



Insights into Vaccine Confidence

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Recent Research includes. . .

- ▶ An in-progress review of the hesitancy/confidence literature
- ▶ “Parents’ Confidence in Recommended Childhood Vaccinations: Extending the Assessment, Expanding the Context,” Nowak and Cacciatore, forthcoming, *Human Vaccines & Immunotherapeutics* (Vol. 13, Issue 3).
- ▶ “Exploring the Impact of the U.S. Measles Outbreak on Parental Awareness of and Support for Vaccination,” Cacciatore, Nowak and Evans, *Health Affairs*, Feb. 2016

Vaccine/Vaccination Confidence

SAGE Working Group Definition (2014): “Vaccination confidence is one of a number of factors that affect individual and population-level willingness to accept a vaccine. It means having confidence in the safety and efficacy of a vaccine, having confidence in the reliability and competence of the health services and health professionals who deliver and administer the vaccine, and having trust in the motivations of the policy-makers who decide which vaccines are needed and when.”

NVAC Report Definition (2015): “Vaccine confidence refers to the trust that parents or healthcare providers have in 1) the immunizations recommended by the ACIP; 2) the provider(s) who administer(s) vaccines; and 3) in the processes that lead to vaccine licensure and the recommended vaccination schedule.”

Literature Review Insights

- ▶ Vaccine confidence is often linked with vaccine hesitancy, but there is a difference between “addressing hesitancy” and “overcoming hesitancy.”
 - **Addressing hesitancy:** establish or build understanding, trust, confidence, including through education and provider-parent communication
 - **Overcoming hesitancy:** mandates, incentives, removing barriers related to access and affordability, foster convenience
- ▶ “Trust” has been proposed as both a measure or indicator of vaccine confidence and as an outcome linked with high confidence.
- ▶ Conceptual definitions of vaccine confidence vary widely – and many definitions have not been operationalized or measured.

Definitions of Vaccine/Vaccination Confidence

- ▶ Layperson definitions of “confidence” often encompass the notion of “**no reservations**” when it comes to compliance or adopting a health-related recommendation, e.g.,
 - “I have no reservations about whether or not it is a good idea and desirable for my child (or me) to be vaccinated” or “I am completely convinced of the (value, safety, need) of this vaccine.”
- ▶ Other characterizations or definitions include:
 - **Faith** – e.g., faith that one will benefit and/or experience no harm
 - **Strength of belief regarding expected outcome** – e.g., that vaccine will provide protection and/or that there will not be an adverse reaction.
 - **Absence of worry or concern(s)** – e.g., not perceiving a significant likelihood of a bad or adverse outcome
 - **Satisfaction with one’s decision** – e.g., “I’m confident my decision to [get / not get] my child vaccinated was the right one.”

Extending the Assessment, Expanding the Context



- ▶ Research Method: A November 2014 YouGov Online Survey
 - ▶ 1,000 U.S. parents of children 5 years old and younger
 - ▶ Designed to be nationally representative
- ▶ Examine whether relationships found between vaccines and confidence ratings are the same or different when it comes to antibiotics, over-the-counter medicines, and children's vitamins.
- ▶ Examine whether confidence ratings are associated with vaccine-related interest, knowledge, and trust in healthcare providers as well as demographics.

Insights include. . .

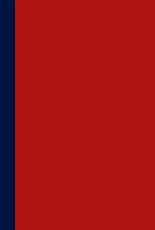


1. Expanding the context suggests that vaccines do relatively well compared to other health-related products that parents of young children have to make decisions about – such as antibiotics, over-the-counter medicines, and vitamins.
2. Parents' behavior, along with their direct and indirect vaccine-related experiences, were associated with confidence ratings.

Overall Confidence Ratings

| Confidence Item | Average (on a 0-10 scale) |
|---|---------------------------|
| Recommended childhood vaccination schedule is safe. | 7.1 |
| Overall recommended schedule will protect my child from all the diseases and illnesses. | 7.0 |
| My child's overall health will benefit from getting all the recommendation vaccines. | 7.2 |
| My child won't have a bad/serious adverse reaction to any of the recommended vaccines. | 6.6 |
| Each of the recommended vaccines is effective in protecting my child from disease/illness. | 7.1 |
| My child's overall health benefits from each one of the vaccines in the schedule. | 7.0 |
| My child won't have a bad/serious adverse reaction to a recommended antibiotic . | 6.6 |
| A recommended children's antibiotic will successfully treat the illness or disease. | 7.1 |
| My child's health will benefit from taking a recommended children's antibiotic . | 6.8 |
| My child won't have a bad/serious adverse reaction to an over-the-counter medicine . | 6.8 |
| OTC medicines and drugs for children will successfully treat the illness or disease. | 6.3 |
| My child's health will benefit from taking OTC medicines or drugs for children. | 6.4 |
| My child won't have a bad or serious reaction to a children's vitamin . | 7.3 |
| Children's vitamins will successfully protect my child from illness or disease. | 5.8 |
| My child's overall health will benefit from taking children's vitamins . | 6.7 |

Vaccine and Health Product Use: Young Children



| Item | Vaccines | Antibiotics | OTC Medicines | Children's vitamins |
|--|----------|-------------|---------------|---------------------|
| <i>Has your youngest child received all, some or none of the recommended vaccines to date?</i> | | | | |
| None | 4.6% | n/a | n/a | n/a |
| Some | 20.6% | n/a | n/a | n/a |
| All | 74.8% | n/a | n/a | n/a |
| <i>Has your youngest child been given ...</i> | | | | |
| No | n/a | 34.7% | 19.1% | 33.5% |
| Unsure | n/a | 5.5% | 5.2% | 3.7% |
| Yes | n/a | 59.8% | 75.8% | 62.8% |

Delays and Refusals of a Recommended Health Product

| Item | Vaccines for children | Antibiotics for children | OTCs for children | Children's vitamins |
|--|-----------------------|--------------------------|-------------------|---------------------|
| <i>Have you ever delayed having your child or children get a recommended [TOPIC] for reasons other than illness or allergy?</i> | | | | |
| No | 69.5% | 81.1% | 76.5% | 78.8% |
| Unsure | 7.2% | 7.4% | 7.6% | 6.8% |
| Yes | 23.3% | 11.5% | 15.9% | 14.4% |
| <i>Have you ever decided not to have your child or children get a recommended [TOPIC] for reasons other than illness or allergy?</i> | | | | |
| No | 74.2% | 82.0% | 76.0% | 78.3% |
| Unsure | 6.1% | 5.5% | 6.7% | 6.4% |
| Yes | 19.7% | 12.5% | 17.3% | 15.3% |

| Item | Mean Confidence Scores | | | |
|---|------------------------|------|------|---------|
| | All to date | Some | None | p-value |
| <u>The Vaccination Schedule</u> | | | | |
| <i>Recommended childhood vaccination schedule is safe</i> | 7.8 | 5.1 | 3.7 | .000 |
| <i>Recommended childhood vaccination schedule will protect my child from all the diseases and illnesses</i> | 7.7 | 5.4 | 3.8 | .000 |
| <i>My child's overall health will benefit from getting all the recommended vaccines</i> | 8.0 | 5.5 | 3.5 | .000 |
| <u>The Individual Vaccines in the Schedule</u> | | | | |
| <i>My child won't have a bad or serious adverse reaction to any of the recommended vaccines</i> | 7.1 | 5.6 | 3.6 | .000 |
| <i>Each of the recommended vaccines is effective in protecting my child from disease and illness</i> | 7.7 | 5.6 | 4.0 | .000 |
| <i>My child's overall health benefits from each one of the vaccines in the recommended schedule</i> | 7.7 | 5.4 | 3.6 | .000 |

Bad Reactions: Parents' Knowledge of and Self-reported Personal Experience

| | Yes | No | Unsure/DK |
|--|-------|-------|-----------|
| Do you know of anyone who has had a bad reaction- outside of general soreness, fever, redness, or swelling at the injection site- a vaccine? | 23.5% | 65.8% | 10.7% |
| Have any of your children ever had a bad reaction – outside of general soreness, fever, redness, or swelling at the injection site – to a vaccine? | 13.4% | 78.6% | 8.0% |
| Do you know of anyone who has had a bad reaction to an antibiotic? | 33.1% | 57.3% | 9.6% |
| Have any of your children ever had a bad reaction to an antibiotic? | 14.4% | 79.4% | 6.2% |
| Do you know of anyone who has had a bad reaction to an over-the-counter medicine for children? | 16.7% | 75.1% | 8.2% |
| Have any of your children ever had a bad reaction to an over-the-counter medicine for children? | 7.0% | 86.1% | 7.0% |
| Do you know of anyone who has had a bad reaction to a vitamin? | 8.7% | 85.0% | 6.3% |
| Have any of your children ever had a bad reaction to a vitamin? | 5.3% | 87.9% | 6.7% |

| Confidence measure | Average Confidence Level Ratings | | | | | |
|--|---|------------|------------|---------------------------------------|------------|------------|
| | <i>Any of your children – bad reaction?</i> | | | <i>Know of anyone – bad reaction?</i> | | |
| | No | Yes | Unsure | No | Yes | Unsure |
| <i>My child won't have a bad or serious adverse reaction to any of the recommended vaccines.</i> | 6.9 | 6.1 | 5.6 | 7.1 | 5.5 | 6.3 |
| <i>Each of the recommended vaccines is effective in protecting my child from disease and illness.</i> | 7.4 | 6.6 | 5.9 | 7.6 | 6.0 | 6.7 |
| <i>My child's overall health benefits from each one of the vaccines in the recommended childhood schedule.</i> | 7.3 | 6.4 | 5.9 | 7.5 | 5.8 | 6.8 |
| <i>My child won't have a bad or serious adverse reaction to a recommended children's antibiotic.</i> | <u>7.0</u> | <u>5.6</u> | 6.7 | <u>7.1</u> | <u>6.0</u> | 6.2 |
| <i>A recommended children's antibiotic will successfully treat the illness or disease.</i> | 7.4 | 6.7 | 6.7 | 7.4 | 6.8 | 6.6 |
| <i>My child's overall health will benefit from taking a recommended children's antibiotic.</i> | 7.1 | 6.5 | 6.4 | 7.2 | 6.4 | 6.1 |
| <i>My child won't have a bad or serious adverse reaction to an OTC medicine or drug for children.</i> | <u>7.0</u> | <u>6.4</u> | <u>6.1</u> | <u>7.1</u> | <u>6.2</u> | <u>6.2</u> |
| <i>OTC medicines and drugs for children will successfully treat the illness or disease.</i> | 6.4 | 6.3 | 6.1 | 6.6 | 5.6 | 5.7 |
| <i>My child's overall health will benefit from taking OTC medicines or drugs for children.</i> | 6.5 | 5.8 | 6.1 | 6.7 | 5.4 | 5.8 |

Thanks