Vaccines: Attitudes and Messaging

Brian S. Krueger
Department of Political Science, Professor
College of Arts and Sciences, Associate Dean
Measles Declared Eliminated from the US in 2000 by the World Health Organization

**MEASLES BY THE NUMBERS**

9 OUT OF 10 susceptible people with close contact to the measles virus will develop it

IN 2018, THE U.S. EXPERIENCED

- 349 confirmed measles cases
- 17 measles outbreaks (3 or more linked cases)

AMONG MEASLES PATIENTS:

- 1 in 4 will be hospitalized
- 1 in 1,000 will develop encephalitis
- 1 to 2 in 1,000 will die

95 PERCENT vaccination rate needed to achieve “herd immunity”

SOURCE: Centers for Disease Control and Prevention
“Scientists often imagine that vaccine hesitancy is primarily the result of a knowledge gap: if the right knowledge is provided, the gap will be bridged, the logical conclusion will readily become apparent, and the rational decision-making process will kick in and override the emotional, illogical, misinformed position previously held. It has become increasingly clear that vaccine hesitancy cannot be fully addressed just by restating the facts.”  (Rosin et al 2021)
Vaccines a scientific triumph

but

the current vaccine challenge is often a social identity issue, not narrowly technical/scientific
Motivated Reasoning

Attitudes Connected to Social Identity are Especially Sticky

• People’s worldview/values can easily override unwelcome facts

• Rejecting a held belief generates inconsistencies that threaten
  • one’s self-concept & in-group standing

Even rebels (especially rebels) conform to their sub-group’s norms
What happens when we try to correct vaccine misinformation?

Parents’ beliefs in misinformation about vaccines are strengthened by pro-vaccine campaigns

Sara Pluviano, Caroline Watt, Giovanni Ragazzini & Sergio Della Sala

Cognitive Processing 20, 325–331 (2019) | Cite this article

“Studies have failed to show the efficacy of educational interventions, and, indeed, a number of studies of educational interventions show a contrarian effect leaving the vaccine-hesitant more entrenched in their views.” (Jacobson 2020)
COVID Vaccination Attitudes Appear Socially/Identity Based

Figure 3
Republicans, Rural Residents, Younger Adults, And Uninsured Lag In Vaccine Uptake

Have you personally received at least one dose of the COVID-19 vaccine, or not? As you may know, an FDA-authorized vaccine for COVID-19 is now available for free to all adults in the U.S. Do you think you will...?

<table>
<thead>
<tr>
<th>Already received at least one dose</th>
<th>Get vaccinated ASAP</th>
<th>Wait and see</th>
<th>Only if required</th>
<th>Definitely not</th>
</tr>
</thead>
<tbody>
<tr>
<td>Democrats</td>
<td>86%</td>
<td>7%</td>
<td>9%</td>
<td>94%</td>
</tr>
<tr>
<td>Ages 65 and older</td>
<td>85%</td>
<td>7%</td>
<td>9%</td>
<td>94%</td>
</tr>
<tr>
<td>College graduates</td>
<td>81%</td>
<td>9%</td>
<td>11%</td>
<td>94%</td>
</tr>
<tr>
<td>Individual w/serious health condition</td>
<td>74%</td>
<td>11%</td>
<td>15%</td>
<td>94%</td>
</tr>
<tr>
<td>Urban residents</td>
<td>73%</td>
<td>12%</td>
<td>10%</td>
<td>93%</td>
</tr>
<tr>
<td>Ages 50-64</td>
<td>73%</td>
<td>10%</td>
<td>10%</td>
<td>94%</td>
</tr>
<tr>
<td>Women</td>
<td>71%</td>
<td>10%</td>
<td>10%</td>
<td>94%</td>
</tr>
<tr>
<td>White adults</td>
<td>70%</td>
<td>15%</td>
<td>10%</td>
<td>94%</td>
</tr>
<tr>
<td>Total</td>
<td>67%</td>
<td>14%</td>
<td>10%</td>
<td>94%</td>
</tr>
<tr>
<td>Suburban residents</td>
<td>66%</td>
<td>14%</td>
<td>10%</td>
<td>94%</td>
</tr>
<tr>
<td>Black adults</td>
<td>65%</td>
<td>16%</td>
<td>12%</td>
<td>94%</td>
</tr>
<tr>
<td>Insured under age 65</td>
<td>65%</td>
<td>16%</td>
<td>15%</td>
<td>94%</td>
</tr>
<tr>
<td>No serious health condition</td>
<td>64%</td>
<td>15%</td>
<td>16%</td>
<td>94%</td>
</tr>
<tr>
<td>Independents</td>
<td>63%</td>
<td>16%</td>
<td>16%</td>
<td>94%</td>
</tr>
<tr>
<td>Men</td>
<td>63%</td>
<td>18%</td>
<td>16%</td>
<td>94%</td>
</tr>
<tr>
<td>Hispanic adults</td>
<td>61%</td>
<td>16%</td>
<td>11%</td>
<td>94%</td>
</tr>
<tr>
<td>Adults without a college degree</td>
<td>61%</td>
<td>17%</td>
<td>12%</td>
<td>94%</td>
</tr>
<tr>
<td>White Evangelical Christians</td>
<td>60%</td>
<td>23%</td>
<td>17%</td>
<td>94%</td>
</tr>
<tr>
<td>Ages 30-49</td>
<td>58%</td>
<td>19%</td>
<td>17%</td>
<td>94%</td>
</tr>
<tr>
<td>Ages 18-29</td>
<td>57%</td>
<td>21%</td>
<td>15%</td>
<td>94%</td>
</tr>
<tr>
<td>Rural residents</td>
<td>57%</td>
<td>21%</td>
<td>15%</td>
<td>94%</td>
</tr>
<tr>
<td>Republicans</td>
<td>54%</td>
<td>20%</td>
<td>22%</td>
<td>94%</td>
</tr>
<tr>
<td>Uninsured under age 65</td>
<td>44%</td>
<td>26%</td>
<td>21%</td>
<td>94%</td>
</tr>
</tbody>
</table>

NOTE: See topline for full question wording.
SOURCE: KFF COVID-19 Vaccine Monitor (July 15-27, 2021) • Download PNG
COVID Vaccination Attitudes Appear Socially Based & Increasingly So

The gap in vaccination rates between Trump and Biden counties is growing

Share of fully vaccinated adults grouped by counties won by Biden and counties won by Trump in the 2020 presidential election, by month

- **BIDEN counties**
  - July 6: 55.0% (Gap: +11.7)
  - May 11: 55.0% (Gap: +6.5)
  - April 22: 52.8% (Gap: +2.2)

- **TRUMP counties**
  - July 6: 44.2% (Gap: -11.7)
  - May 11: 38.5% (Gap: -6.5)
  - April 22: 32.6% (Gap: -2.2)

Republicans who most trust far right news outlets have become more likely (46%) than they were in March (31%) to refuse vaccination (PRRI 2021)
People in Missouri are wearing disguises to get vaccinated, doctor says

Nathan Place
July 26, 2021 • 2 min read

Secret vaxxers: These Americans are getting COVID vaccinations but not telling anyone
Secret vaxxers: These Americans are getting COVID vaccinations but many cases, vaccinated people hide it because they know people in ...
2 weeks ago
Americans who don’t want the vaccine are not changing their minds
Share of respondents by whether they intend to get vaccinated against COVID-19, by month

The share of Americans vehemently refusing the vaccine has remained steady for the last eight months

Persuasion probably won’t work
Persuasion may work

The latest poll was conducted July 15-27 and may not capture recent upticks in vaccinations after the CDC outlined the increased risk of the delta variant.
Subgroup Understanding

One size fits all communication part of the problem

Messaging should be sensitive to subpopulation cultures, experiences, and attitudes
Treatment 1  
**Pneumonia Prevention**
The pneumococcal vaccine is highly effective at preventing pneumonia.

Treatment 2  
**Costs**
In the United States, pneumonia is a leading cause of death, with over 50,000 people dying from pneumonia each year. Pneumonia also causes severe sickness leading to bed rest, hospitalization and missing work. Cigarette smokers, older adults, those with asthma or COPD are most susceptible to pneumonia. Fortunately, pneumonia can be prevented by the highly effective pneumococcal vaccine. Even if you are currently healthy, had pneumonia in the past, or had the flu shot you still need the pneumococcal vaccine to be protected. It is free, quick and easy to get the pneumococcal vaccine from most health providers.

Treatment 3  
**Safety of Vaccine**
The pneumococcal vaccine is highly effective at preventing pneumonia and the pneumococcal vaccine has been thoroughly tested for safety by independent medical doctors and scientists. Years of evidence strongly show that sickness and side effects from the pneumococcal vaccine are incredibly rare. The pneumococcal vaccine is considered very safe.

Treatment 4  
**Community and Family Duty**
It is everyone’s duty to eliminate contagious disease from our communities. Those receiving the pneumococcal vaccine contribute to everyone’s good health by helping to eradicate pneumonia. This simple act of getting the pneumococcal vaccine protects family, friends and our community because vaccinated individuals will be less likely to infect others with pneumonia. Being responsible and caring for those around you means getting vaccinated.

Treatment 5  
**Combined message (all of the above)**
If allowed by your healthcare professional, how important is it for you to have the pneumococcal vaccine?

<table>
<thead>
<tr>
<th>Table 3. Survey Experiment Treatment Effect Sizes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Control</td>
</tr>
<tr>
<td>Pneumonia Prevention</td>
</tr>
<tr>
<td>Costs</td>
</tr>
<tr>
<td>Safety of Vaccine</td>
</tr>
<tr>
<td>Community and Family Duty</td>
</tr>
<tr>
<td>Combined Message</td>
</tr>
</tbody>
</table>

Note: **Bold** indicates statistically significant effects in the ANOVA.
With COVID, People Also Seem to be Motivated by Community Framed Messages (PRRI 2021)

FIGURE 6.1 Potential Benefits That Make Americans More Likely to Get a COVID-19 Vaccine
Percent who say the following makes them more likely to get vaccinated:

- You would be making a decision that protects human life
  - All Americans: 15
  - Refuser: 39
  - Hesitant: 53

- You would be helping to protect the most vulnerable members of your community
  - All Americans: 12
  - Refuser: 38
  - Hesitant: 53

- You could safely visit with family and friends
  - All Americans: 11
  - Refuser: 35
  - Hesitant: 48

- You would no longer need to wear a face mask
  - All Americans: 10
  - Refuser: 27
  - Hesitant: 37

Elderly and Under 12 Children frame would likely work
Thank you!

Brian S. Krueger  
Department of Political Science, Professor  
College of Arts and Sciences, Associate Dean