CLINICAL WEBINARS
FOR HEALTH SERVICE PSYCHOLOGISTS
TRANSLATING RESEARCH TO PRACTICE
The Origins of Parental Vaccine Decision-Making & What Clinicians Can Do

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Please review our webinar guidelines for frequently asked questions:
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1 CE Credit, Instructional Level: Intermediate
1 Contact Hour (New York Board of Psychology)

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Matt Motta, PhD

Matt Motta, PhD, is an assistant professor of political science at Oklahoma State University. His research aims to better understand the psychological origins and policy consequences of health, environmental, and political misinformation endorsement. He is also interested in using insights from this work to inform effective health and climate communication. His research has been published in peer-reviewed journals across the social sciences, including *Nature Climate Change*, *Social Science & Medicine*, *Climatic Change*, *Vaccine*, and *Political Behavior*. His work on COVID-19 misinformation and efforts to encourage vaccine uptake has also been featured in outlets like *The New York Times*, *CNN*, *The Washington Post*, *The Atlantic*, and *Scientific American*. 
Disclosures/Conflicts of Interest

I have no conflicts of interest to disclose.
Learning Objectives

1. Describe peer-reviewed research on the causes of parental vaccine decision-making.

2. Explain how health communicators use research on the causes of vaccine hesitancy to inform effective vaccine promotion messaging.

3. Discuss several evidence-based strategies for encouraging vaccine promotion in clinical settings, and consider how to use each one appropriately in conversations with parents who decide to forgo vaccinating their children.
References


Motta, MP. Republicans, not Democrats, are More Likely to Endorse Anti-Vaccine Misinformation. Forthcoming at American Politics Research.

References


Three In Ten Parents Say They Will Definitely Not Get Their 5 To 11 Year Old Vaccinated

Thinking about your child between the ages of 5 and 11, once there is a COVID-19 vaccine authorized and available for your child’s age group, do you think you will get them vaccinated...?

- Right away
- Wait and see
- Only if required
- Definitely not

<table>
<thead>
<tr>
<th></th>
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<th>Definitely not</th>
</tr>
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<tbody>
<tr>
<td>Oct '21</td>
<td>27%</td>
<td>33%</td>
<td>5%</td>
<td>30%</td>
</tr>
<tr>
<td>Sept '21</td>
<td>34%</td>
<td>32%</td>
<td>7%</td>
<td>24%</td>
</tr>
<tr>
<td>July '21</td>
<td>26%</td>
<td>40%</td>
<td>5%</td>
<td>25%</td>
</tr>
</tbody>
</table>

NOTE: Among parents or guardians of children ages 5-11. See topline for full question wording.
SOURCE: KFF COVID-19 Vaccine Monitor - Download PNG
### Figure 2

**Long-Term Effects, Serious Side Effects, And Impacts On Fertility Are Among The Top Concerns Parents Have About Vaccinating Their 5-11 Year Old Child**

Percent of parents of children ages 5-11 who say they are **very** or **somewhat concerned** about each of the following:

<table>
<thead>
<tr>
<th>Concern</th>
<th>Concerned Parents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not enough is known about the long-term effects of the COVID-19 vaccine in children</td>
<td>76%</td>
</tr>
<tr>
<td>Their child might experience serious side effects from the COVID-19 vaccine</td>
<td>71%</td>
</tr>
<tr>
<td>The COVID-19 vaccine may negatively impact their child’s fertility in the future</td>
<td>68%</td>
</tr>
<tr>
<td>Their child might be required to get the COVID-19 vaccine even if they don’t want to</td>
<td>53%</td>
</tr>
<tr>
<td>They might need to take time off work to bring their child to get vaccinated or to care for them if they experience side effects</td>
<td>36%</td>
</tr>
<tr>
<td>They won’t be able to get the vaccine for their child from a place they trust</td>
<td>25%</td>
</tr>
<tr>
<td>They might have to pay an out-of-pocket cost to get the COVID-19 vaccine for their child</td>
<td>25%</td>
</tr>
<tr>
<td>They will have difficulty traveling to a place to get their child vaccinated</td>
<td>19%</td>
</tr>
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**NOTE:** Among parents or guardians of children ages 5-11. See topline for full question wording.

**SOURCE:** KFF COVID-19 Vaccine Monitor (October 14-24, 2021) • Download PNG
How did we get here?

And, what can we do about it?
Structure of This Talk

Part I: The Social & Psychological Origins of Parental Vaccine Hesitancy

- Exposure to misinformation from partisan media sources
- Vaccine skepticism from political elites
- Anti-expert attitudes
- Social-psychological influences (e.g., religious commitments, moral values, etc.)

Part II: Three Clinical Recommendations for Promoting COVID-19 Vaccine Uptake Through Effective Health Communication

- Harness the Power of Reversal Narratives
- Emphasize Objective Risk over Factual Corrections
- Make an Effort to “Meet People Where They Are.”
Part I. How did we get here?
What people want

What our research tells us
Part I. How did we get here?

Parents are more likely to hold negative views toward childhood vaccination if they...

- Are psychologically averse to needles (+14%)
- Are prone to conspiratorial thinking (+21%)
- Strongly value moral purity (+8%*)

* May be more-limited in application to HPV vaccination

Parent psychology and the decision to delay childhood vaccination

Timothy Callaghan¹,², Matthew Motta³, Steven Sylvester³, Kristin Luna Trujillo³, Christine Crudo Blackburn³

¹ Texas A&M University, United States
² Oklahoma State University, United States
³ Utah Valley University, United States
⁴ University of Minnesota, United States

Objective: The study of vaccine hesitancy identifies parental decisions to delay childhood vaccinations as an important public health issue, with consequences for immunization rates, the pursuit of commercial exemptions in states, and disease outbreaks. While prior work has explored the demographic and social underpinnings of parental decisions to delay childhood vaccinations, little is known about how the psychological dispositions of parents are associated with this choice. We analyze public opinion data to assess the role of psychological factors in reported parental decisions to delay childhood vaccinations.

Method: In an original survey of 400 American parents weighted to population benchmarks, we asked parents about delay-related vaccination behavior, demographic questions, and several psychological batteries. We then developed a vaccination delay scale and modeled delay as a function of conspiratorial thinking, needle sensitivity, moral purity, and relevant demographic controls. We then re-specified our models to look specifically at the predictors of delaying HPV vaccination, which has a low uptake rate in the United States.

Results: Controlling for other common predictors of hesitant behavior, we find that parents with high levels of conspiratorial thinking and needle sensitivity are more likely to report pursuing alternative vaccination schedules. When analyzing the specific decision by parents to delay HPV vaccination, we find that tendencies towards moral purity and, in turn, sexual deviance are also associated with vaccine seeking behavior.

Conclusion: Parental decisions to delay childhood vaccinations are an important public health concern that are associated with conspiratorial thinking and needle sensitivity.
Part I. How did we get here?

In GENERAL, people (parents included!) are more likely to hold negative views toward vaccination if they...

- View anti-vaccine movement as central to one’s sense of self
- Hold self-vs. other-focused values
- Hold negative views toward scientists and medical experts
- Embrace conservative ideological labels and/or identify as Republicans
- Are members of populations historically marginalized by the medical community
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![Figure 1- Racial Differences in Impact of Police Attitudes on Vaccine Beliefs](image)
Part II. What can we do about parental vaccine hesitancy?
Strategy #1. Going Broad: The “Reversal Narrative”
The “Reversal Narrative”

Vaccine skeptics who “see the light” may be particularly powerful communicators of pro-vaccination talking points.

Skeptics share in common not only their views on vaccine safety and efficacy, but (potentially) a common anti-vaccine *identity*.

Emphasizing the stories of skeptics who opted to vaccinate, or those who regret *not* vaccinating, may be an effective way to change parents’ attitudes and behaviors.

*For example...*
Great and Powerful Dr. Oz?

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*For example...*
Clinical Recommendation: Find & Share “Reversal” Stories

Make an effort to talk about the stories of those who initially resisted the vaccine (highlighting their reasons for doing so), and why they’re either (a) glad that they got the vaccine, or (b) regret resisting it.
Strategy #2. Going Broad: The Power & Pitfalls of Factual Corrections
“If only people knew ‘the facts,’ they’d be willing to side with scientific consensus and get vaccinated.”
Assumes that the reason why people reject vaccine safety is that they’re unaware of scientific consensus

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“If only people knew ‘the facts,’ they’d be willing to side with scientific consensus and get vaccinated.”
Assumes that the reason why people reject vaccine safety is that they’re unaware of scientific consensus.

Skeptics may be aware of the facts, but motivated to reject them.

They might even use their superior understanding of the facts to validate their skepticism. (Flat Earth Theory; QAnon)

“If only people knew ‘the facts,’ they’d be willing to side with scientific consensus and get vaccinated.”
Are “Just the Facts” Just Enough?

Sometimes! Fact check exposure can encourage misinformed people to change their minds.

But, these effects may be limited to issues that are not politically, socially, religiously, or culturally contentious.

That’s typically not the case for vaccine-related issues; especially vaccinating against COVID-19.
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The Effectiveness of Perceived Personal Risk

In summer 2020, we varied N ~ 7,000 subjects’ exposure to...

Risk Frames: Personal vs. Economic vs. Social

Communicators: Experts, Non-Experts

Inoculation Effort: “Pre-bunking” idea that FDA will cut corners to approve a vaccine.

Key Takeaway: Personal risk (irrespective of source) and to some degree social risk (from non-expert sources) move vaccination intentions by 2-4%
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**TABLE 1 | Experimental design summary**

<table>
<thead>
<tr>
<th>Frame</th>
<th>Source (lay)</th>
<th>Source (expert)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal health risk</td>
<td>Thinking about skipping the COVID-19 vaccine? Take it from someone who had the virus: That’s a bad idea</td>
<td>Thinking about skipping the COVID-19 vaccine? You’re putting your health at risk</td>
</tr>
<tr>
<td>No clinical trial info</td>
<td>Corey Miller is an accountant from Austin, TX, who suffered complications from the novel coronavirus in March 2020</td>
<td>Dr. Corey Miller is a Medical Doctor at the University of Texas –Austin</td>
</tr>
<tr>
<td>N = 504 (lay)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N = 502 (expert)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinical trial info (pre-bunk)</td>
<td>Thinking about skipping the COVID-19 vaccine? Take it from someone who lost their job: That’s a bad idea</td>
<td>Thinking about skipping the COVID-19 vaccine? Prepare for a slower economic recovery</td>
</tr>
<tr>
<td>N = 407 (lay)</td>
<td>Corey Miller is an accountant from Austin, TX, who suffered job loss as a result of the novel coronavirus in March 2020</td>
<td>Dr. Corey Miller is a Professor in the Department of Economics at the University of Texas–Austin</td>
</tr>
<tr>
<td>N = 498 (expert)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economic costs</td>
<td>Thinking about skipping the COVID-19 vaccine?</td>
<td>Thinking about skipping the COVID-19 vaccine? Prepare for more deaths and hospitalizations</td>
</tr>
<tr>
<td>No clinical trial info</td>
<td>Corey Miller is an accountant from Austin, TX, who is currently undergoing chemotherapy treatments for lung cancer</td>
<td>Dr. Corey Miller is an Austin, TX based Pharmaceutical Consultant for Johnson and Johnson, a United States company developing a vaccine for COVID-19</td>
</tr>
<tr>
<td>N = 505 (lay)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N = 471 (expert)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collective health consequences</td>
<td>Thinking about skipping the COVID-19 vaccine? Tell that to people who depend on you to get vaccinated</td>
<td></td>
</tr>
</tbody>
</table>
The Effectiveness of Perceived Personal Risk

In summer 2020, we varied \( N \approx 7,000 \) subjects’ exposure to...

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Key Takeaways:

Personal risk (irrespective of source) and to some degree social risk (from non-expert sources) move vaccination intentions by 2-4%
Clinical Recommendation: Focus less on factual corrections, and more on objective health risks.

If parents want to know more information about vaccine safety, clinical trial procedures, etc., provide that information in terms most people can understand. Otherwise, emphasizing the health risks to one’s self/child of not vaccinating may be a more effective approach.
Strategy #3. A More-Focused Approach: Meeting People Where They Are
The *Science* of Science Communication

1. Determine **how many** Americans hold views that are inconsistent with best available scientific evidence. (Survey Research)

2. Suggest/test the potential **causes** of those beliefs (Correlational Analysis; sometimes Longitudinal Survey Analyses).

3. Use what we know about why some people reject scientific evidence to **inform communication interventions** that correct misperceptions, change behavior, etc. (Randomized Controlled Trials).

An example of a study where we put the science of science communication into practice, regarding MMR vaccine hesitancy.
Vaccinating Across the Aisle

Exemplars of high profile partisans who have chosen to vaccinate against COVID-19 is thought to have the ability to encourage vaccine uptake among skeptical groups. (Source cues & persuasion). Available evidence, however, is mixed.

We theorize that co-partisan source cues can increase uptake, but only among certain types of skeptical partisan sub-groups.

Strong identifiers may have little incentive to change their attitudes/behavior (entrenchment), and “leaners” may be too detached to heed advice from partisan elites. It’s the “middle of the road” partisans who we expect to be most receptive to exemplars.
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Vaccinating Across the Aisle

N = 3,000 adults, recruited via Lucid Theorem

Randomly assigned to receive a pro-COVID-19 vaccine message that either included or excluded partisan exemplars from one’s own party. (Based on pre-treatment meta-data).

Key finding: vs. the control, middle-of-the-road Republicans were 3% more likely (p < 0.05) to intend to vaccinate if provided with a co-partisan source cue.
Clinical Recommendation: Ask *Why* People are Skeptics, & Tailor Communications in Response

Make an effort to (a) ask people about *why* they express doubt about vaccine safety/efficacy, and (b) make an effort to present the benefits of vaccination in a way that does not challenge their cherished worldviews, social identities, etc.
Clinical Recommendation: Ask Why People are Skeptics, & Tailor Communications in Response

For example: if parents are concerned about the unknown long-term side effects of COVID-19 vaccination, maybe talk less about the rigors of clinical trials, and more about the potential long-term side effects of “long haul” COVID (which the vaccines have been shown to be very effective at preventing).
Q&A With Dr. Motta

- Dr. Sammons will read select questions that were submitted via the Q&A feature throughout the presentation.
- Due to time constraints, we will not be able to address every question asked.

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