

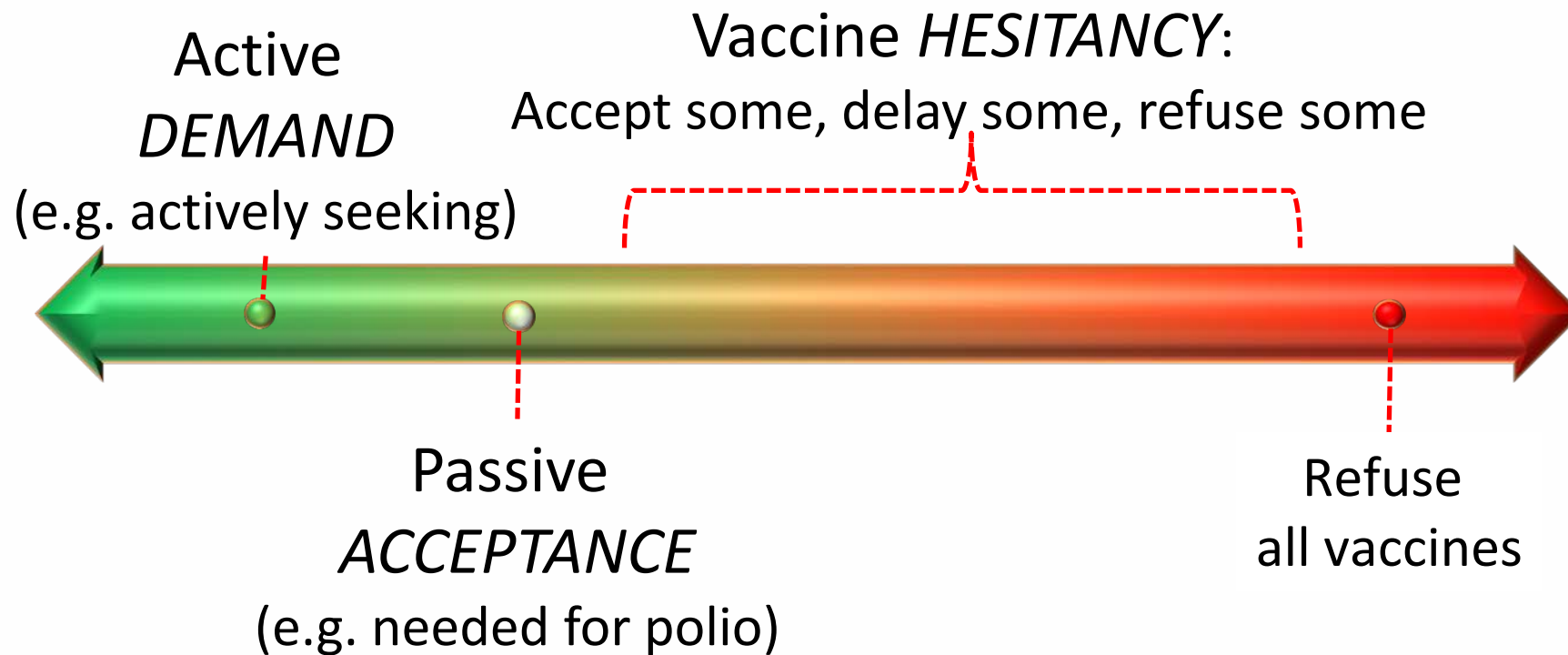
Communicating About Vaccines Effectively Within Your Communities

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William H. Foege Professor of Global Health
Professor of Epidemiology & Pediatrics



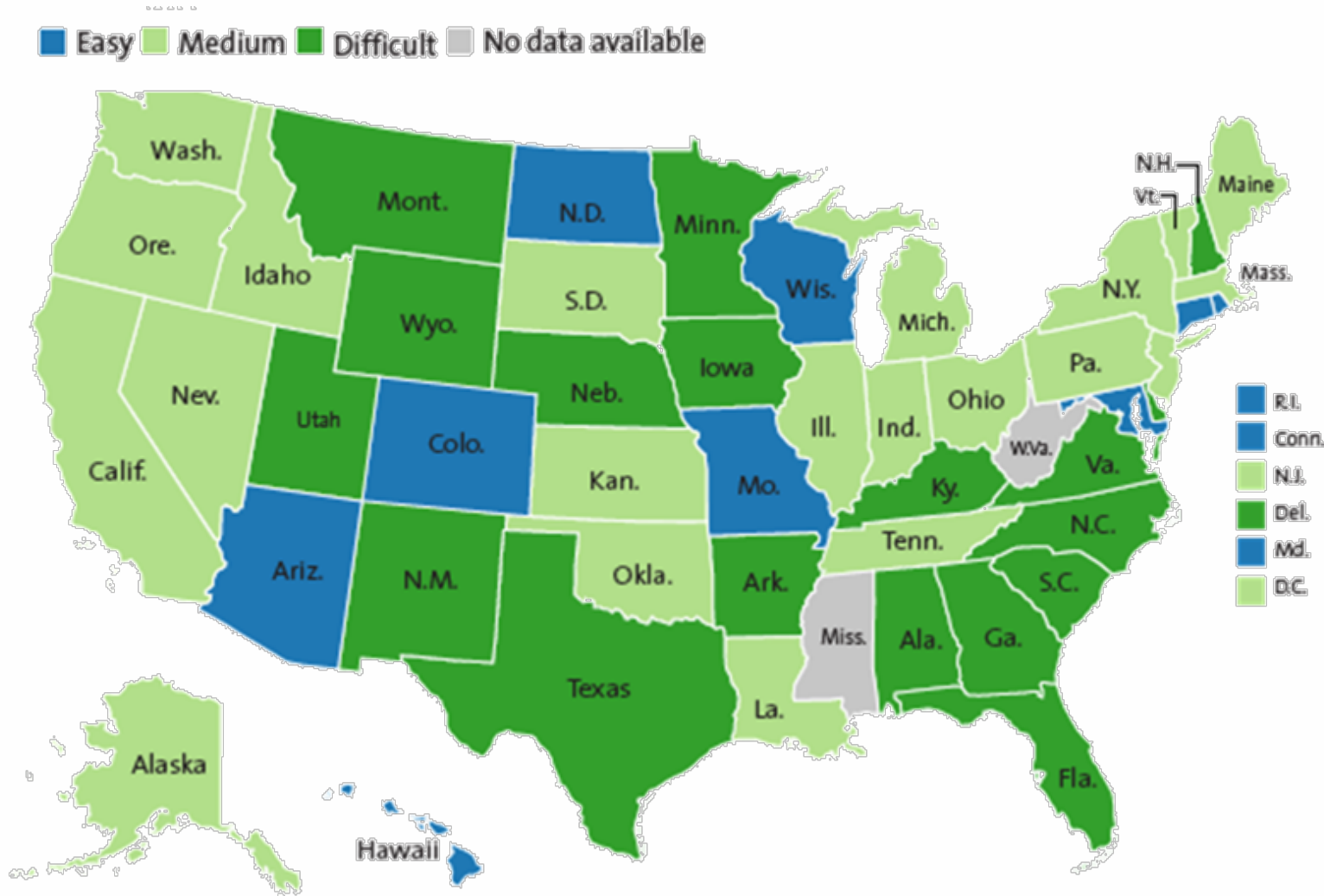
EMORY UNIVERSITY



Vaccine hesitancy: a delay in acceptance or refusal of vaccines, despite available services. Is complex and context specific, varying across time, place, and vaccine

Impact of Vaccine Hesitancy

Ease of Obtaining Vaccine Exemptions –by State



Exemption Policies & Whooping Cough Incidence, 1986-2004

Exemption ease	Incidence Rate Ratio
Difficult	Reference
Medium	1.35 (0.96-1.91)
Easy	1.53 (1.10-2.14)

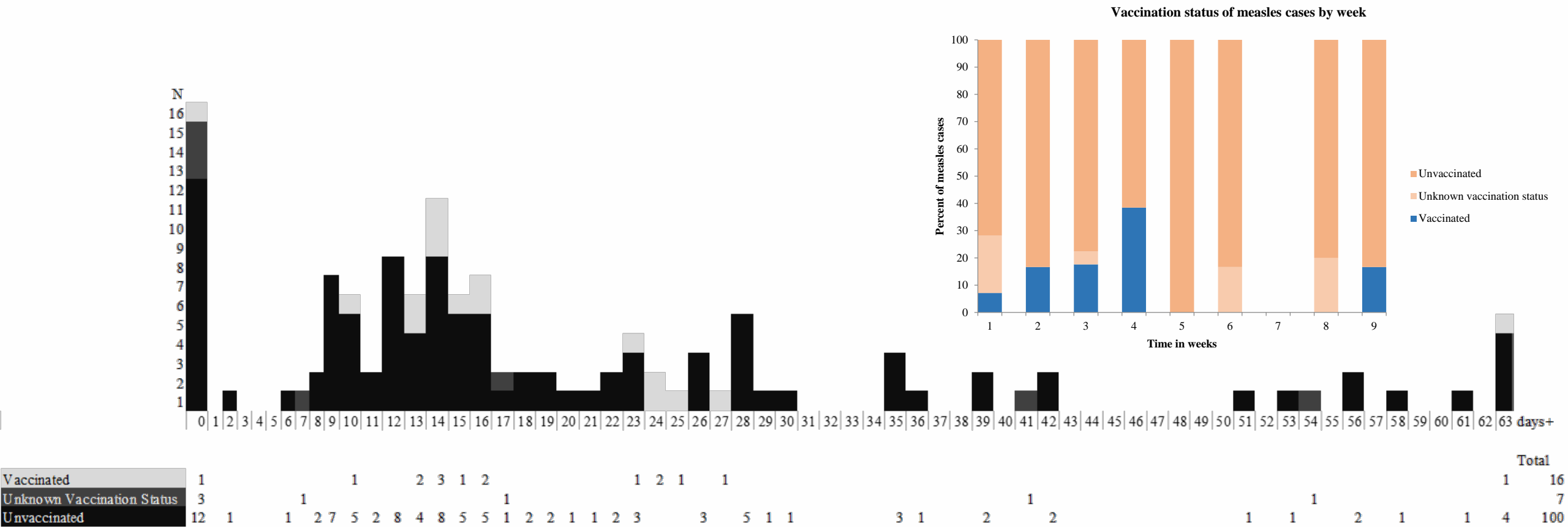
Omer et al., JAMA, 2006

Omer et al., New England Journal of Medicine. 2012

Figure (with updated 2013 data) created by Mother Jones

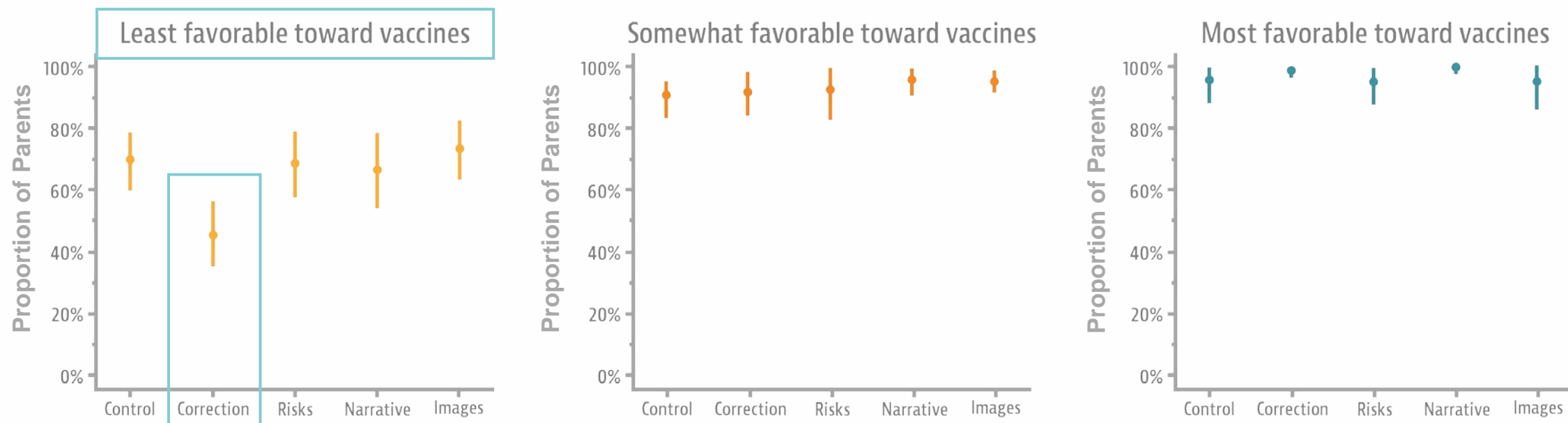


Cumulative Epidemic Curve of 16 Measles Outbreaks 2000 - 2015, United States



**Correct misinformation
regarding vaccine safety?**

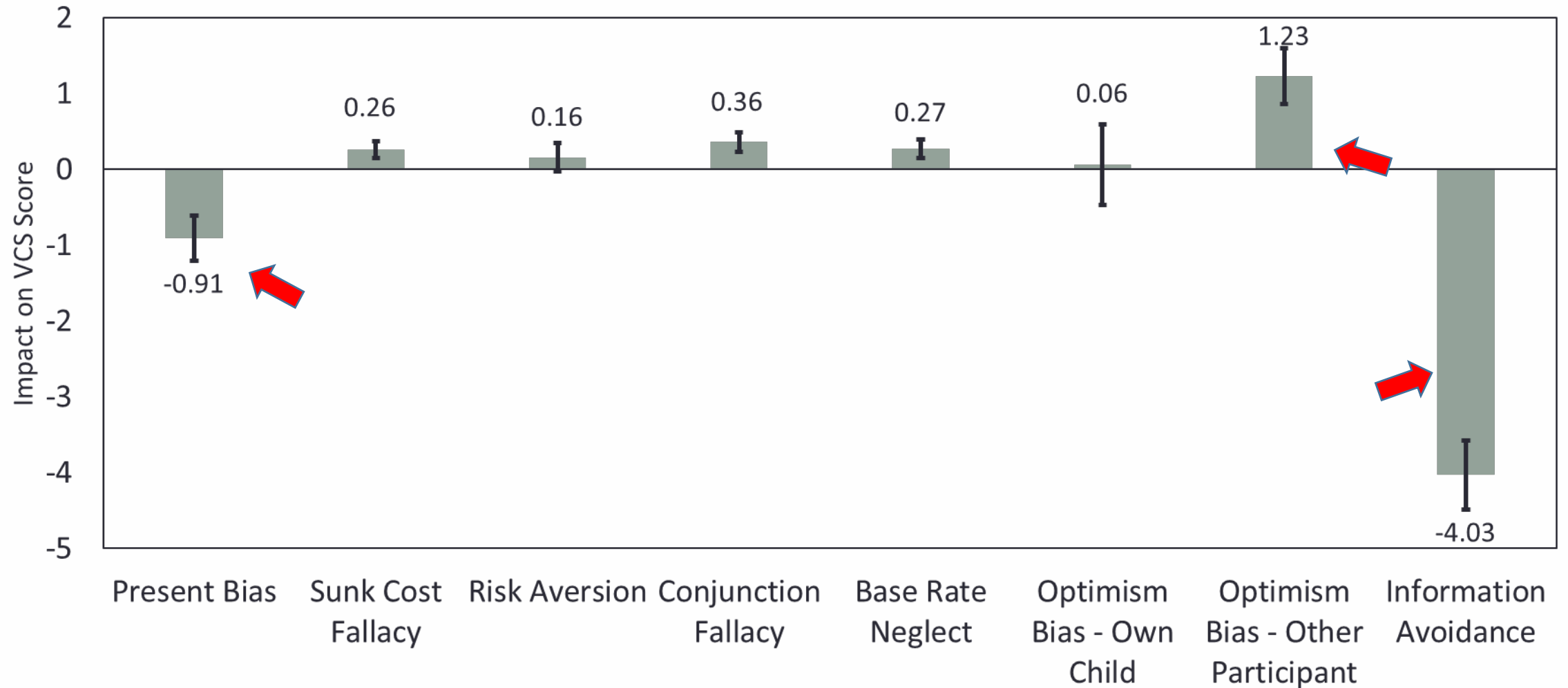
Limitations of Fact-based Messaging



Main points: 1) Outcome persisted even when knowledge scores increased

2) Misperceptions may not be overcome with knowledge alone

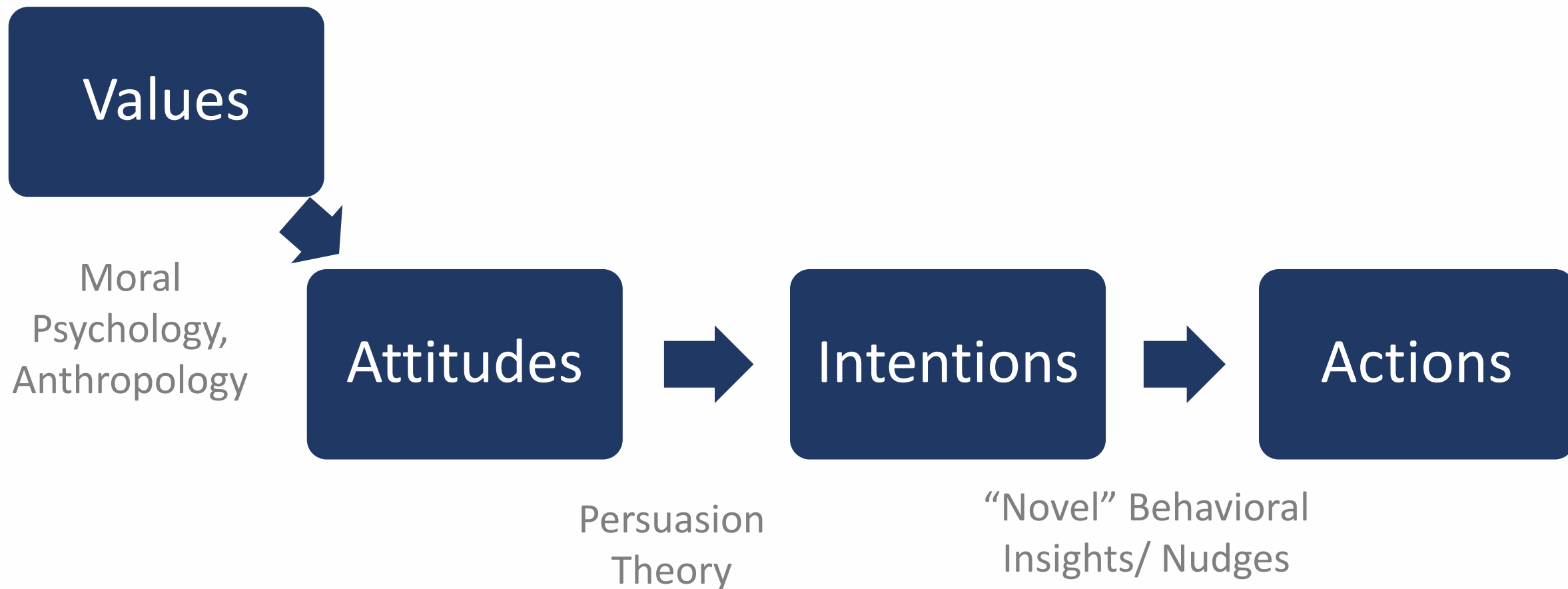
Predicted Change in VCS Score per Increase in Bias Susceptibility



Simple linear regressions of each bias on VCS score

The higher the VCS score, the more vaccine confidence one has

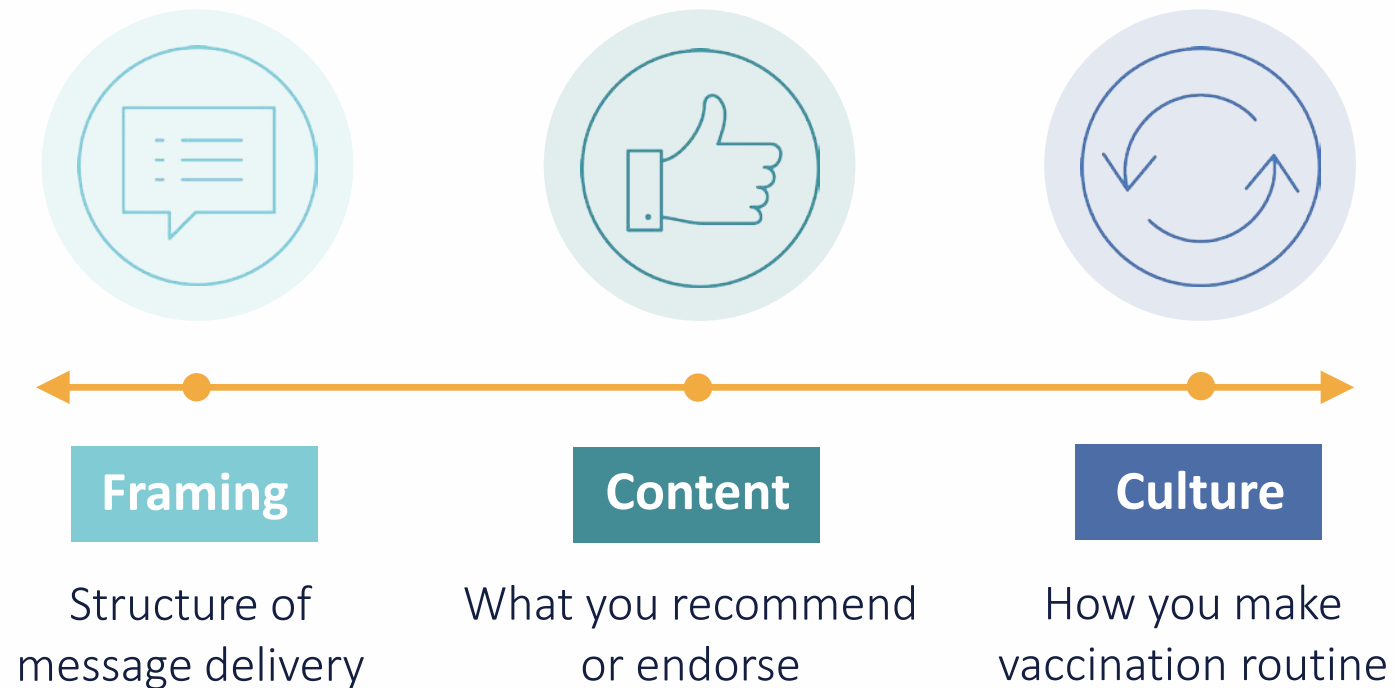
Values, Attitudes, Intentions, Actions





Approaching Hesitant Parents: Framing, Content and Culture

*How you discuss and promote vaccines is as important as *what* you say*



Affect vs. Cognition

BMW AG

1.5L TURBOCHARGED DOHC I-3

Displacement:
1,499 cc

Block / head material:
aluminum / aluminum

Horsepower (SAE net):
134 @ 4,500-6,000 rpm

Torque:
162 lb.-ft. (220 Nm)
@ 1,250 rpm

Specific output:
89 hp/L

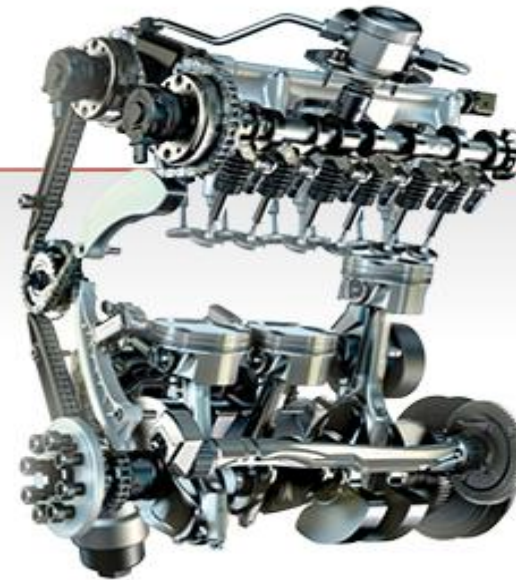
Bore x stroke:
82 x 94.6 mm

Compression ratio:
11.0:1

EPA city / highway:
29 / 40 mpg

Assembly site:
Hams Hall,
Warwickshire, U.K.

Application tested:
'15 Mini Cooper Hardtop





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Used Cars

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* Acceleration claim based on BMW AG test results. Figures based on 23 mpg city/33 mpg hwy for 328i Automatic Transmission. May change as a result of EPA testing. † Whichever comes first. For full details on BMW Ultimate Service® visit bmwusa.com/ultimateservice.
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Intervention 1: Cognitively-Based iPad App



{ Vaccines for a Healthy Pregnancy }

- I.I Introduction to Tutorial
- I.II About Flu and Whooping Cough
- I.III Getting Vaccinated During Pregnancy: The Flu and Whooping Cough Shots
- I.IV Vaccine Safety During



2 What shots should I get and when?

For the Flu:


To protect against flu, pregnant women should get the **inactivated flu shot**, not the nasal spray form of the vaccine. The sooner you get the shot, the better. CDC recommends that the flu shot can be given at any point during pregnancy. The flu season in the United States runs from September – May. Flu shots are often available by September, and in some cases even in August. Whether you are pregnant at any point during flu season, or are planning to have your baby during flu season, it is important to get your vaccine.

For Whooping Cough:

The **Tdap shot** is the vaccine which protects you from whooping cough. While it's safe to get Tdap any time during pregnancy, it's best to wait until your second or third trimester (20 weeks or later) to make sure your fetus gets the most antibodies it can right before birth.

Can I get both shots at the same visit?

Yes! It is safe to both you and your fetus to get both shots at once.



1 What are flu and whooping cough, and how do they affect pregnant women?



Kevin A. Ault, MD
Department of Gynecology and Obstetrics
Emory University School of Medicine

Both Flu and whooping cough:

- Are highly contagious
- Affect your lungs, throat, nose and sinuses
- Flu can be more serious during pregnancy due to changes in your body and immune system

4 How do I know the benefits of getting these shots outweigh the risks?

For my baby?

Studies have shown that getting vaccinated for flu during pregnancy can reduce the likelihood that your baby will be born prematurely or of low birth weight. By protecting yourself from getting sick, you increase the chances your baby stays healthy and is born on time.

Protective antibodies that you produce to the shots have been shown to pass from your blood to the baby through your placenta or umbilical cord. Antibodies also pass through breastmilk which is extremely important for protecting your newborn before they are able to get shots themselves. Babies cannot receive their first whooping cough vaccine until they are 2 months old, and they cannot receive a flu vaccine until they are at least 6 months old. **Protecting yourself through vaccination is the best way to protect your baby during their most vulnerable few months.**

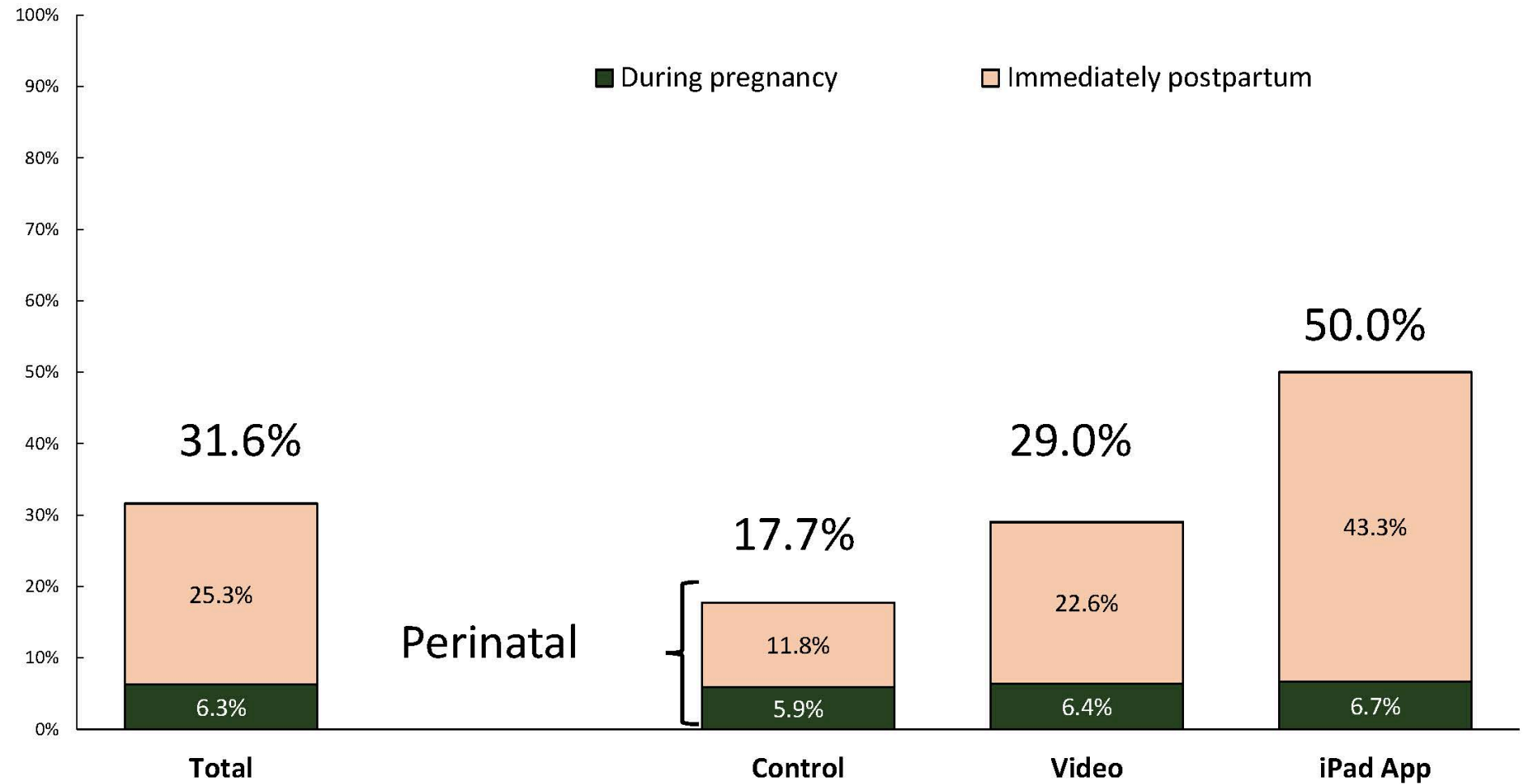
Seeing a baby suffer from whooping cough is terrible. The babies struggle to breathe through bouts of terrible coughing. Doing whatever you can to prevent your newborn from getting sick with whooping cough is important.



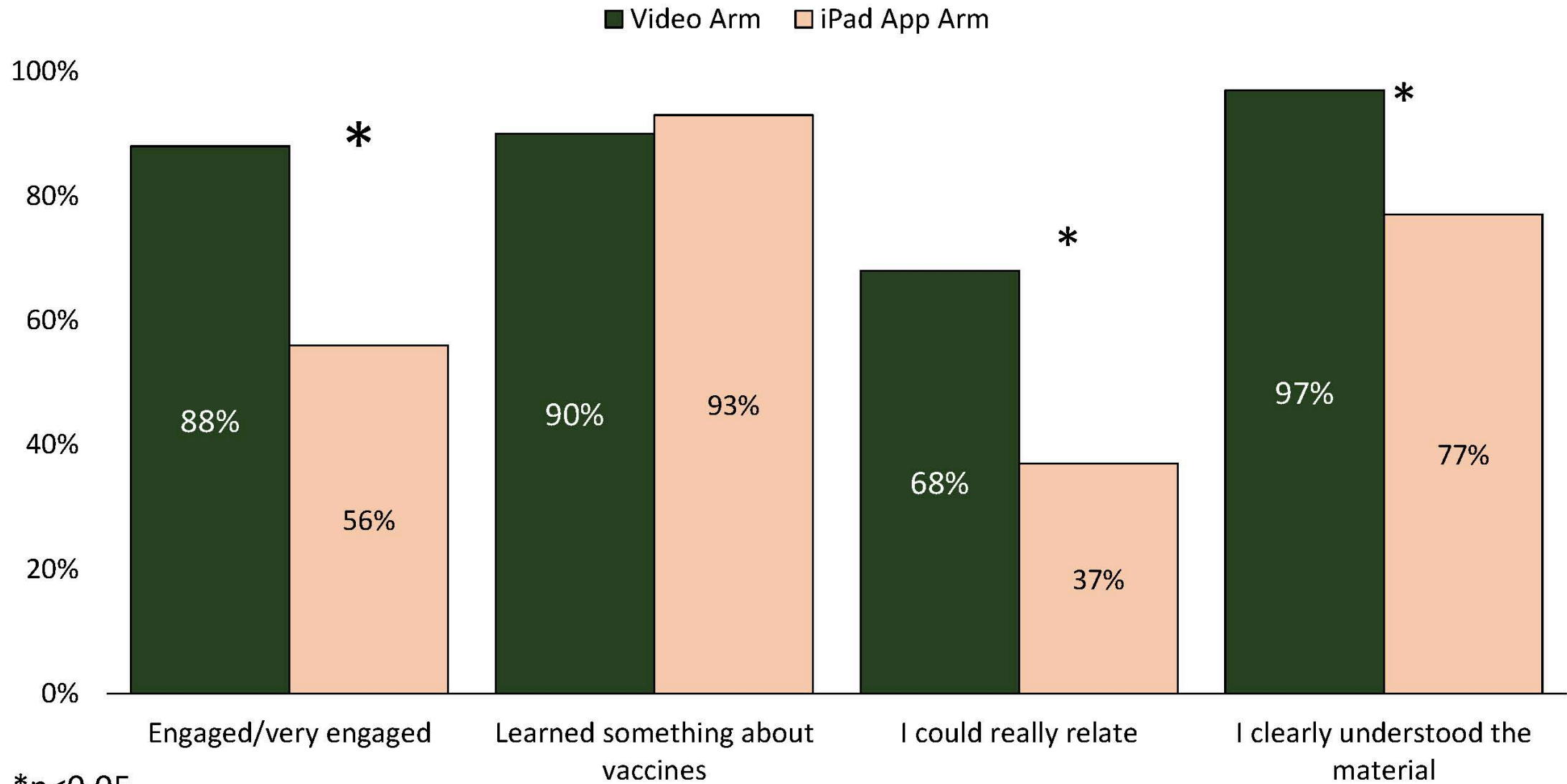
Intervention 2: Affectively-Based Video



Tdap Vaccination During Pregnancy and Postpartum



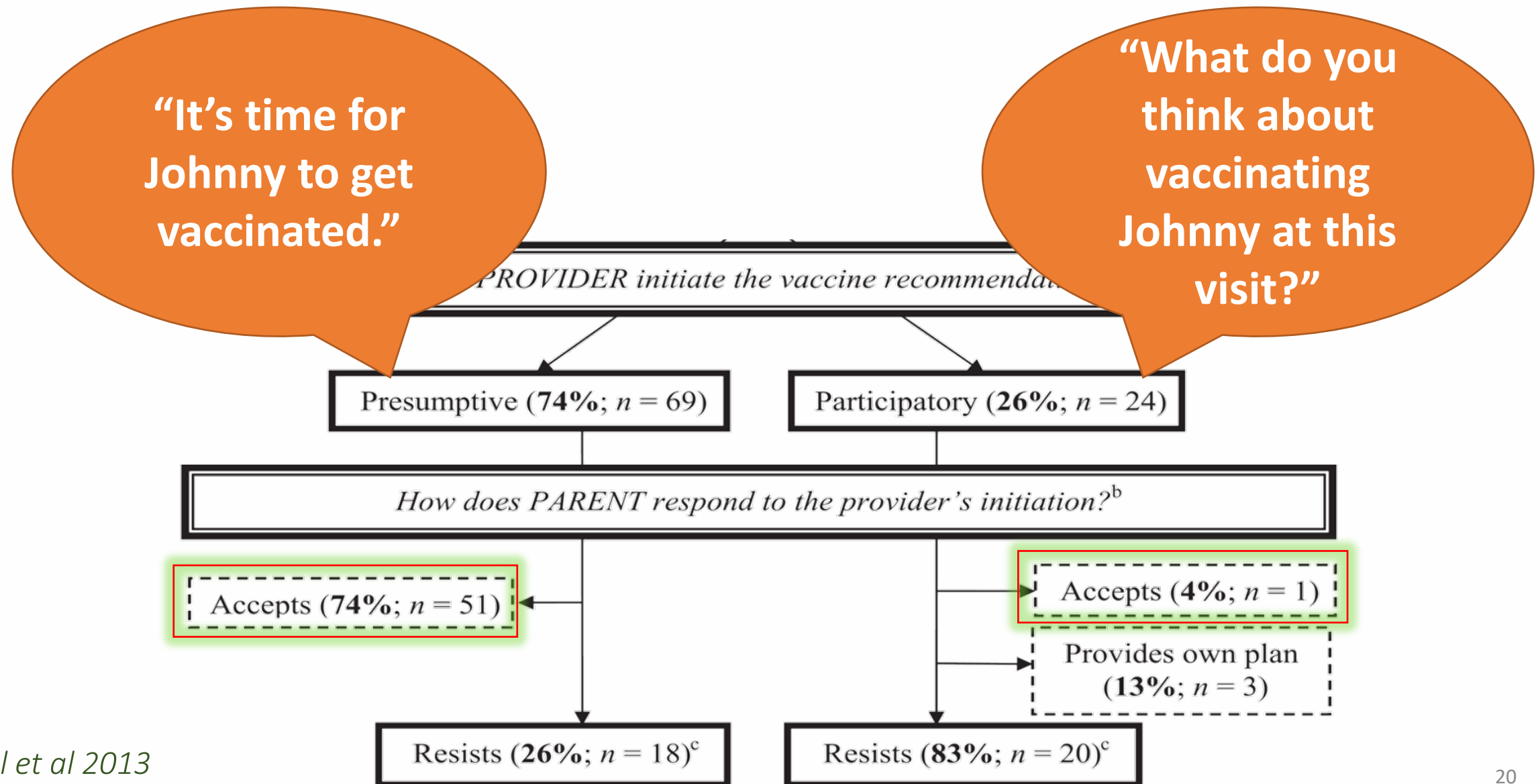
Engagement with the Interventions



* $p < 0.05$

How can we leverage power of defaults

Preliminary Data: How the vaccine conversation is started matters



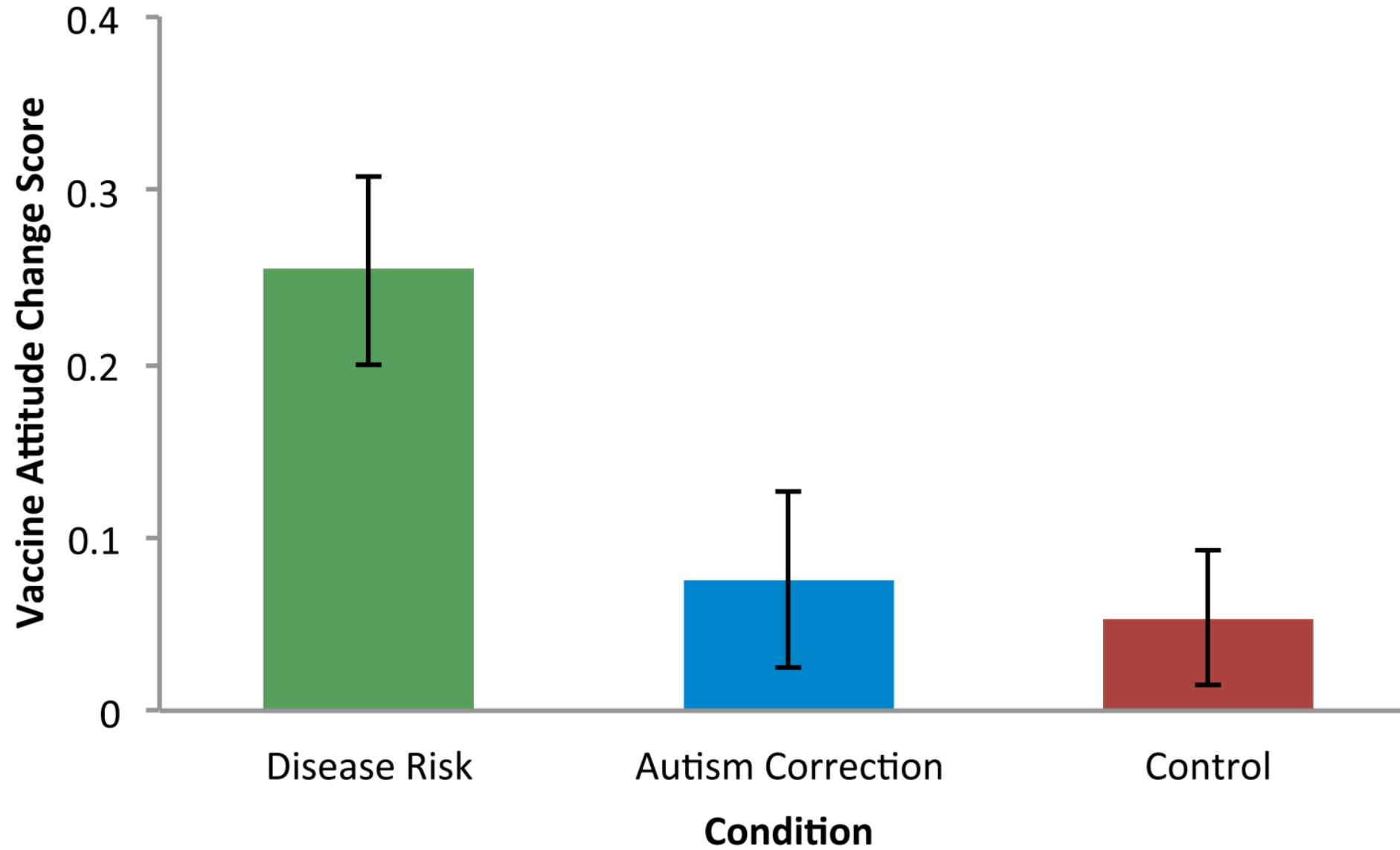


Talk about the disease

Disease Risk Salience

- Can backfire
- Do not shock
 - Could induce behavioral paralysis + dismissal of subsequent information
- Always include a solution
 - ↑Self Efficacy
 - ↑Response Efficacy
- **Use sparingly & Ethically**





Framing

Ending with Self-Efficacy



After you inform
parents of disease
risks, do not leave
them hanging



Provide parents /patients
with actions they can take
to protect themselves (self-
efficacy^{8,9})



Now you should address the
vaccination again
The single best way to protect
yourself AND your baby

8. Witte, 1992 9. Barnett, et al., 2009

Which would you rather have, a **cholesterol** test or a final exam?

For many, the first sign of heart disease is a heart attack. Did you know that one out of two adult Canadians is at risk of developing heart disease because they have high cholesterol? And that cardiovascular disease IS the leading cause of death in Canada? High cholesterol is a major risk factor for heart disease but managing your cholesterol can be quite simple.

If any of these apply to you, cut this screening test out and ask your doctor about getting your cholesterol tested:

- Woman 50 years or older
- Man 40 years or older
- Heart disease (angina, heart attack, coronary bypass, stroke, angioplasty)
- Diabetes
- Family history (mother, father, sister, brother or grandparent) of heart disease or high cholesterol
- Two or more of the following:
 - Overweight
 - Physically inactive
 - Smoker
 - High blood pressure

OFFICE OF THE MEDICAL EXAMINER

Case No. 5341-96

Name J.P.

Age 42

Sex M

Overweight 160

Cause of Death Heart attack

Call toll-free at
1-877-4-LOW-LDL
(1-877-456-9535) or visit
www.makingtheconnection.ca
and you will receive this
free booklet describing the
connection between cholesterol
and heart disease.



The Canadian Diabetes Association has endorsed the "Making the Connection" program for its medical and scientific accuracy. The Canadian Diabetes Association does not endorse the products of any pharmaceutical company. Sponsored by one of Canada's research-based pharmaceutical companies.

Making the
Connection
www.makingtheconnection.ca

**We are excellent linguists but
poor statisticians**

COGNITIVE PSYCHOLOGY 5, 207–232

“people judge the probability of events by the ease in which instances could be brought to mind”

psychologyandsociety.com

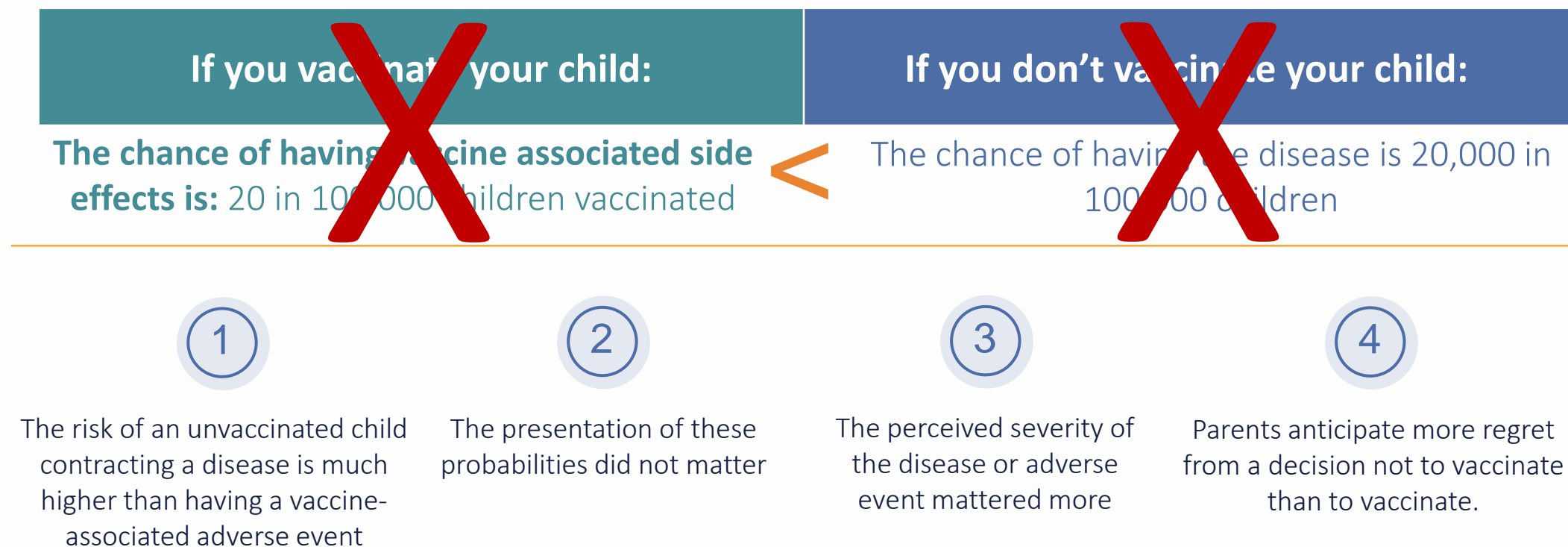
Availability: A Heuristic Frequency and Probability

AMOS TVERSKY AND DANIEL KAHNEMAN

The Hebrew University of Jerusalem and the Oregon Research Institute

Content

What Matters to Parents?



Main point: Narratives of disease severity resonate more than statistical probabilities

**What to do when you cannot
get out of correcting a myth?**

Addressing a Myth

Sometimes addressing a myth is unavoidable – what should you do?

Clearly state that the assertion is a myth

State why the myth is not true

Replace the myth with the best alternative explanation



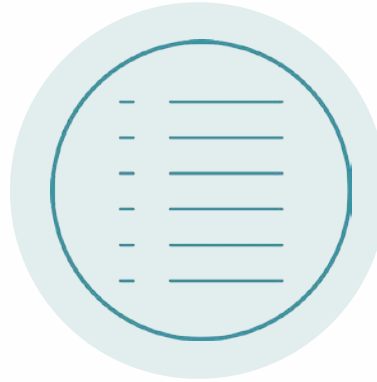
Think of it like a blank space where the belief in the myth used to reside

Healthcare Facility Culture



Culture

Normalization and Respect

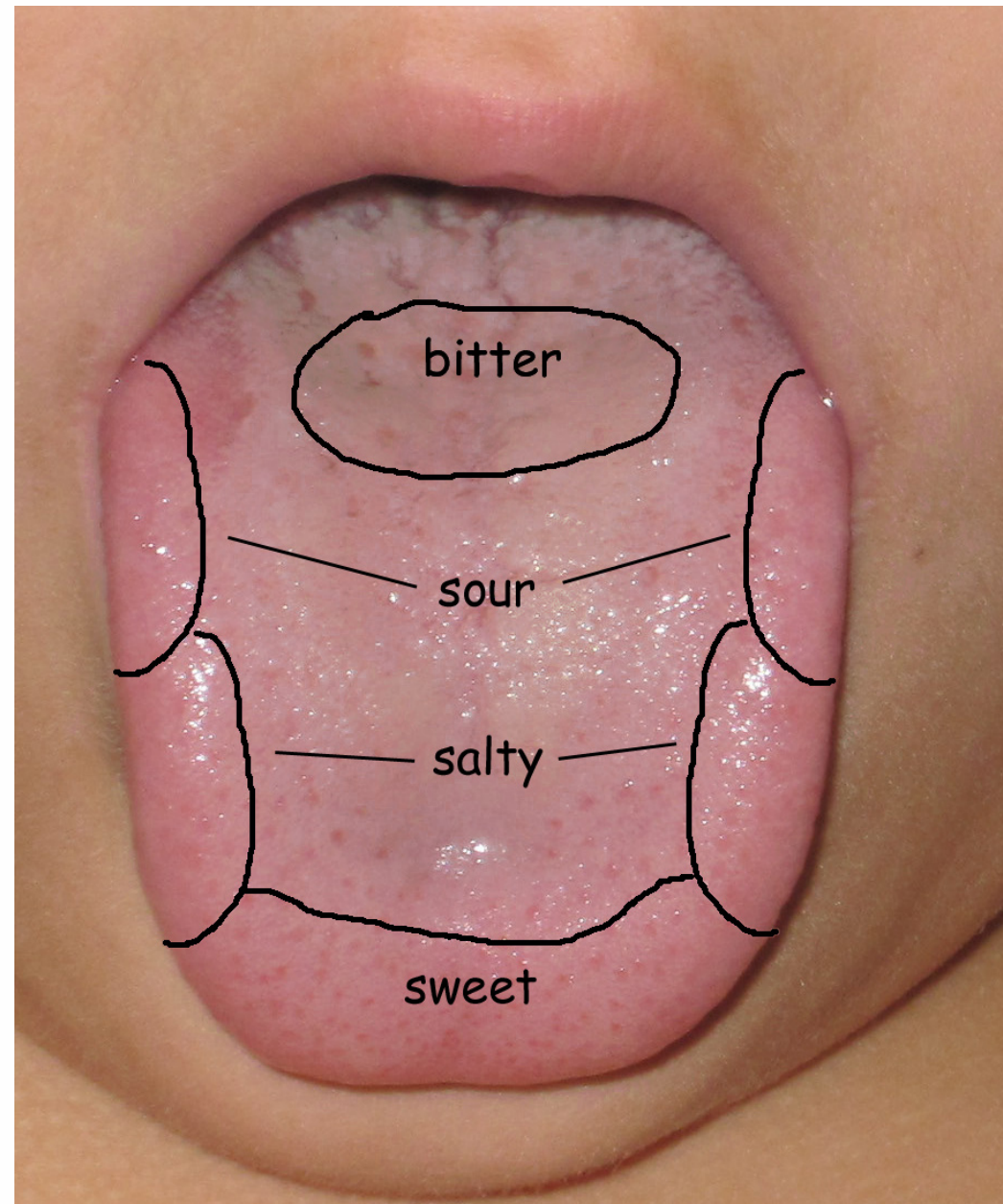


Incorporate vaccination into a prenatal care checklist

Encourage health facility staff to use presumptive language too

“It’s time for your vaccine.” instead of “Do you want the vaccine?”

Incorporating Values into Messaging





Care/Harm



Fairness/
Cheating



Loyalty/
Betrayal



Authority/
Subversion



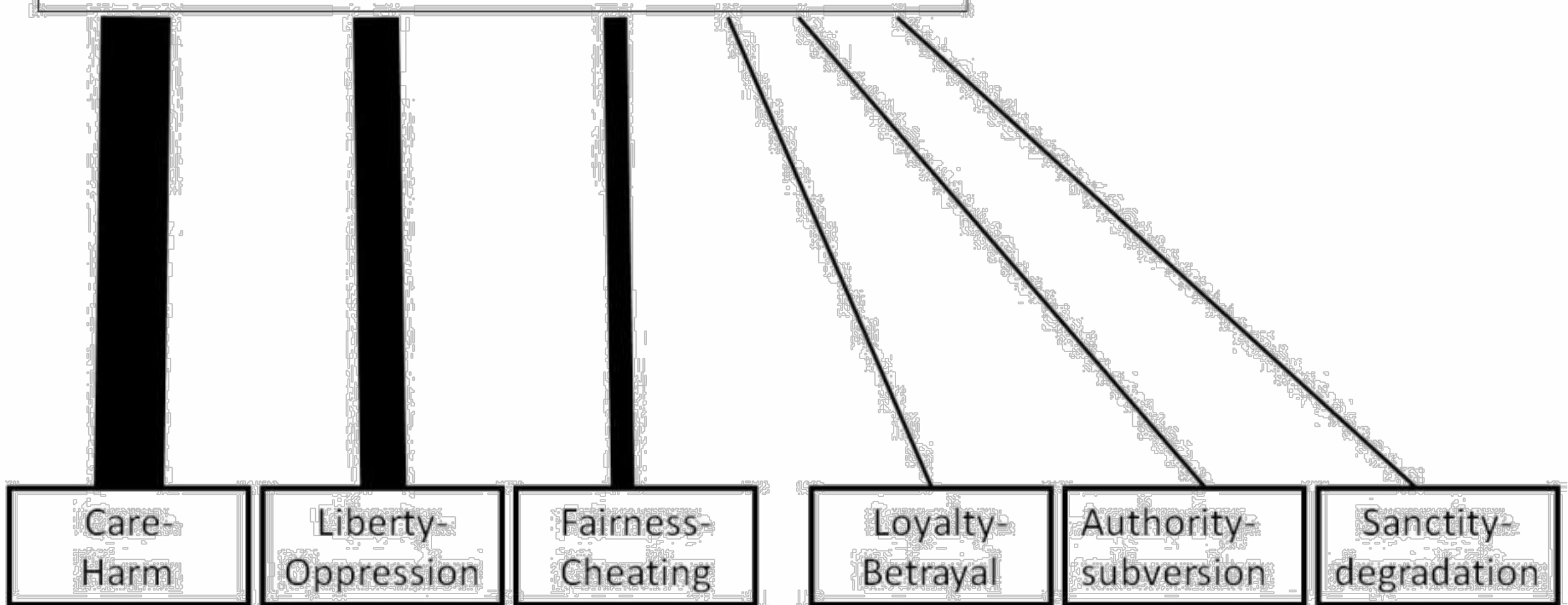
Purity/
Degradation



Liberty/
Oppression

The Liberal Moral Matrix

Most sacred value: care for victims of oppression



The Social-Conservative Moral Matrix

Most sacred value: Preserve the institutions and traditions that sustain a moral community

Care-
Harm

Liberty-
Oppression

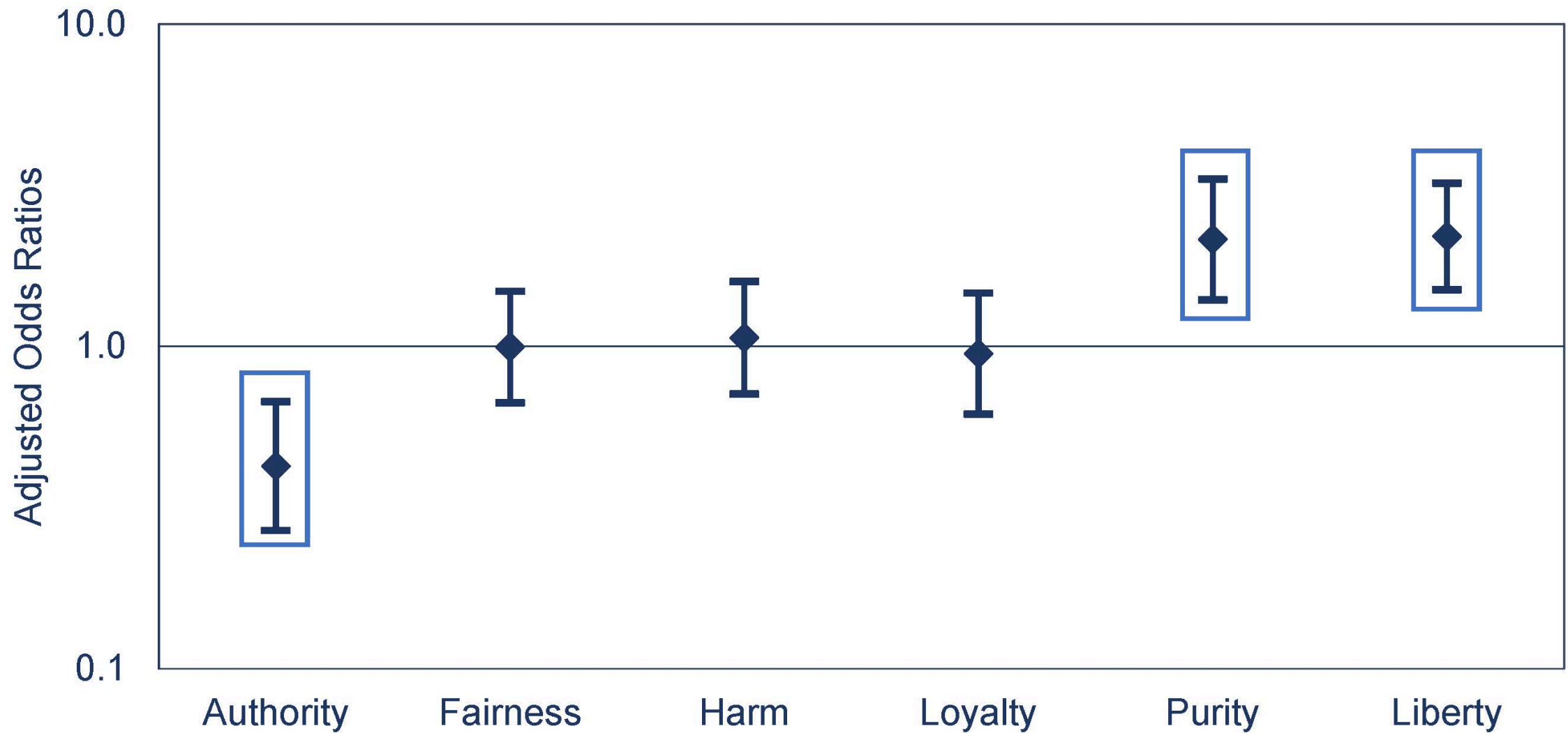
Fairness-
Cheating

Loyalty-
Betrayal

Authority-
subversion

Sanctity-
degradation

High vs. Low Hesitancy Parents





Summary of the Current State of the Evidence

10 Major Points



Presume
vaccination



Don't affirm a
misperception



Avoid lingering on
a myth



Seek permission to
share your knowledge



Connect to a
parent's values



Pivot to the disease
and focus on severity



Follow severity
with self-efficacy



Know 1-2
easy-to-remember
facts



Continue the
conversation



Make vaccination the
norm

Smart investments that improve immunisation equity

Inspirational activities for practitioners, managers and
influencers of demand promotion



VIEWPOINT

Communicating About Vaccines in a Fact-Resistant World

JAMA Pediatrics

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Bloomberg School of Public Health, Johns Hopkins University, Baltimore, Maryland.

The continued success of vaccines, one of the most effective public health interventions, depends on high rates of acceptance. Vaccine refusal in the United States has increased since the late 1990s.¹ This trend has coincided with an increase in vaccine safety concerns. Such concerns result from easy recall of adverse events, misinformation, and human tendency to poorly judge probabilities. When a significant proportion of the US population is impervious to scientific facts, such as belief in human-induced climate change, it is difficult to communicate vaccine-related information to patients.

Parent-physician communication in such conditions is challenging and, if done improperly, may worsen the problem. Although the evidence base for vaccine-related communications is still emerging, we present developments in social and behavioral communication, behavioral economics, social psychology, and persuasion

phenomenon, not only for parents but also for physicians. For example, physicians who graduated from medical school between 1995 and 2002 had relatively less favorable attitudes regarding vaccines compared with those who graduated between 1954 and 1964.⁴

Countering Misinformation and the Boomerang Effect

The instinctive response to vaccine-related misinformation is to provide correct information. However, this information correction-based approach has limitations and can backfire. For many, processing information on controversial topics occurs in a way that preserves pre-existing beliefs. Individuals who receive messages opposing their pre-existing beliefs may not just resist challenges to their views but support their original opinion even more.⁵ Coined the *boomerang effect* by psycholo-



Thank You
@SaadOmer3

