Webinar Series

May 6
Face Coverings and Social Distancing

May 13
Knowledge and Understanding

May 20
Perceived Risk and Threat

May 27
Vaccination
Objectives

The survey collected information about knowledge, perceptions, attitudes, and behaviors related to COVID-19.

Survey Topics
- Perceived severity and risk
- Transmission
- Personal protective practices
- Community mitigation strategies
- Vaccination
- Misinformation/myths
- Testing
- Stigma

Open-ended Questions
- What is your single most urgent question about the coronavirus?
- What is the biggest challenge you are facing when trying to follow the strategies in your community to try to slow down transmission of the coronavirus?
- What is your main motivation to follow the strategies in your state or community to try to slow down transmission of the coronavirus?
Interdisciplinary Research Team

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Molly Lynch, MPH
Linda Squiers, PhD

Study Team Members: Pia MacDonald, PhD; Christine Bevc, PhD, MA; Alicia Frasier, MPH; Carla Bann, PhD; Alyssa Jordan, MPH; Ana Saravia, BA; Ashley Wheeler, BA
• What does the general public know and understand about COVID-19?
• How confident are they in the ability to protect themselves?
• Has knowledge changed over time?
• How is knowledge linked with COVID-19 related behaviors?
Methodology

- Probability-based, web-based panel designed to be representative of U.S. households
- Wave 1 fielded Feb. 28–March 2, 2020 (n = 1,021)
- Wave 2 fielded April 10–13 and 17–20, 2020 (n = 2,279)
- Weighted to represent the U.S. population
Respondent Characteristics for Wave 2 (n = 2,279)

- Male: 48%
- Female: 52%

- White: 78%
- Black: 12%
- Other: 10%

- Hispanic: 16%
- Not Hispanic: 84%

- Northeast: 18%
- Midwest: 21%
- South: 38%
- West: 24%

- Less than High School: 11%
- High School: 28%
- Some College: 28%
- Bachelor’s Degree or Higher: 33%

- <$50,000: 32%
- $50,000–$99,999: 31%
- $100,000–$149,999: 17%
- ≥ $150,000: 21%

- 18-24: 10%
- 25-34: 18%
- 35-49: 24%
- 50-64: 26%
- 65+: 22%

- Excellent/Very Good: 50%
- Good: 35%
- Fair/Poor: 15%

- Employed: 65%
- Not Employed: 35%
Knowledge and Understanding
Knowledge Domains on the Surveys

- Susceptibility
- Severity and mortality
- Transmission
- Protection/mitigation
- Misinformation/myths
Self-reported Knowledge

25% say they DO NOT have all the information they need to protect themselves and their families.

Wave 2 Data, April 2020
96% understand that people of all ages, races, and ethnic groups are at risk.
Some misunderstanding and uncertainty exists around disease severity.
“How does it compare to the seasonal influenza outbreak in terms of number who get it and the fatalities from it?”

“Once you have it, are you immune from getting it a second time?”

“Why does it kill or make some severely ill and not others?”
If you have been in close contact with someone who has the Coronavirus and you do not have symptoms within 5 days, it is safe to assume you have not been infected.

People infected with the Coronavirus cannot transmit it to others unless they have symptoms.

The Coronavirus is very contagious.

The Coronavirus is spread through coughing and sneezing.
“Are people who already survive COVID-19 in danger of continuing to spread it?”

“Is the coronavirus actually airborne?”

“Can it be spread from pets?”
40% incorrectly believed or were unsure that anyone in the U.S. who needed a test could get one.
“When will ‘everyone’ be tested?”

“When will we have enough testing capacity to reopen our country?”

“When [can I] go to get tested if I feel like I’m infected?”

– Spanish translation
Many, but not all, understand the purpose of wearing a face covering.

If someone wears a cloth face covering out in public, they do not have to worry about practicing social distancing. **False**

Wearing a cloth face covering may prevent you from spreading the Coronavirus to someone else. **True**

Wave 2 Data, April 2020
For handwashing to be effective at killing the coronavirus, you should wash your hands with soap and water for at least 10 seconds. **False**

Wave 2 Data, April 2020
A vaccine is now available to prevent infection from the Coronavirus.  
*False*

Antibiotics can be used to treat the Coronavirus.  
*False*

Antibiotics can be used to prevent infection from the Coronavirus.  
*False*
“[There’s a] variety of conflicting information about treatment/transmission, what is acceptable to do/not to do from government on all levels (county, state, federal).”

“I have heard many conflicting expert opinions about the risk of exposure to the virus on surfaces...I would like definitive answers.”

“We don’t know what’s really true. There’s a lot of corrupt information regarding coronavirus.”

− Spanish translation
Knowledge Over Time
<table>
<thead>
<tr>
<th><strong>Susceptibility</strong></th>
<th>People of all ages can become infected with the coronavirus.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>People of all racial and ethnic groups can become infected with the coronavirus.</td>
</tr>
<tr>
<td><strong>Severity and Mortality</strong></td>
<td>Most people who are infected with the coronavirus die from it.</td>
</tr>
<tr>
<td></td>
<td>Most people who are infected with the coronavirus recover from it.</td>
</tr>
<tr>
<td></td>
<td>Most people who are infected with the coronavirus only have mild symptoms.</td>
</tr>
<tr>
<td><strong>Transmission</strong></td>
<td>The coronavirus is very contagious.</td>
</tr>
<tr>
<td></td>
<td>The coronavirus is spread through coughing and sneezing.</td>
</tr>
<tr>
<td><strong>Vaccines and Treatment (Antibiotics)</strong></td>
<td>A vaccine is now available to prevent infection from the coronavirus.</td>
</tr>
<tr>
<td></td>
<td>Antibiotics can be used to prevent infection from the coronavirus.</td>
</tr>
<tr>
<td></td>
<td>Antibiotics can be used to treat the coronavirus.</td>
</tr>
<tr>
<td><strong>Protection/Mitigation</strong></td>
<td>If you are infected with the coronavirus, wearing a surgical face mask, like an N95 respirator, will help prevent you from spreading it to others.</td>
</tr>
<tr>
<td></td>
<td>Wearing a cloth face covering may prevent you from spreading the coronavirus to someone else.</td>
</tr>
</tbody>
</table>
Knowledge increased in all domains over the last couple months.

Gaps in knowledge remain especially related to severity and mortality of COVID-19, antibiotics and a vaccine.

Note: Adjusted means control for gender, age, race/ethnicity, education, income, employment status, health insurance, region, self-reported health status, and confidence can protect self and family from getting infected with the coronavirus. All differences significant ($p < .001$).
Knowledge gaps remain, but some increases over time, especially for those with less education.
Knowledge levels lower for those with no insurance or on Medicaid, with some improvements.

$p = 0.030$. Note: Adjusted means control for gender, age, race/ethnicity, education, income, employment status, health insurance, region, self-reported health status, and confidence can protect self and family from getting infected with the coronavirus.
Misinformation about vaccine ability and misunderstanding about the role of antibiotics improved over time, and more so for non-White racial/ethnic groups.

\( P = 0.048 \). Note: Adjusted means control for gender, age, race/ethnicity, education, income, employment status, health insurance, region, self-reported health status, and confidence can protect self and family from getting infected with the coronavirus.
Why Is Knowledge Important?
<table>
<thead>
<tr>
<th>12-item Behavioral Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Washing my hands with soap and water more often</td>
</tr>
<tr>
<td>Using more disinfectants, such as hand sanitizers and cloth wipes</td>
</tr>
<tr>
<td>Wearing a face mask while out in public</td>
</tr>
<tr>
<td>Avoiding travel on subways, buses, taxis, Ubers/Lyfts</td>
</tr>
<tr>
<td>Wearing a cloth face covering while out in public</td>
</tr>
<tr>
<td>Sheltering-in-place / staying home</td>
</tr>
<tr>
<td>Not letting people who do not live with me enter my home</td>
</tr>
<tr>
<td>Not visiting family and friends in their homes</td>
</tr>
<tr>
<td>Plan to wear face covering</td>
</tr>
<tr>
<td>Practicing social distancing</td>
</tr>
<tr>
<td>Postponing or cancelling non-essential medical appointments, procedures, or surgeries</td>
</tr>
<tr>
<td>Wearing protective gloves while out in public</td>
</tr>
</tbody>
</table>
47% had either moderate or low knowledge.
More Knowledge = More Behaviors

Mean number of behaviors was significantly different between High vs. Low ($p = .003$) and Medium vs. Low ($p = .001$). High vs. Medium was not significant.
Greater knowledge about COVID was associated with practicing mitigation behaviors outside the home...

<table>
<thead>
<tr>
<th>Low Knowledge</th>
<th>Medium Knowledge</th>
<th>High Knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not visiting family or friends</td>
<td>67% 77% 78%</td>
<td>88% 94%</td>
</tr>
<tr>
<td>Practicing social distancing</td>
<td>72% 88%</td>
<td>65% 70%</td>
</tr>
<tr>
<td>Postponing or cancelling non-essential medical appointments, procedures, or surgeries</td>
<td>49%</td>
<td>70%</td>
</tr>
</tbody>
</table>

Note: Not visiting $p = 0.028$ for High vs. Low and $p = 0.009$ for Low vs. Medium. Social distancing: $p < 0.001$ between all groups. Postponing: $p < 0.001$ for High vs. Low and $p = 0.002$ for Low vs. Moderate.
Knowledge and Mitigation Behaviors

- Sheltering in place:
  - Low Knowledge: 71%
  - Medium Knowledge: 87%
  - High Knowledge: 89%

- No visitors in home:
  - Low Knowledge: 49%
  - Medium Knowledge: 63%
  - High Knowledge: 62%

...and inside the home.

Note: Sheltering: $p < 0.001$ for High vs. Low and High vs. Moderate. No visitors: $p = 0.004$ for High vs. Low and $p = 0.008$ for High vs. Moderate.
Fauci says people should 'just forget about shaking hands' even after the coronavirus threat is over

Dr. Anthony Fauci, the nation’s top infectious disease expert, said later in the same briefing: “We will have coronavirus in the fall. I am convinced of that.”
What Else Could Be Driving COVID-19 Behaviors?

- Emotions and worry
- Perceptions of personal risk
- Work/family status
- Health status
- Confidence
25% say they are **NOT** confident they can prevent themselves and their families from being infected
Learning about a new disease on the fly, with more than 78,000 U.S. deaths attributed to the pandemic, they have little solid research to guide them. The World Health Organization’s database already lists more than 14,600 papers on covid-19. Even the world’s premier public health agencies, including the Centers for Disease Control and Prevention, have constantly altered their advice to keep pace with new developments.

“Things change in science all the time. Theories are made and thrown out. Hypotheses are tweaked. It doesn’t mean we don’t know what we are doing. It means we are learning,” said Deepak Bhatt, executive director of interventional cardiology at Brigham and Women’s Hospital in Boston.

https://www.washingtonpost.com/health/2020/05/10/coronavirus-attacks-body-symptoms/?arc404=true
Recommendations for Public Health Education Campaigns

• Understand your audience
• Clearly state what is known and unknown and cite data sources
• Provide numeric information and explain its context
• Include “calls to action” in messages
Recommendations for Public Health Education Campaigns

• Focus on groups at greatest risk and identify specific knowledge gaps
• Deliver information through multiple channels and trusted sources
• Evaluate the impact of the campaign and adjust over time
Concluding Thoughts and Discussion

Knowledge is important, but it’s not a sufficient catalyst for behavior change.

- Knowledge was strong in some areas, deficient in others.
- Misinformation about vaccine ability and the role of antibiotics was prevalent.
- Knowledge improved for some vulnerable subgroups as more information about COVID-19 was disseminated.
- Confusion persists for some.
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COVID-19 Response and Capabilities

To combat the unprecedented challenges presented by COVID-19, RTI offers broad and deep experience to address a variety of public health threats—including Ebola, Zika, tuberculosis, malaria, and HIV.

RTI offers a deep bench of cross-functional experts:

- Epidemiologists
- Physicians
- Data scientists
- Survey methodologists
- Public health workers
- Evaluation specialists
- Educators and trainers
- Innovation experts

Learn more about RTI’s rapid response to COVID-19 [rti.org/emerging-issue/covid-19-research]