

# Effective Messages in Vaccine Promotion: A Randomized Trial

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## KEY WORDS

vaccines, myths, MMR, autism, false, misperceptions, misinformation

## ABBREVIATIONS

aOR—adjusted odds ratio

CDC—Centers for Disease Control and Prevention

MMR—measles-mumps-rubella

Drs Nyhan and Reifler initiated the project, obtained funding for the study, designed the experiment, analyzed and interpreted the data, and drafted the initial manuscript; Drs Richey and Freed initiated the project, obtained funding for the study, designed the experiment, interpreted the data, and reviewed and revised the manuscript; and all authors approved the final manuscript as submitted.

[www.pediatrics.org/cgi/doi/10.1542/peds.2013-2365](http://www.pediatrics.org/cgi/doi/10.1542/peds.2013-2365)

doi:10.1542/peds.2013-2365

Accepted for publication Dec 20, 2013

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PEDIATRICS (ISSN Numbers: Print, 0031-4005; Online, 1098-4275).

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**FINANCIAL DISCLOSURE:** The authors have indicated they have no financial relationships relevant to this article to disclose.

**FUNDING:** Funded by a grant from the Robert Wood Johnson Foundation Health and Society Scholars Program at the University of Michigan. The findings and conclusions in this report are those of the authors and do not necessarily represent the views of the funders.

**POTENTIAL CONFLICT OF INTEREST:** The authors have indicated they have no potential conflicts of interest to disclose.



**WHAT'S KNOWN ON THIS SUBJECT:** Maintaining high levels of measles-mumps-rubella immunization is an important public health priority that has been threatened by discredited claims about the safety of the vaccine. Relatively little is known about what messages are effective in overcoming parental reluctance to vaccinate.



**WHAT THIS STUDY ADDS:** Pro-vaccine messages do not always work as intended. The effectiveness of those messages may vary depending on existing parental attitudes toward vaccines. For some parents, they may actually increase misperceptions or reduce vaccination intention.

## abstract



**OBJECTIVES:** To test the effectiveness of messages designed to reduce vaccine misperceptions and increase vaccination rates for measles-mumps-rubella (MMR).

**METHODS:** A Web-based nationally representative 2-wave survey experiment was conducted with 1759 parents age 18 years and older residing in the United States who have children in their household age 17 years or younger (conducted June–July 2011). Parents were randomly assigned to receive 1 of 4 interventions: (1) information explaining the lack of evidence that MMR causes autism from the Centers for Disease Control and Prevention; (2) textual information about the dangers of the diseases prevented by MMR from the Vaccine Information Statement; (3) images of children who have diseases prevented by the MMR vaccine; (4) a dramatic narrative about an infant who almost died of measles from a Centers for Disease Control and Prevention fact sheet; or to a control group.

**RESULTS:** None of the interventions increased parental intent to vaccinate a future child. Refuting claims of an MMR/autism link successfully reduced misperceptions that vaccines cause autism but nonetheless decreased intent to vaccinate among parents who had the least favorable vaccine attitudes. In addition, images of sick children increased expressed belief in a vaccine/autism link and a dramatic narrative about an infant in danger increased self-reported belief in serious vaccine side effects.

**CONCLUSIONS:** Current public health communications about vaccines may not be effective. For some parents, they may actually increase misperceptions or reduce vaccination intention. Attempts to increase concerns about communicable diseases or correct false claims about vaccines may be especially likely to be counterproductive. More study of pro-vaccine messaging is needed. *Pediatrics* 2014;133:1–8