Role of health communication and policy in vaccine hesitancy and acceptance

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Departments of International Health, Epidemiology, and Health, Behavior & Society
Director, Behavioral and Implementation Science, International Vaccine Access Center
What is driving vaccine hesitancy within the COVID-19 context?
Arguments underlying hesitancy pre-COVID

- Vaccine ingredients
- Vaccine schedule
- Misperception of link between vaccines and severe adverse events (i.e., autism)
- Low levels of risk perception

Arguments underlying hesitancy have shifted

- Distrust and lack of confidence
- Misinformation
- Polarization of attitudes

Distrust and lack of confidence

- Working with African Methodist Episcopal Zion congregations
  - Over the last 6 months, have met with 50 congregations in the mid-Atlantic (MD, VA, PA, NY, WV, DE, NC) n=~900

- Working with non-profits that serve incarcerated populations
  - Over the last 6 months, have met with 6 groups of incarcerated populations (n=~100)

- Key concerns:
  - Distrustful of the vaccine development process (timing, recruitment of participants)
  - Distrustful of health care system due to history of medical experimentation
  - Lack of confidence: “Is the vaccine safe for Black people?”
  - Lack of confidence related to safety of the vaccine and other co-morbidities
Misinformation and disinformation

Dictionary.com’s 2018 Word of the Year: *Misinformation*

- When people spread misinformation, they often believe the information they are sharing.
- Disinformation is crafted and disseminated with the intent to mislead others.

Example: If a political leader claims that COVID-19 is no worse than the flu, despite knowing otherwise, that is *disinformation*. When an individual hears this, believes it, and then shares it, that is *misinformation*. 
Polarization of attitudes

**ONLINE COMPETITION BETWEEN VACCINE VIEWS**

A snapshot of links between vaccine-related Facebook clusters, posted on one day in 2019. The connections between anti-vaccination (red), pro-vaccination (blue) and undecided (green) stances suggest that the small anti-vaccination movement has created a sprawl of pages that are ‘highly entangled’ in discussions among undecided groups.
How should we communicate about vaccines to reduce hesitancy?
Facts alone are not enough – build trust

- Facts alone will not persuade skeptics: a 2014 study that supplied corrective facts about vaccines had no impact on their intentions to vaccinate
- Instead: work to build trust
Use trusted messengers

- Some communities of color face discrimination and have historical reasons to distrust health authorities
- Working with civic and faith leaders and other trusted figures within those groups is paramount
Communicate to the benefit of the community

- Effective messages should convey the desired behavior is not just an individual choice, but important for the public good
- #stayhomesavelives #flattenthecurve
- Invoke the risk that by not engaging in the desired behavior you are putting people you know in the community at risk
Appeal to aspirational norms

"GO AHEAD.
TELL ME MY
MASK LOOKS
WEAK."
Make the ask unambiguous, concise, and uncategorical

- “Clean after yourself” - what is the problem with this ask?
- Instead: “do not leave dirty dishes in the sink”
Appeal to patriotism

- **Safe**: All in favor of a COVID-19 vaccine, raise your arm.
- **Effective**: Let’s take back our city. One vaccination at a time.
- **Free**: New York City is coming back strong with COVID-19 vaccines.

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*Johns Hopkins Bloomberg School of Public Health*
Effect of regulations for enforcement of vaccines
Mandating COVID-19 vaccines

- Whether an employer may require or mandate COVID-19 vaccination is a matter of state or other applicable law (U.S. Equal Employment Opportunity Commission)
- Balancing liberty and trust: reactive and restrictive measures should only be used in situations when there is both immediate and serious risk to the larger population, and when other non-restrictive options have been exhausted
- Employers such as Kroger, Target and Petco are relying on monetary incentives; others are using the lottery

Religious and Social Factors Influencing Vaccine Hesitancy in the U.S.

John H. Evans
Co-Director, Institute for Practical Ethics
Tata Chancellor’s Chair in Social Sciences
UC, San Diego
Outline for Talk

I. Religious Demography of the U.S.

II. The Vaccine Hesitant Groups – African American Protestants and White Conservative Protestants

III. Religious Reasons for Hesitancy

IV. Social Reasons for Hesitancy
   A) African American Protestants – Experience as African Americans
   B) White Conservative Protestants – moral conflict, populism and embeddedness in politically conservative media

V. Public Health Officials Using Religious Messages to Tip the Hesitant to Acceptance
Vaccine Hesitancy in the Context of COVID-19 Vaccines

Sean O’Leary, MD, MPH, FAAP
Professor of Pediatrics
University of Colorado Anschutz Medical Campus/Children’s Hospital Colorado
Vice Chair, Committee on Infectious Diseases, American Academy of Pediatrics
Historical Perspective
Historical Perspective
Historical Perspective
How much of a problem is vaccine hesitancy?

• Requests to “spread-out” the series or refusal of specific vaccines not uncommon
• More than a third of US children not on the recommended schedule
  • Hargreaves et al, Pediatrics, March 2020
• Percentage refusing all vaccines remains small (1.3%)
  • MMWR
Vaccines as victims of their own success
  - Loss of diseases’ visibility
  - Loss of a sense of urgency
  - Lack of fear

The assault on science
  - Facts and evidence are seen as just a matter of opinion, rather than proven truth
  - Simple ‘belief’ is often considered as valid as critical thinking
# Vaccine Acceptance Continuum

## Pro-vaccine

<table>
<thead>
<tr>
<th>Category</th>
<th>Acceptors</th>
<th>Hesitant</th>
<th>Rejectors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agree with or do not question vaccines</td>
<td></td>
<td></td>
<td>Completely reject vaccines</td>
</tr>
<tr>
<td>Children fully immunized</td>
<td></td>
<td></td>
<td>Children under-immunized</td>
</tr>
<tr>
<td>High trust in provider</td>
<td></td>
<td></td>
<td>Low trust in</td>
</tr>
<tr>
<td>Interest in vaccine information from child’s provider</td>
<td>70%</td>
<td>30%</td>
<td>&lt;1%</td>
</tr>
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## Anti-vaccine

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</tr>
<tr>
<td>Interest in vaccine information from child’s provider</td>
<td></td>
<td></td>
<td>No interest in vaccine information</td>
</tr>
</tbody>
</table>

- **70%** respond with or do not question vaccines.
- **30%** are unsure about, delay, or choose only some vaccines.
- **<1%** completely reject vaccines.
**But really, how is the US doing?**

<table>
<thead>
<tr>
<th>Vaccination Coverage with Selected Vaccines and Exemption Rates Among Children in Kindergarten - United States, 2018-19 School Year.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seither R, Lorian C, Driver K, Meltzer SD, Knighton CL, Black CL</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>National average</th>
<th>2 doses</th>
<th>5 doses</th>
<th>2 dose</th>
<th>Any exemption</th>
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<tbody>
<tr>
<td>MMR</td>
<td>94.7</td>
<td>94.9</td>
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<td>94.3</td>
<td>2.6</td>
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<tr>
<td>DTaP</td>
<td>83.2</td>
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<td>73.6</td>
<td></td>
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<tr>
<td>Varicella</td>
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<td></td>
<td></td>
<td>73.2</td>
<td></td>
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</table>

|-----------------------------------------------------------------------------|

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>National average</th>
<th>1 or more doses</th>
<th>4 or 5 doses</th>
<th>birth dose</th>
<th>Rotavirus</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMR</td>
<td>91.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DTaP</td>
<td>83.2</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Hep B</td>
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Surveys of Parents Regarding COVID-19 Vaccines for Children

• Among parents surveyed, 46-60% plan to get their children vaccinated\(^1-4\)
• Reasons for not vaccinating\(^2\):
  • Not sure it will be safe (59%)
  • Vaccine developed too quickly (59%)
  • Don’t trust info being published about the vaccine (48%)
  • Won’t trust right away (44%)
  • Don’t have enough info (43%)
• Parents reported similar or slightly lower intent to vaccinate their children compared to intent to vaccinate themselves\(^3,4\)

1. Axios/IpsosApril 2-5; Axios/IpsosApril 16-19; Calarco and Anderson preprint; WebMD March 2021.
2. National Parents Union Survey January 2021
4. Parents Together March 2021 Survey

Slide adapted from ACIP meeting, 5/12/2021
Values: Parents' Intent for Children to Receive COVID-19 Vaccine Varies by Race/Ethnicity

Source: ACIP, 5/12/2021

*Positive vaccine intentions includes persons reporting definitely or probably likely to get their child vaccinated.
Values: Surveys of Adolescents and Parents Intent to get vaccine/have children vaccinated

Adolescents 13-17 years (n=839)
- 15% Certainly will get vaccinated
- 13% Possibly will get vaccinated
- 20% Not sure
- 22% Possibly will not get vaccinated
- 29% Certainly will not get vaccinated

51% definitely/probably will get vaccinated

Parents of Adolescents 12-17 years (n=766)
- 14% Definitely will get vaccinated
- 33% Probably will get vaccinated
- 12% Not sure
- 19% Probably will not get vaccinated
- 22% Definitely will not get vaccinated

55% definitely/probably will get adolescent vaccinated

Source: ACIP, 5/12/2021

CDC/U Iowa Survey of Parents and Adolescents, April 2021
Acceptability: Comfort with adolescent receiving COVID-19 vaccine at each site

CDC/U Iowa Survey of Parents and Adolescents, April 2021

Source: ACIP, 5/12/2021
The Challenge: Pseudo-symmetry (False Equivalence)
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Although only one Coloradan has had a confirmed case of the illness since an outbreak started at Disneyland, in California, the low vaccination rate here is a big concern — and a source of bewilderment.

“We are going to have a large outbreak of measles,” said Dr. Edwin J. Asturias, a pediatrician with the Colorado School of Public Health, University of Colorado School of Medicine and Children’s Hospital Colorado.

“For almost a decade we have been accumulating people without protection,” said Asturias, an expert in infectious diseases and vaccines. “We are like a forest waiting to catch fire.”

One reason Colorado has such a low vaccination rate is that it has a high exemption rate. The state is one of 20 that allow parents to claim any kind of personal opposition to immunization programs, and there’s a strong sentiment among some parents here that they should be able to choose.

“It’s a parent’s right to decide what medical procedure and products are used on their children,” said Theresa Wrangham of Louisville, executive director of the nonprofit National Vaccine Information Center. “If people want to use vaccines, they should have access to them. Vaccines should be safe as possible, but they are not totally 100 percent safe.”

Among the 49 states and the District of Columbia reporting vaccination coverage for measles, mumps and rubella, or MMR, for the 2013-14 school year, Colorado stood dead last, according to the Centers for Disease Control and Prevention.
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“The more kids who are unvaccinated, the greater the risk to children who are unable to be vaccinated because of medical issues,” said Dr. David Elkins, director of the Colorado Department of Public Health and Environment. “We need to get the message out that vaccines are safe and effective.”

Niki Tracy of Salida, whose daughter battles transverse myelitis
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Among the 49 states and the District of Columbia reporting vaccination coverage for measles, mumps and rubella, or MMR, for the 2013-14 school year, Colorado stood dead last, according to the Centers for Disease Control and Prevention. The state’s vaccination rate was 81 percent, compared to the national rate of 92 percent.