Using and Interpreting Research to Strengthen Immunization Programs: Translating Research into Effective Messages and Materials for Parents and Health Care Professionals

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National Conference on Immunization and Health Coalitions
Outline

- **Types of research**
  - Quantitative
  - Qualitative
  - Mixed methods

- **Incorporating others’ research**
  - Why look at others’ research?
  - Where to search
  - How to evaluate quality

- **Incorporating your own research**
  - Formative
  - Data collection/surveillance
  - Evaluation

- **Example: Childhood immunizations**
Quantitative Research

- The systematic empirical investigation of social phenomena via statistical, mathematical or computational techniques.
  - The objective of quantitative research is to develop and employ mathematical models, theories and/or hypotheses pertaining to phenomena.
  - The results of quantitative research are designed and intended to be generalizable to a larger population.
    - The ability to generalize based on quantitative research is directly related to the quality of the research conducted and interpretation of the research.

Qualitative Research

- In-depth understanding of human behavior and the reasons that govern such behavior.
  - The qualitative method investigates the why and how of decision making, not just what, where, when. Hence, smaller but focused samples are more often needed than large samples.
  - Units of analyses are not quantified, but examined within the larger context to understand dynamic phenomena.
  - Results from qualitative research are not generalizable.

### Qualitative and Quantitative Research: Differences

<table>
<thead>
<tr>
<th>Quantitative Research:</th>
<th>Qualitative Research:</th>
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<tbody>
<tr>
<td>– Broad generalizations</td>
<td>– Thematic insights</td>
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<td>– State of the field assessments</td>
<td>– Aspects of decision making</td>
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<td>– Stratification of populations</td>
<td>– Context</td>
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<td>– Macro-level phenomena</td>
<td>– Reactions</td>
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Mixed Methods Research

- Research **triangulation**, or incorporating quantitative and qualitative components of research, provides the most thorough insights.
  - Use quantitative methods for generalizations, baseline assessments, and trend data.
  - Use qualitative research for nuanced understanding of contextualized phenomena, such as opinions and attitudes towards specific messages or materials.

- Common options for mixed methods research include parallel, sequential, and multiphase designs.

Incorporating Others’ Research

- Literature search an important first step in answering a research question
  - Could save time, effort, and resources if others have already looked at your research question
  - Can build upon what others have done (i.e., “more research is needed”)
  - Can learn who publishes in this area and seek out advice or collaboration
  - Can be a source for survey questions or instruments (with permission)
Incorporating Others’ Research: Search Resources

- Google Scholar (http://scholar.google.com)
- PubMed (www.pubmed.gov)
- Journal websites (e.g., JAMA, Pediatrics)
- Open access journals (e.g., BioMed Central, PLoS)
- Institutional, university, and municipal libraries
Incorporating Others’ Research: Tips for Evaluating Quality

- **Quality of an online search**
  - Peer-reviewed articles
  - Journals of importance included in the search?
  - Incorporate search terms from popular sources in scholarly searches

- **Quality of an individual article**
  - **Sample**
    - Representativeness
    - Sample size
  - **Method**
    - What is the best way to study the issue? Did the authors use it?
  - **Analysis**
    - Does the interpretation of the data make sense to you? Are similar findings supported in other sources?
Incorporating Your Own Research

- **Formative research**
  - Can be qualitative, quantitative, or both
  - Often includes several iterations
  - Useful for testing preliminary information, concepts, messages, materials, and revisions

- **Surveillance**
  - Traditional “disease” surveillance
  - Can also be used to learn about and track knowledge, attitudes, and behaviors at a specific point or over time

- **Evaluation**
  - Used to learn about a program or intervention
  - Not just “if” it works but more importantly, “why”
  - Looks at process, outcome, and impact
Example: Childhood Immunizations

- Communication challenges
  - Low familiarity with diseases means an increased focus on vaccine risks
  - Full and complicated immunization schedule
  - Spectrum of parent attitudes and beliefs

- Role of research in development of materials
  - Literature review and other research
  - Development, testing, and revision of draft materials
  - Ongoing formative research with parents throughout the process
Completed Research with Health Care Professionals

- 2008 in-depth interviews with pediatricians and family physicians
- 2009 survey of pediatricians and family physicians (partnership with U of Colorado)
- Pilot evaluation of educational materials with WA state health care professionals
- In-depth interviews (IDIs) to discuss provider resources
Completed Research with Parents

- 2008, 2009, 2010 HealthStyles mail surveys of parents
- 2008 and 2009 focus group research with moms
- 2008 online testing of draft educational materials with moms
- 2010 national poll of parent vaccine attitudes and behaviors
- 2010 cognitive interviews and focus groups with moms to test readability of VIS
- 2011 focus groups and intercept interviews with parents to discuss vaccination barriers and facilitators, and to test message concepts
  - Includes research with high and low acculturation Hispanic parents and with fathers
- 2011 ConsumerStyles mail survey of parents
Research Guides CDC’s Vaccine Communication Priorities, Strategies, and Messages

- Research indicated that:
  - HCPs were seeking info to pass on to parents about immunizing their children
  - Parents did not know much about vaccine-preventable diseases and some questioned vaccine safety and efficacy
  - Parents’ most trusted source of vaccine information was their child’s doctor or nurse

- So, we made the development of resources to meet these needs and supporting HCP-parent conversations a priority
  - Slated direct-to-parent media campaign for Phase II
How did we translate these findings into action/materials?

- Phase 1: focus on health care professionals
  - Parents’ #1 source for health information
  - Give them the resources they need to address parental questions/concerns

- Phase 2: direct-to-parent communication
  - Tell them to talk to their child’s doctor if they have concerns
  - Reassure them
  - Educate them
Phase 1: “Provider Resources for Vaccine Conversations with Parents”

- Developed with partners: AAP and AAFP
- Primary Target Audience: Healthcare Professionals
  - Information to help hcps talk with parents about vaccines, vaccine-preventable diseases, and vaccine safety
  - Dual purpose: resources hcps can provide to parents
- Based on formative, mixed methods research
- Using risk communication principles
- Extensively reviewed by subject matter experts
- Updated annually

www.cdc.gov/vaccines/conversations
“Talking with Parents about Vaccines for Infants”

- **During the Office Visit**
  - Take time to listen
  - Solicit and welcome questions
  - Keep the conversation going
  - Use a mix of science and personal anecdotes
  - Acknowledge benefits and risks
  - Respect parents’ authority

- **After the Office Visit**
  - Document parents’ questions/concerns
  - Follow up a few days after the visit
Materials: Provider Resources for Vaccine Conversations with Parents

- **Understanding Vaccines and Vaccine Safety**
  - How Vaccines Work
  - The Recommended Childhood Immunization Schedule
  - Ensuring the Safety of U.S. Vaccines
  - Understanding the Vaccine Adverse Reaction Reporting System
  - Understanding MMR Vaccine Safety
  - Understanding Thimerosal, Mercury, and Vaccine Safety
  - Understanding Vaccine Ingredients

- **Diseases and the Vaccines that Prevent Them**
  - 14 vaccine-preventable disease sheets
    - 2 versions (one for high-information seeking parents and other plain language)

- **If You Choose Not to Vaccinate, Understand the Risk and Your Responsibilities**
Parent-Targeted Materials

Current stories from families affected by VPDs

DISEASES and the VACCINE

**Measles Symptoms**
- High fever
- Reddened, watery eyes
- Runny nose
- Mild cough
- Red or pink rash that starts on the face and spreads down to the body

**Measles is Serious**
- Viral pneumonia
- Encephalitis
- Death

**People Exposed to Measles Who Have Not Been Vaccinated Almost Always Get Measles**

**Vaccines Have Made Measles Rare in the USA, But Not Worldwide**
- In developed countries, measles cases have declined and in many countries have been eliminated

**Co-branded with AAFP and AAP**

Vaccine risks and benefits

References

Quotes from health care professionals

For more information on vaccines, talk to your child’s healthcare provider or call 800-CDC-INFo (800-232-4636) www.cdc.gov/vaccines

<image of a child>
Phase 2: Direct-to-Parent Media Campaign Launched in April 2012

- Based on extensive formative research
- English & Spanish materials

Print Ads
- 2 sizes and poster format
- Available: [http://www.cdc.gov/vaccines/events/niww/print-materials.html](http://www.cdc.gov/vaccines/events/niww/print-materials.html)

Radio/TV PSA
- Broadcast quality
- Downloadable: [http://www.cdc.gov/vaccines/cdcmediaresources/](http://www.cdc.gov/vaccines/cdcmediaresources/)

- Products can be pitched and placed with local media
Campaign Goals

• Reinforce the social norm to vaccinate their children
• Increase awareness of VPDs
• Increase awareness of disease protection benefits of vaccines
• Empower parents to make the choice to immunize their children
English Campaign
*Immunization. Power to Protect.*

**Print Ads**
- Strong protection message
- Real-life, relatable scenarios
- Drives parents to new parent-friendly website

**TV :30**
Spanish Campaign

*Con salud, todo es posible. Vacune a sus hijos.*

- **Print Ads**
  - **Tagline:** “With health, all is possible. Vaccinate your children.”
  - **Strong protection message**
  - **Endearing terms and colorful images**

- **TV :30**
  - **Tagline:** “With health, all is possible. Vaccinate your children.”
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*CDC* - U.S. Department of Health and Human Services
http://www.cdc.gov/espanol/vacunas
1-800-232-4636
Research and evaluation are an ongoing process, and can take many forms.

Incorporating your own or others’ research findings into health education or communication campaigns is essential.

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