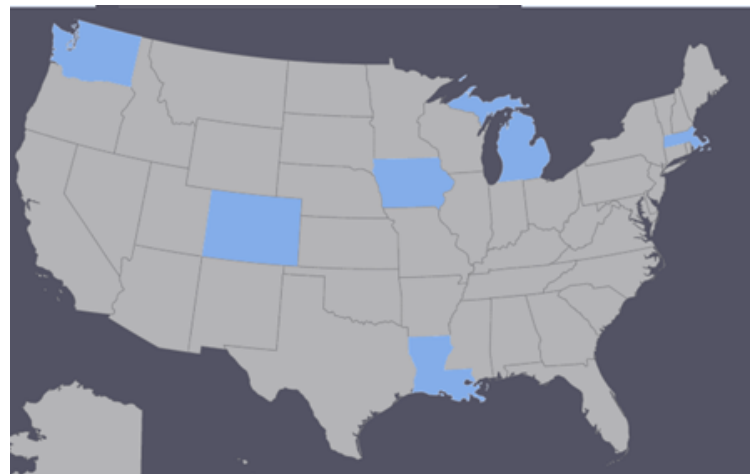


Figure 1. U.S. states surveyed for this research

This technical report summarizes the results of the first wave of a three-wave panel survey distributed to a representative group of individuals residing in Colorado, Iowa, Louisiana, Massachusetts, Michigan, and Washington. These states were selected to capture variation in both the onset of the COVID-19 outbreak, risk reduction policies, and demographic and social factors.

The survey was conducted using online survey panels through Qualtrics between May 15, 2020, and June 7, 2020. We asked survey respondents to answer questions about the following topics:

- Physical and mental health, including recent experience with COVID-like symptoms and COVID-specific worries.
- Risk perceptions, including level of concern about potentially contracting COVID-19.
- Risk reduction behaviors, such as staying-at-home, physical distancing, and mask wearing, many of which are included in state COVID-19 restrictions, as well as individual coping behaviors (e.g., exercise, spiritual activities, social support, alcohol and drug use).
- Information seeking, including when, where, and how often people look for information relating to the COVID-19 pandemic (e.g., television, social media, government or academic sources).
- Government performance, including approval of different policymakers, levels of government, and specific policies, in relation to their responses to COVID-19.

Two additional waves of the survey will be distributed in the coming months to observe trends over time, especially as

COVID-19-related policies and viral spread change across states. These survey waves will capture effects associated with the anticipated increase in COVID-19 cases during the onset of the influenza season.



Figure 2. Projected survey waves timeline

The following sections of this technical report summarize the characteristics of the survey sample, followed by key findings about each of the topics listed above. Separate reports are available for each of the individual states, and similar technical reports will be released following the additional survey waves. These technical reports provide an overview of our surveys and the scope of questions we asked. Subsequent papers and presentations will provide detailed analyses of key questions that are the focus of our interdisciplinary research team, including racial and class disparities in COVID-19 outcomes, the role of risk communication in shaping risk perceptions and behaviors, the relationship between mental health factors and risk perceptions and behaviors, and variation and diffusion of state-level COVID-19 policies. We encourage interested parties to follow our website and social media for updates.

CHARACTERISTICS OF THE SURVEY SAMPLE

In total, our Wave 1 survey sample includes 3,059 individuals across the six sampled states. Sample characteristics are shown in Table 1. Qualtrics implemented quotas to recruit a sample for each state that is roughly representative of the state’s age, race/ethnicity, and income demographics.

# Respondents:	ALL STATES	COLORADO		IOWA		LOUISIANA		MASSACHUSETTS		MICHIGAN		WASHINGTON	
	3,059	512	512	507	507	512	512	511	511	518	518	499	499
		Sample	Census	Sample	Census	Sample	Census	Sample	Census	Sample	Census	Sample	Census
Gender													
Male	39%	40%	49%	40%	50%	34%	49%	41%	49%	39%	49%	41%	50%
Female	60%	59%	51%	60%	50%	65%	51%	58%	51%	61%	51%	58%	50%
Age													
18-34	35%	34%	30%	31%	27%	36%	28%	36%	28%	35%	26%	36%	29%
35-55	38%	38%	35%	34%	32%	41%	34%	37%	33%	39%	33%	42%	34%
55+	27%	28%	35%	36%	41%	23%	38%	26%	39%	27%	41%	22%	37%
Race/Ethnicity													
Non-Hispanic White	72%	71%	68%	87%	85%	57%	58%	73%	71%	75%	75%	70%	69%
Non-Hispanic Black	12%	5%	5%	4%	5%	34%	33%	8%	8%	14%	14%	5%	5%
Hispanic/Latinx	11%	19%	22%	5%	6%	5%	6%	12%	12%	6%	6%	14%	14%
Other	6%	5%	5%	3%	4%	3%	3%	8%	9%	5%	5%	11%	12%
Income													
<=\$50,000	41%	41%	41%	43%	42%	52%	52%	33%	33%	44%	44%	33%	33%
\$50,000-\$100,000	30%	30%	30%	35%	34%	29%	27%	27%	26%	31%	31%	31%	31%
>\$100,000	29%	29%	29%	22%	25%	19%	21%	41%	41%	25%	25%	36%	36%

Table 1. Wave 1 sample demographics and census demographics of the six states surveyed in the first wave of panel data



PHYSICAL AND MENTAL HEALTH

Nearly 11% of respondents thought that they personally had contracted COVID-19 when they took this survey, and 21% of those stated that they received a COVID-19 test. Interestingly, the majority of respondents (52%) personally knew at least one person who had tested positive for COVID-19. Over 47% of respondents said they were currently unemployed because of COVID-19, and 37% reported being designated an essential worker.

Figure 3 shows reported mental and physical health changes since the COVID-19 pandemic began. While the majority of respondents said that their health stayed about the same, it is important to note that 26% said their mental health declined, while 12% said their physical health declined. Fewer people (less than 10%) said their mental or physical health had improved since the start of the pandemic. In addition, 42% rated their distress as a 6 or higher over the past week on a sliding “distress thermometer,” where 0 = “Things are good”, 10 = “I feel as bad as I have ever felt”.

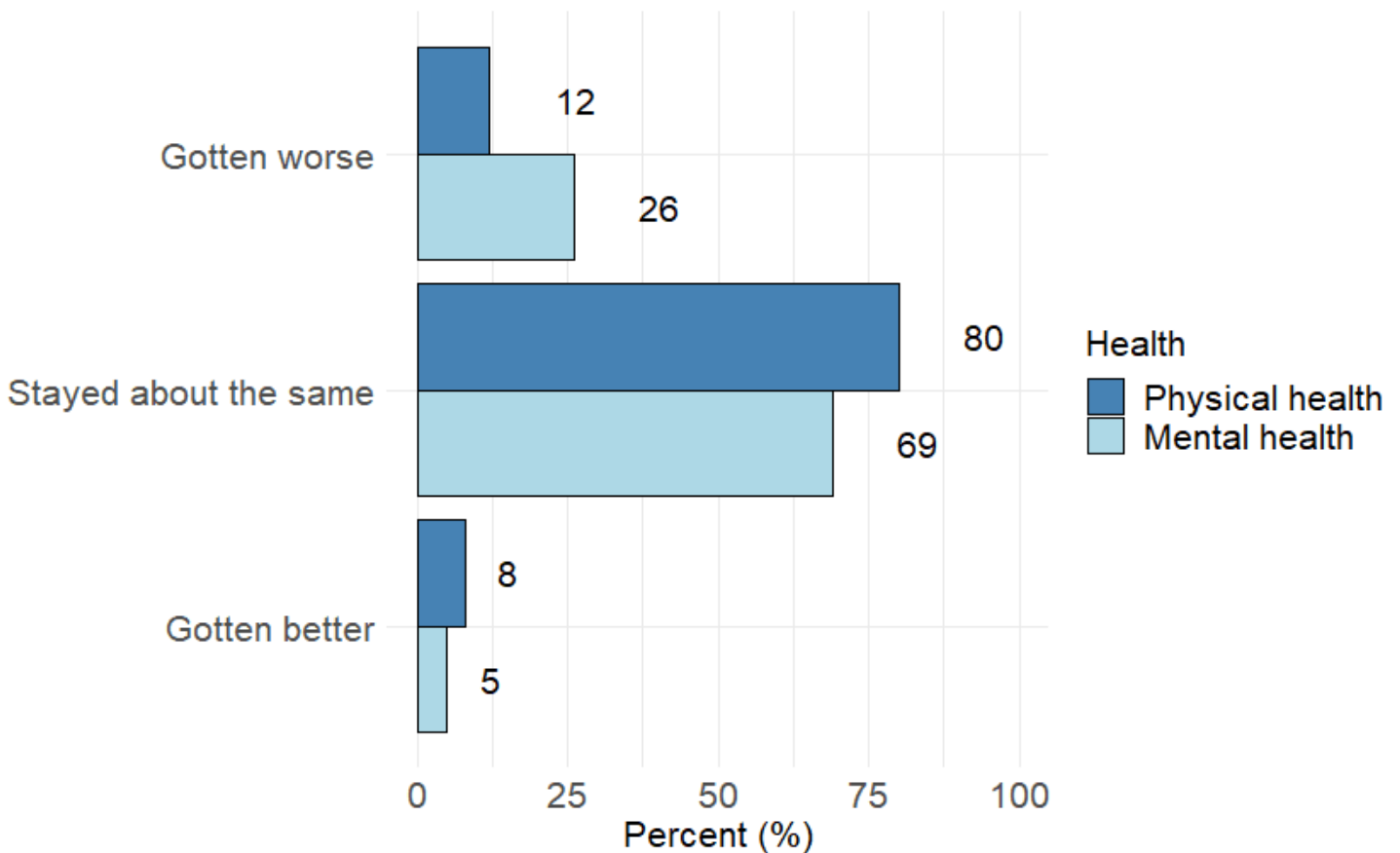


Figure 3. Changes in respondents’ physical and mental health since the COVID-19 pandemic began

RISK PERCEPTIONS

A robust understanding of public perceptions of COVID-19 risk is essential for constructing more effective risk messaging and risk reduction policies. We asked respondents to estimate their likelihood of getting COVID-19, becoming seriously ill from COVID-19, and dying from COVID-19, as well as the risk to their personal financial situation due to COVID-19.

When asked about their likelihood of getting COVID-19 in the next three months, on average, respondents indicated there was a 28% chance they would contract the virus. Interestingly, respondents said *if they did contract COVID-19*, there was a 34% chance they would become seriously ill and a 22% chance they would die. This reflects an over-estimation of COVID-19 risks, as the actual chances of contraction, falling ill, and death are currently much lower across states.

COVID-19 also presents unique financial challenges for many Americans through layoffs or reductions in working hours, the closure of businesses, potential health care costs, and other avenues. On average, respondents said there was a 28% chance they would run out of money in the next three months due to COVID-19.



28% chance of getting COVID-19

34% chance of getting seriously ill

22% chance of death

28% chance of running out of money

RISK REDUCTION BEHAVIORS

In addition to asking about risk perceptions, we asked respondents several questions about their behaviors related to COVID-19. Specifically, we assessed the extent to which respondents 1) stayed at home or left home for a variety of reasons; 2) kept physical distance from others when they did leave home; and 3) wore masks or face coverings in public. Given the timing of the study, questions that ask respondents to recall recent behaviors (e.g., over the past month to three months) captured information during and just after the period when most states in our sample -- and across the U.S. -- were under stay-at-home orders.



Stay-at-Home Orders and Reasons for Leaving Home

Starting in March of 2020, many U.S. states issued stay-at-home orders or recommendations to the public, except for those conducting essential activities, in order to reduce contact between people and slow the spread of COVID-19. Our survey assessed “stay-at-home” behavior by asking respondents to report how often they left home to conduct various activities in the month prior to the survey. The most common reason people reported leaving home weekly or more frequently was to exercise outdoors (about half of respondents), followed closely by grocery shopping (40% of respondents shopped on at least a weekly basis). About a quarter of respondents reported working outside the home multiple times a week or every day, while 40% said they had never left home for work in the past month. About a third of respondents reported leaving home for an in-person medical appointment at least once in the past month. Smaller percentages of respondents reported leaving home to visit a gym or exercise facility (10%), attend a religious service (12%), visit a hair salon or similar (16%), or dine out (19%). Less than 2% of respondents said they had not left their home for any of these reasons in the past month, while about 11% said they had only left home to grocery shop or exercise.

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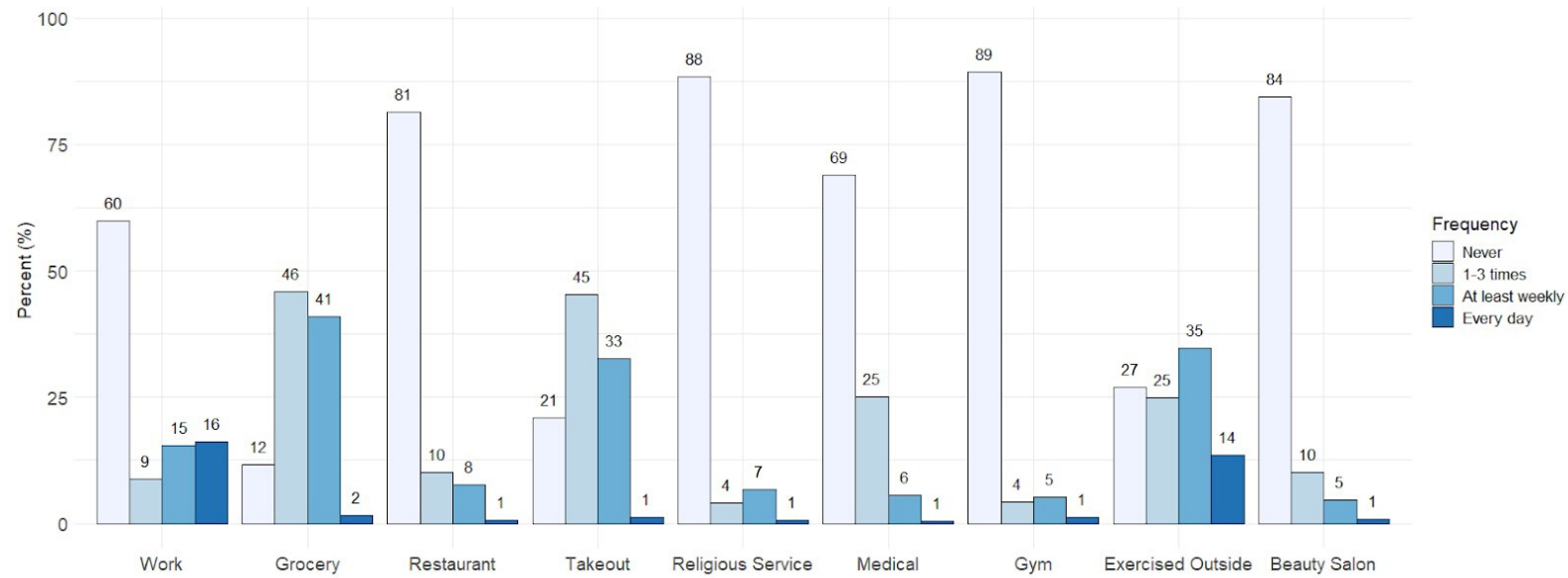
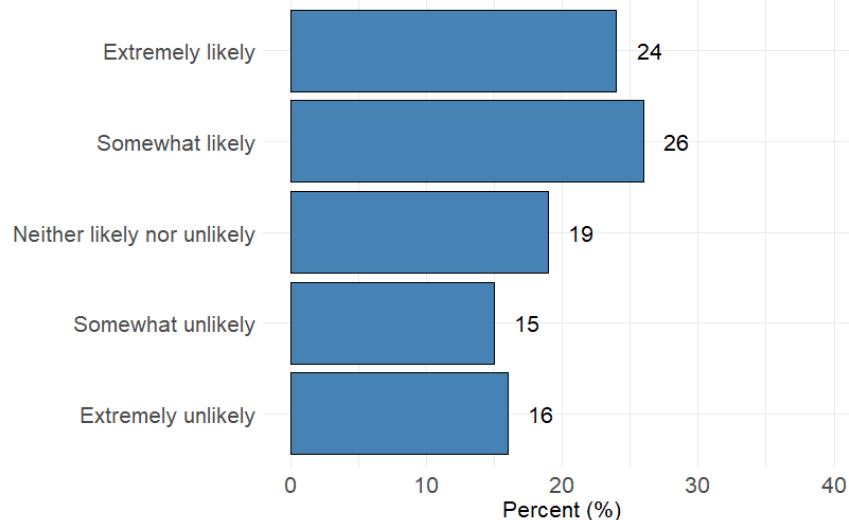


Figure 4. Responses to the question “In the past month, about how often did you do each of the following activities?”

We also asked respondents how frequently they had taken public transportation in the prior two months. About 90% of respondents said they had never taken public transit during this period, while just over 3% reported doing so more than five times.

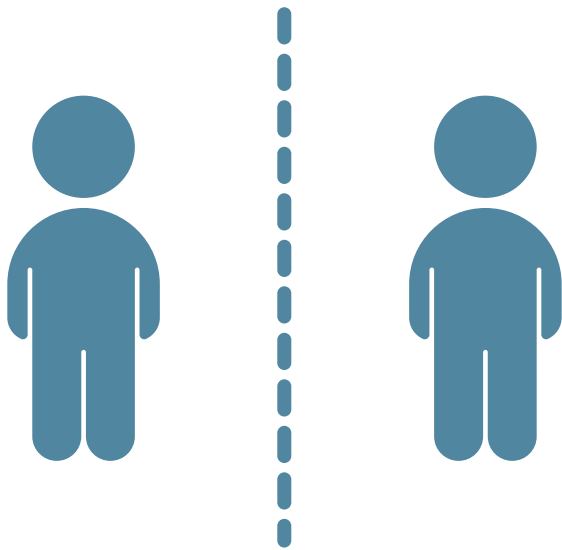
Finally, given that this survey was conducted during the end of the school year, with public schools closed for in-person instruction across all states included in the survey, we assessed respondents’ willingness to send their children back to school in the fall if schools reopen. About 43% of respondents’ households included children under 18 (n=1,314). Of these, about 30% said they were extremely or somewhat unlikely to send their children to school or daycare in the fall if these facilities were open, while about 50% said they were somewhat or extremely likely to do so.

Figure 5. Responses to the question “If schools and daycares are open in the fall, how likely would you be to send your child to school or daycare (in-person)?”



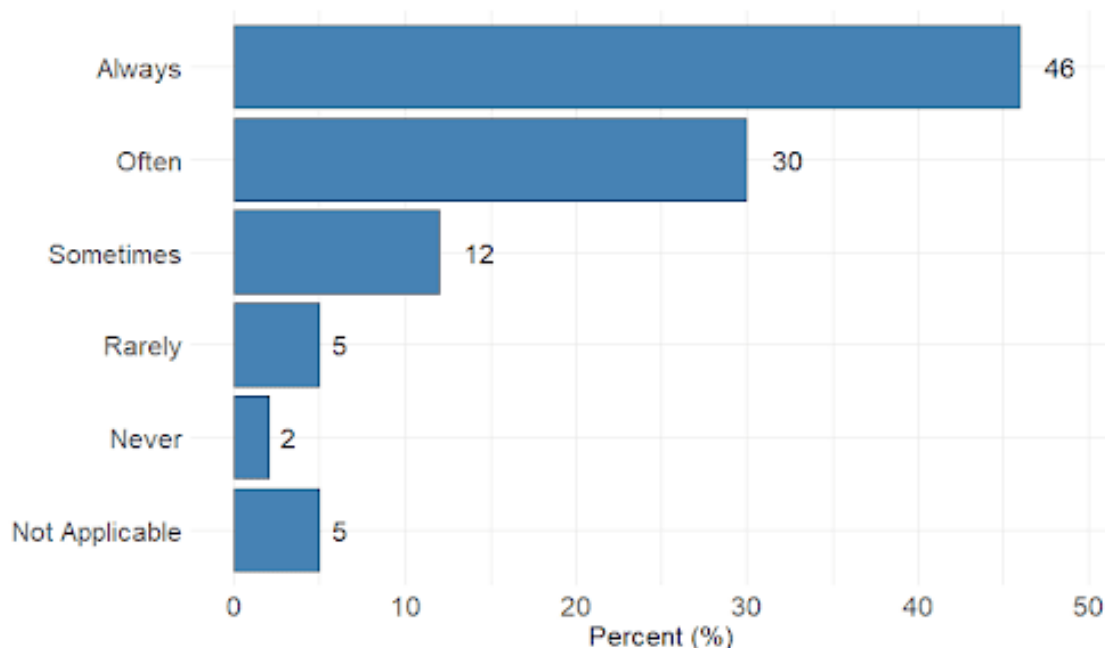
Keeping Distance from Others

In the period prior to the survey, officials also recommended that individuals keep distance from people outside their household to reduce COVID-19 transmission, a practice referred to as social distancing or physical distancing. To assess distancing behaviors, we asked respondents to report how often they kept distance from other people outside their household in the week prior to the survey. Just under half of respondents said that they always practiced this behavior, while another 30% said they did so “often,” and another 2% reported that they never left home or encountered anyone else.



When we asked respondents why they may not always keep distance from other people, common reasons included difficulty keeping distance in stores or public buildings (33%), the fact that one or both people were wearing masks (29%), other people approaching the respondent (25%), and an inability to keep distance at work (23%).

Figure 6. Responses to the question “In the past week, did you keep a distance from people outside your household?”



Wearing Masks or Face Coverings

In early April 2020, about a month prior to the start of our survey, the Centers for Disease Control and Protection (CDC) issued recommendations that people wear cloth face coverings in public, especially in areas with high rates of community transmission of COVID-19, to reduce the spread of the disease. We asked respondents whether or not they owned masks or face coverings and how frequently they wore them. Overall, about 95% of respondents said they had some type of face covering. About 56% of respondents owned a cloth mask or face covering, while 19% had paper surgical masks, and 17% reported having an N95 surgical mask or similar.

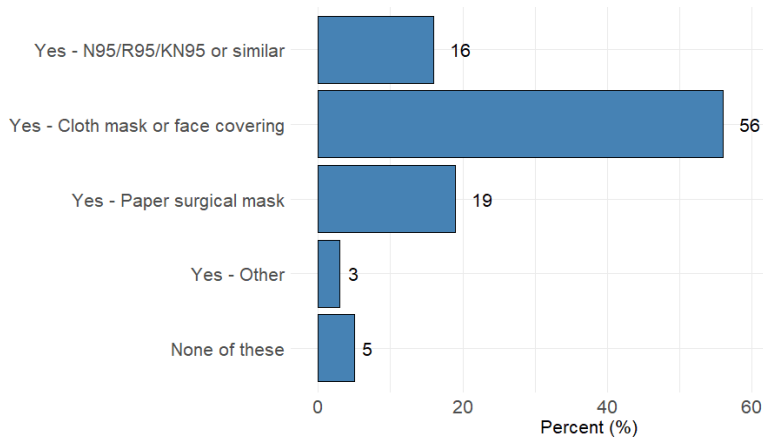


Figure 7. Responses to the question “Do you have a paper or cloth mask or face covering that you could wear to avoid getting or spreading COVID-19?”

Additionally, we asked respondents how frequently they had worn a face covering in the week prior to the survey while participating in different activities.

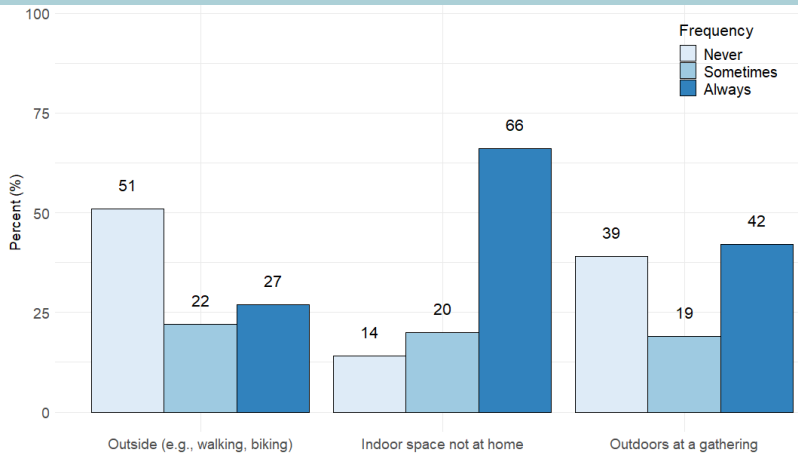


Figure 8. Responses to the question “In the past week, how often did you wear a face covering in each of the following situations?” Percentages were calculated using only respondents who participated in these activities.

Respondents reported high rates of face covering while in indoor public spaces like stores or workplaces: 66% of respondents said they always wore a face covering, while 20% reported wearing a face covering “sometimes,” and 14% said they never wore a face covering (n=2,863 that ever went to indoor public places). Among respondents who reported spending any time in crowded outdoor spaces (n=1,772), 42% said they had always worn a face covering, while 39% said they never wore a face covering in these circumstances. Finally, for respondents who spent any time outdoors exercising in the past week (n=2,761), 27% said they always wore a face covering, while 50% said they never did during this activity. The most common barriers to wearing a face covering cited by respondents were related to difficulty breathing or discomfort.

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Rates of reported mask wearing varied across the six states included in our sample. In Massachusetts, 85% of respondents said they always wore a mask in indoor public spaces, compared to 73% in Colorado, 72% in Michigan, 60% in Washington, 55% in Louisiana, and 52% in Iowa.

We also examined how mask wearing varied with respondent characteristics. Non-Hispanic Black and other non-White respondents were more likely to report always wearing masks indoors compared to White respondents, and respondents over 55 years old reported higher rates of mask wearing compared to respondents under 34. Mask wearing rates also increased with increasing education levels. Finally, compared to respondents who identified as politically moderate, liberals were more likely to wear masks, while conservatives were less likely to do so.

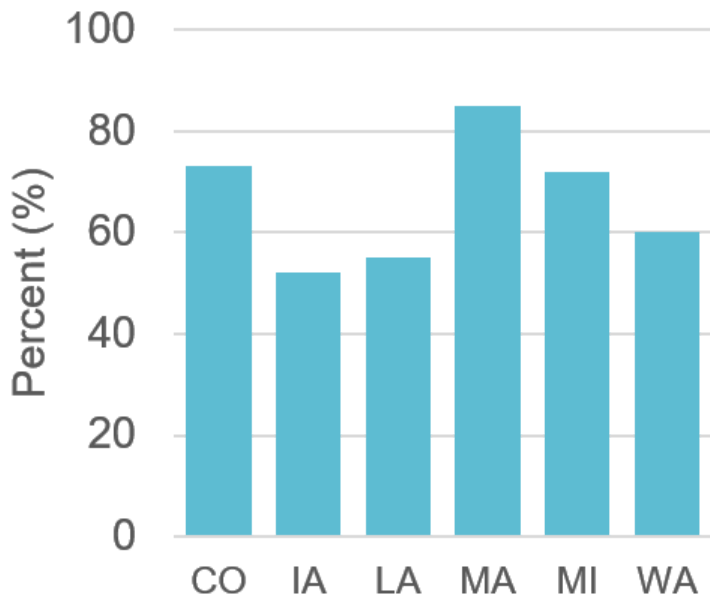


Figure 9. Percent of respondents reporting always wearing a mask in indoor public spaces by state

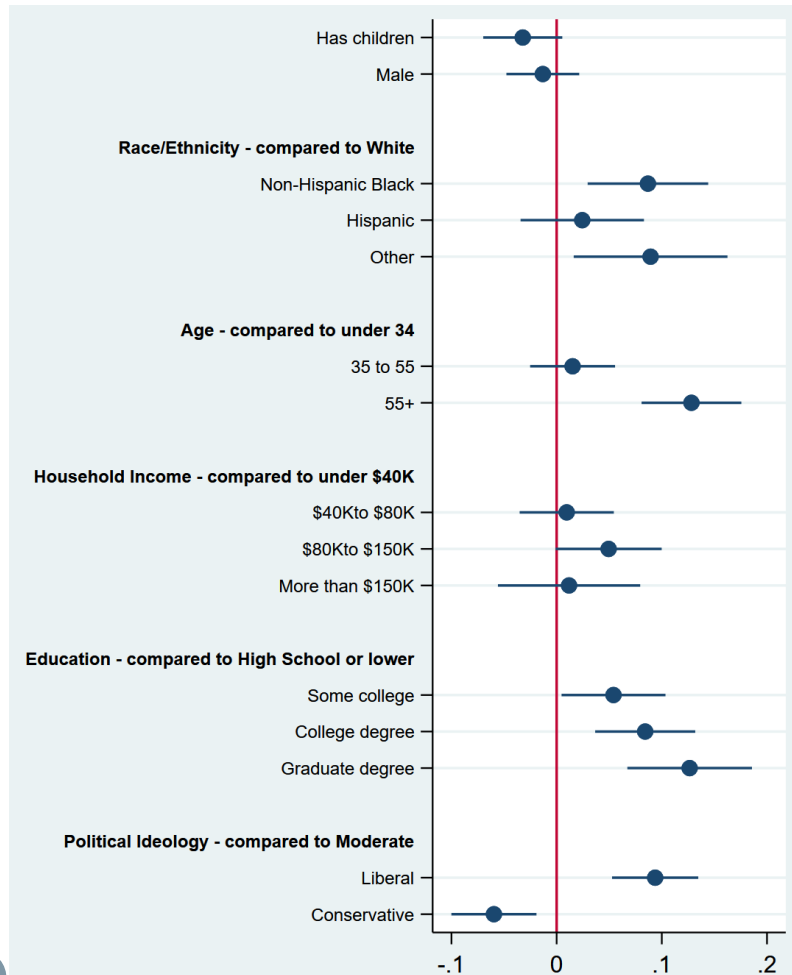


Figure 10. Relationship between likelihood of always wearing a mask in indoor public spaces and respondent characteristics (multivariate regression coefficients for binary outcome variable) Red line represents comparison group (e.g., respondents without children, females, White respondents)



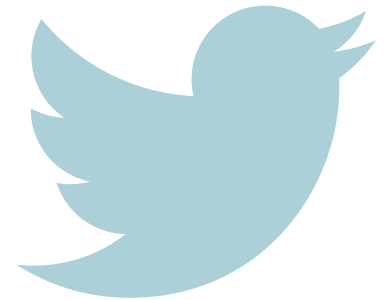
INFORMATION SEEKING

In addition to measuring risk perceptions and behaviors, we measured how respondents obtain information about COVID-19. The proliferation of social media means individuals can obtain information about their risk and recommended behaviors from a variety of sources, ranging from television to Twitter, radio to podcasts.

Among traditional media, television was the most widely used source, with nearly half of respondents (46%) indicating that they seek information about COVID-19 from television every day, while 39% indicated that they obtain information from television a few days a week. Newspapers and radio news were less common sources of information. Nearly half of all respondents indicated that they never obtain information from radio (46%) or newspapers (49%).

In the realm of social media, Facebook was the most widely used platform for gathering information on COVID-19. More than half of all respondents indicated that they obtain information about COVID-19 from Facebook at least a few

days a week (27% of respondents obtain information from Facebook everyday). Conversely, 71% respondents indicated that they never obtain information from Twitter. A little over a quarter (27%) of respondents indicated that they obtain information from other social media platforms (e.g., Instagram, TikTok) a few days a week.



Podcasts are not a particularly common source of COVID-19 information, as 78% of respondents indicated that they never obtain information from this source. Finally, government and academic websites, as well as media aggregation tools (i.e., Reddit and Google News), represent important sources of online information. More than 70% of respondents indicated they frequently seek information from government or academic websites either every day (21%) or a few days a week (50%). About 56% of respondents indicated they obtain information from media aggregation tools, like Google News.

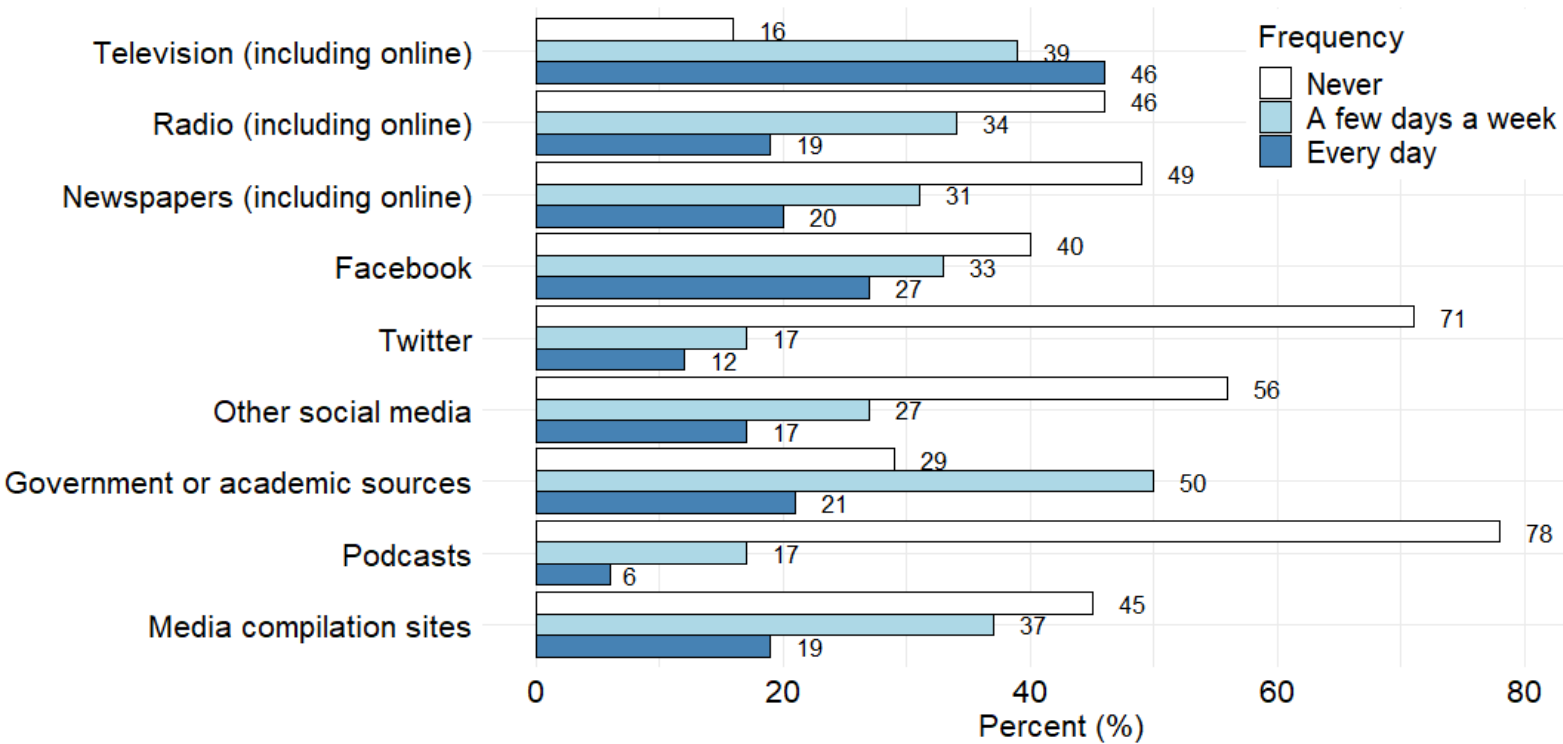
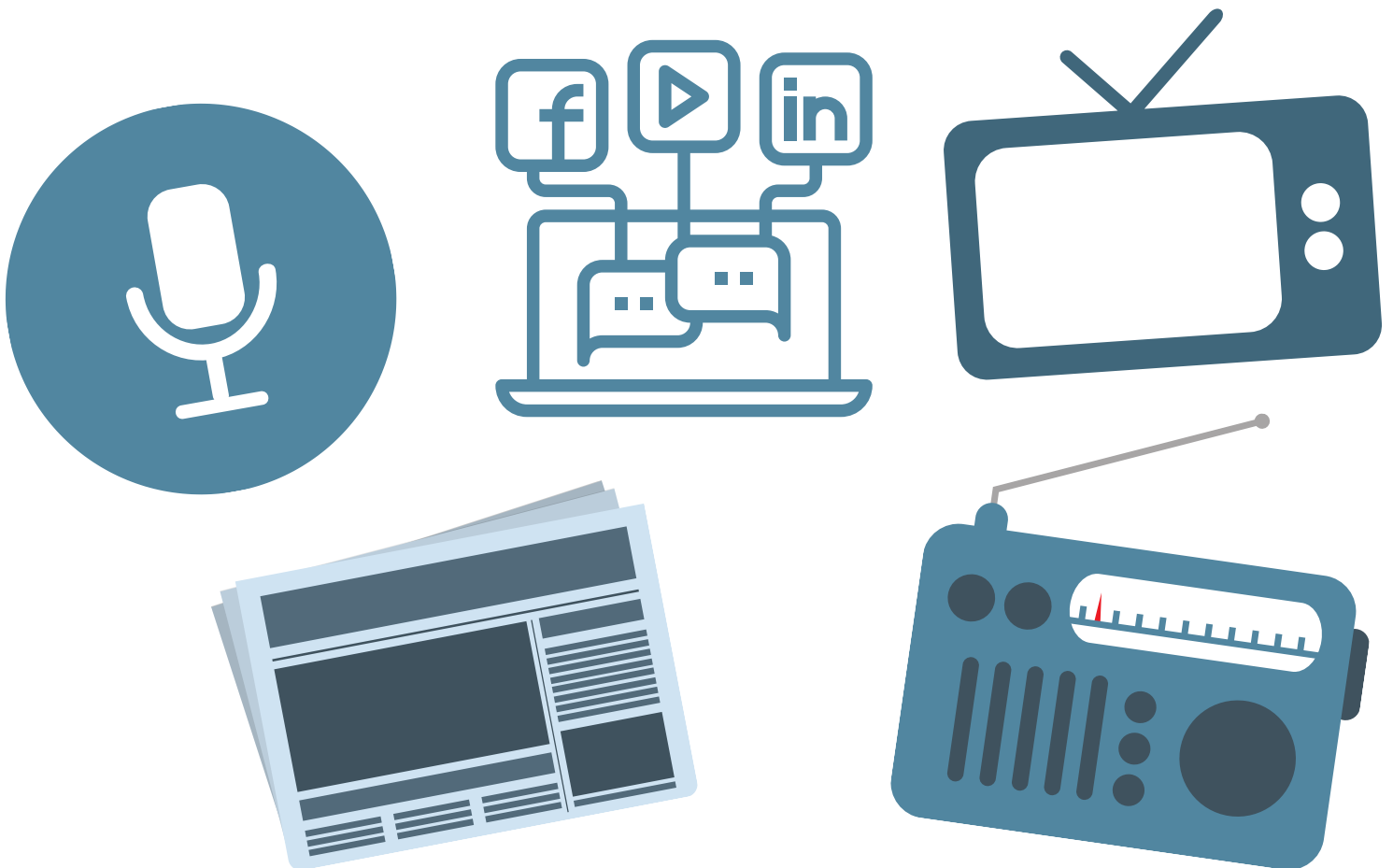


Figure 11. Responses to the question “How often do you get information about COVID-19 from the following sources?”



GOVERNMENT PERFORMANCE

Governments at all levels (local, state, and national) play a role in managing the COVID-19 pandemic. All of the states included in our survey imposed some sort of restrictions on individuals, such as stay-at-home orders, business and school closures, and others. We asked respondents to assess the relative stringency of these rules by asking them whether they thought existing COVID-19 policies in their state should be more strict, less strict, or remain about the same. About half of our respondents (48%) indicated that the policy in their state should remain about the same, while nearly one-third of respondents (31%) felt the policy should be more strict. Less than a quarter of respondents (21%) felt restrictions were too strict in their state.

We also asked respondents to assess the performance of different government officials and institutions. No single individual or institution attracted more criticism from respondents than President Donald Trump. The majority of respondents either disapproved (14%) or strongly disapproved (37%) of President Trump’s handling of the pandemic.

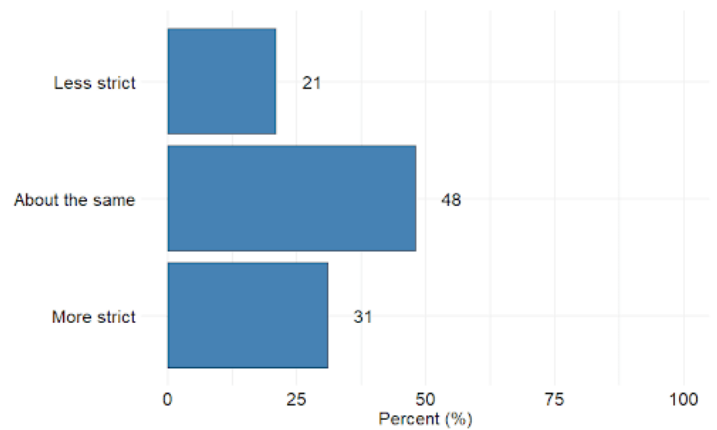
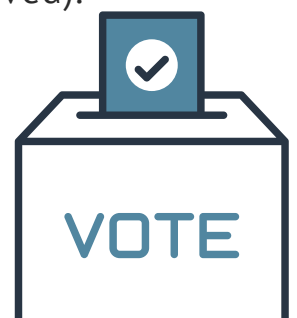


Figure 12. Responses to the question “Overall, do you believe existing COVID-19 restrictions in your state should be more strict, less strict or about the same?”

Conversely, most respondents (56%) approved or strongly approved of the performance of Dr. Anthony Fauci, Director of the National Institute of Allergy and Infectious Disease (NIAID) and one of the most visible federal officials during the pandemic response. In fact, scientists received overwhelmingly high approval ratings from respondents, nearly 66% of whom either approved or strongly approved of their performance. Respondents also expressed overwhelmingly positive views of local governments (roughly 54% either approved or strongly approved) and local school districts (roughly 63% either approve or strongly approved).



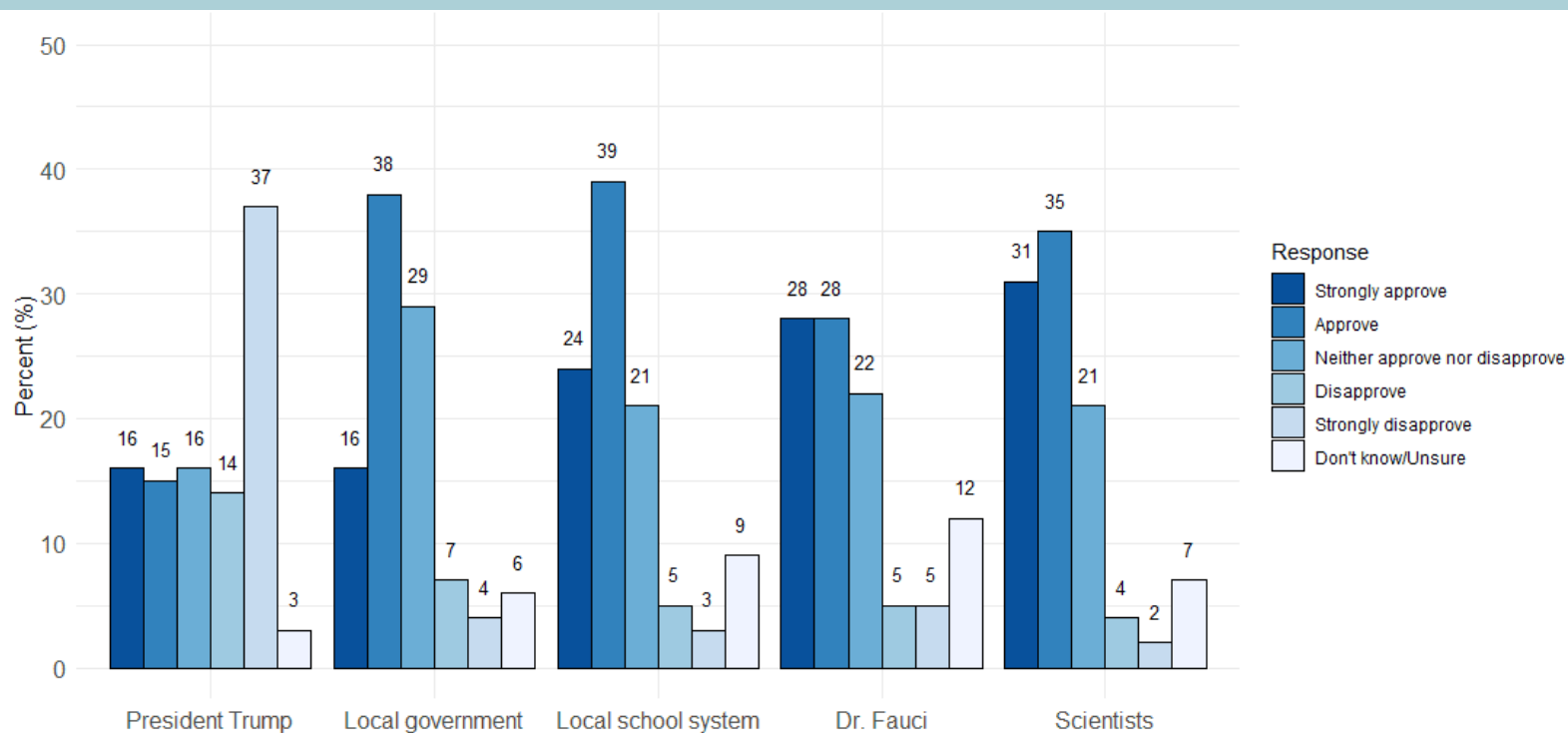


Figure 13. Responses to the question “Do you approve or disapprove of the job each of the following has done in handling the COVID-19 response?”

CONCLUSION

Understanding how individuals perceive the risks associated with COVID-19, as well as how they respond through their behaviors, is critical for creating effective risk communication strategies and risk reduction policies. It is also important for assessing the differential effects of state-level policies on risk perceptions and behaviors, especially as both the policies and the pandemic dynamics continue to evolve. For instance, while our data show that people generally overestimate their risk of contracting COVID-19, we also observed highly variable levels of compliance with recommended behaviors for slowing the spread of COVID-19 among respondents. Through more in-depth analysis of these data, it will be important to understand how these impacts differ among groups (e.g., racial, class, pre-existing physical and mental health conditions) and what strategies states may use to ensure their pandemic responses are equitable.

Please [visit our website](#) to see related reports for information specific to each of the six states. Future reports will assess these and other trends over time.

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