Strategies for Improving Vaccine Coverage
Workshop F1

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Measles Outbreak--San Diego, 2008

- Intentionally unvaccinated 7 yo contracted measles on trip to Switzerland
- Exposed 839 people and resulted in 11 additional cases
- Cost to public: $124,517
- Cost to families quarantined: $775 per family
- Of 12 cases:
  - 9 had not been immunized purposefully—parents had signed waiver for personal belief exemption
  - 3 were too young to have received the vaccine—one required hospitalization
Pertussis, 2012
Who is Refusing Vaccines?

<table>
<thead>
<tr>
<th>Pro-vaccine</th>
<th>Vaccine-hesitant</th>
<th>Anti-vaccine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acceptors</td>
<td></td>
<td>Rejectors</td>
</tr>
<tr>
<td>Agree with or do not question vaccines</td>
<td>Are unsure about, delay, or choose only some vaccines</td>
<td>Completely reject vaccines</td>
</tr>
<tr>
<td>Children fully immunized</td>
<td>Children under-immunized</td>
<td>Children un-immunized</td>
</tr>
<tr>
<td>High trust in provider</td>
<td>Desire a trustworthy provider</td>
<td>Low trust in provider</td>
</tr>
<tr>
<td>Interest in vaccine information from child’s provider</td>
<td>Interest in vaccine information from child’s provider</td>
<td>No interest in vaccine information</td>
</tr>
<tr>
<td>70%</td>
<td>30%</td>
<td>&lt;1%</td>
</tr>
</tbody>
</table>

Slide courtesy of Douglas J. Opel MD, MPH
Parents and the Public

Vaccine Concerns Reported by Parents of Children Age 6 or Younger, 2010

Kennedy et al. Health Affairs 2011
Parental Hesitancy: Contributors

- Beliefs (not supported by reasonable evidence): Vaccine effects on immune system, opposition to injection of foreign material, concern about vaccine components
- Lost memory of vaccine-preventable infectious diseases
- Flawed risk assessment
- Internet and Media and Celebrities as source of “truth”
- Increasing number of vaccines
Parental Vaccine Concerns 2009

- 90% of parents feel vaccines are a good way to protect their children from disease
- 88% generally follow their physicians recommendation
- 54% are concerned about adverse effects
- 23% believe vaccines cause autism in healthy children
- 31% believe parents should have the right to refuse vaccines that are required for school for any reason
- 11% don’t feel children need vaccines for diseases that are not common anymore.

Improving Childhood Vaccination

Remove obstacles to vaccination
Barriers

- Access Barriers
- Transportation Barriers
- Cost Barriers
- Educational Barriers
Justice, Policy, and Vaccination

• Vaccination programs are important to the public health and a community good

• Benefit of vaccination program shared by the entire community, including those who refuse vaccination (Free-riders)

• Burden of vaccination programs should not be borne exclusively by individuals participating in vaccination program
Policy Issues

- Vaccination provided at public expense

- Adequate compensation for losses and health care related to vaccine related injury should be provided by public

- Tax-based system of compensation

- Tax incentive to participate in vaccination program “levels the playing field.”
Improving Childhood Vaccination

Rapidly and forcefully refute unsubstantiated claims made publicly
Anti-vaccine Messengers

HOW THE CASE AGAINST THE MMR VACCINE WAS FIXED

By Brian Deer

In the first part of a special BMJ series, Brian Deer exposes the bogus data behind claims that launched a worldwide scare over the measles, mumps, and rubella vaccine, and reveals how the appearance of autism was manufactured at a London medical school.

When I broke the news to the father of child 11, he at first did not believe me. Wakefield told me my son was the 33rd child they saw. “And they only took 12,” she said.

That paper was published in the Lancet on 28 February 1998. It was retracted on 2 February 2010. Authors by Andrew Wakefield, John Walker Smith and 11 others from the Royal Free Hospital and School of Medicine, London, it reported on 12 developmentally challenged children, and triggered a decade-long public health scare.

“Outbreaks of diarrhoeal illness were associated by the parents, measles, mumps, and rubella vaccination in nine of the 12 children,” began the conclusions added: “It does the anti-vaccine movement good.”

As it turns out, those parents were among the first vaccine deniers. Wakefield had already identified such a syndrome before the paper that would eventually be known as vaccine-induced encephalitis.

“The regulator’s main focus was whether the research was ethical. Mine was whether it was true.”

The trial concluded £150 ($200; €120) an hour through a Swedish solicitor named Richard Herr, he had been confidentially put on the payroll for two years before the paper was published, eventually giving him £35 635, plus expenses.

Contrary, however, Wakefield had already identified such a syndrome before the paper that would eventually be known as vaccine-induced encephalitis.

“Children with encephalitis/encephalitis disorder (an expression he used for how he defined the vaccine-induced autism) form part of a new syndrome,” he said and Harr explained in a confidential grant application to the UK government’s Legal Aid Board, “before any of the children were investigated.”

“Remember the evidence is unacceptably in favour of a specific vaccine induced pathologies.”

The two men also aimed to show a sudden onset “temporal association”—strong evidence in product liability. “In Wakefield’s view that if we can show a clear time link between the vaccination and onset of symptoms, “we should be able to dispose of the suggestion that it’s simply a chance association.”

But child 11’s case must have proved a disappointment. Records show his behavioral symptoms started too soon: “This development was normal until 25 months of age,” notes the discharge summary. “In the period 13-14 months he developed slow speech patterns and repetitive hand movements. Over this period his parents noticed his slow gradual deterioration.”

That put the first symptom two months earlier than reported in the Lancet, and a
Love them. Protect them. Never inject them.

There are NO safe vaccines!

Chronic Ear Infections
ADD
Allergies
Asthma
Autism
Death
Diabetes
Meningitis
Polio
Seizures
SBS
and SIDS are caused by adverse reactions to vaccine poisons.

VaccineTruth.com 1-888-249-1421

Autism is only the tip of the iceberg.

The following conditions are among those linked to vaccine damage:

- Allergies (including food allergies), anaphylaxis, anorexia, arthritis
- Asperger’s syndrome, asthma, attention deficit disorder (ADD)
- attention deficit hyperactivity disorder (ADHD), Bell’s palsy (facial paralysis)
- brain tumors, bulimia, cancer, chronic pain, convulsions, crib death (SIDS),
- Crohn’s disease, depression, diabetes, dyslexia, ear infection, encephalitis (brain damage),
- eye and vision disorders, eczema, fainting, fatigue, febrile convulsions, genital warts,
- Guillain-Barré syndrome, hearing disorders and deafness, heart irregularities, hives, infertility,
- joint pain, kidney failure, learning disorders, menstrual irregularities, mental retardation,
- multiple sclerosis (MS), ovarian tumors, pervasive developmental disorder (PDD), pneumonia,
- rashes, reproductive system complications, seizures

You have a choice. Say No To Vaccination.

NOTES: 1. Whenever a toxic chemical stress is introduced into a population, the effects are exhibited among a considerable risk unresponsive to any and vast numbers of effects at the other. Most indeed are damaged to varying degrees. 2. Counter to popular belief, parents are not legally obligated to vaccinate their children. Information on exemptions can be found at: CanVac or not and the other site.
Improving Childhood Vaccination

Strengthen and Enforce School Vaccine Requirements
School Immunization Laws: Purpose

- Prevent outbreaks in the community
- Protect others attending the school from disease
- Minimize disruption to education
- Minimize illness among individual students
School Vaccine Requirements

- Wide variability between and within states with regard to:
  - Which vaccinations required
  - Who qualifies for exemption
  - What is required to obtain exemption
  - Enforcement

- Easy exemption associated with high rates of exemption

- High rates of exemption associated with disease outbreaks
Arizona offers a personal belief exemption for school but not daycare

Personal belief exemptions include religious, philosophical and any other unspecified non-medical exemption

State Coercion and Vaccination

- Safety of children attending school and community interest must be balanced with individual freedom and avoidance of coercion

- Current requirements are not strictly coercive

- Personal belief exemptions remove any coercion

- Personal belief exemptions should require just as much effort and expense as vaccination does
School Immunization “Requirements”

- State Laws (not Federal)
- Wide Variability in Laws
  - Which vaccinations required
  - Those who qualify for exemption
  - What is required to gain exemption
<table>
<thead>
<tr>
<th>Administrative Difficulty</th>
<th>Low (&lt;0.5%)</th>
<th>Medium (0.5% - 1.0%)</th>
<th>High (&gt;1.0%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Easy</td>
<td>RI, OK, MO, HI, PA</td>
<td>AK, AZ, VT, CA, MD</td>
<td>WA, ID, WI, MI, OR</td>
</tr>
<tr>
<td>Medium</td>
<td>ND, CT, IL, NC, AL, NY, OH, KS, NJ, LA</td>
<td>MA</td>
<td>UT, SD, CO</td>
</tr>
<tr>
<td>Hard</td>
<td>WY, NH, MT, VA, IN, AR, MN, KY, GA, TN</td>
<td>IA, DE, CS, ME, NM, TX, NV, FL, NE</td>
<td>Rota et al <em>AJPH</em>, 2000.</td>
</tr>
</tbody>
</table>
Nonmedical Exemptions for States With Religious Exemptions and With Personal Belief Exemptions - 1991 - 2004

Only Religious Exemptions Permitted

Personal Belief Exemptions Permitted

Omer et al., JAMA, 2006 Data Updated
Nonmedical Exemptions by Ease of Exemption 1991 - 2007

Easy Exemption Policy

Medium Exemption Policy

Difficult Exemption Policy

Omer et al., JAMA, 2006

Data Updated
Relative Risk of Measles and Pertussis in Exemptors from School Laws

<table>
<thead>
<tr>
<th></th>
<th>Measles</th>
<th>Pertussis</th>
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<tr>
<td>CO (1987-98)</td>
<td>22</td>
<td>5.9</td>
</tr>
</tbody>
</table>

School Exemption Rates in Counties With and Without Pertussis Outbreaks: Colorado

Counties with outbreaks 4.7%

Counties without outbreaks 1.3%

p = .001

WA State Senate Bill 5005

- Past law: signature from medical professional only required when medical exemptions filed
- New law (signed May 10, 2011 by Gov. Gregoire):
  - “Modifications are made to the certification, that a parent or guardian must present, to exempt a child from school immunization requirements [for religious or philosophical reasons]…must include a statement, signed by a health care practitioner, that the parent or guardian has been informed of the benefits and risks of the immunization.”
- Exemption Rate 6.2% (2009-2010) to 4.7% (2011-2012)
Improving Childhood Vaccination

Communication Strategies need to be improved
Communication Strategies

- Physician-Patient
- Public at large
The Physician’s Obligation

- Absent state authority, the physician cannot treat or vaccinate without parental consent.

- State agencies should not be involved unless the parental decision places the child at substantial risk of serious harm (i.e. neglect)

- Respectfully continue to work with the family
Doctor-parent communication and immunizations

- Parents consistently report that their child’s provider is the most important influence on their immunization decision-making.
- Most parents state they most commonly seek immunization information from their child’s provider.
- Parents change their minds about delaying or refusing a vaccine after receiving information or assurances from their child’s provider.

Current state of doctor-parent communication about immunizations

- Parents find it difficult to have an open discussion
- Providers:
  - say little to parents about immunizations
  - “a discussion would open a can of worms”
- Lack of time
  - Median time discussing immunization in a 16 minute well-child visit: 1.9 minutes
  - Providers estimate they need 2 minutes more

Aristotle and Rhetoric

- Ethos: Speaker is trustworthy
- Logos: Factually correct
- Pathos: Message Emotionally Resonates with audience
- Telos: Clear goal or end in mind
Changing Minds

• Reason: Reasoned argument
• Research: Use data and facts
• Resonance: Message must resonate emotionally with audience
• Re-descriptions: Message conveyed in different ways (story, visual, reasoned argument)
• Address Resistance/opposing arguments

Strategies with Parents

• Seek first to understand: Diagnose the Resistance

• Respond to concerns

• Show respect

• Be willing to compromise while educating

• Tell personal stories
Communication Principles

- Ask-Tell-Ask
  - ASK the parent to describe her current understanding of the issue
  - TELL the parent in straightforward language what you need to communicate
  - ASK the parent if she understood what you just said
- Tell me more
- Respond to emotions
Strategy: The Provider Toolkit

- Triple A Guidelines for Pediatric Care Providers
  - Ask, Acknowledge, Advise

**ASK**
1. Confirm if parents have the Recommended Childhood Immunization Schedule (RCIS). If not, give them a copy.
2. What questions do you have about the RCIS?
   *It is common for parents to have questions about vaccinations.*

**Hesitant** or wanting to follow an alternative schedule.

**ACKNOWLEDGE**
Guideline: Verbally acknowledge you understand their concerns. Emphasize that they are not alone.

**ADVISE**
Guideline: Tailor advice to their specific concern(s). Offer parents time to look over any written material.

**Not hesitant** or planning to follow the recommended schedule.

**ACKNOWLEDGE**
Guideline: Verbally support their decision to follow the Recommended Childhood Immunization Schedule.

**ADVISE**
Guideline: Encourage parents to consider their own immunization status and those that care for their child.
Effect of Clinician Style on Motivation for Change

**Styles that Enhance**
- Empathic
- Non-judgmental
- Respectful
- Collaborative spirit
- Emphasis on choice

**Styles that Promote Resistance**
- Coercing, arguing,
- Shaming, criticizing
- Judging, labeling
- Commanding, threatening
- Moralizing, lecturing

Adapted from: *Brief Negotiation: Behavior Change Counseling in Brief Clinical Encounters, 2nd ed.* The Permanente Medical Group, Inc., Northern California

Slide Courtesy of Ed Marcuse
Communication Tools

- Centers for Disease Control and Prevention (CDC), American Academy of Pediatrics (AAP), American Academy of Family Physicians (AAFP):
  - Provider Resources for Vaccine Conversations with Parents ([http://www.cdc.gov/vaccines/spec-grps/hcp/conversations.htm](http://www.cdc.gov/vaccines/spec-grps/hcp/conversations.htm))
  - October 2009
“Firing” Families who Refuse to Vaccinate

- Self-Defeating
- Unlikely to accomplish goals
- May further harm the child
- Undermines trust in physician and organized medicine
- Continued dialogue shows concern and respect
Public Messaging

• Same Principles apply:
  • Trusted messenger
  • Message is evidence-based
  • Message resonates emotionally

• Taking advantage of the “teachable moment”
  • Deaths due to vaccine-preventable diseases
  • Disease outbreaks
CONCERNED PARENTS

INTENTIONAL MISINFORMERS

PLAY SOFTBALL...

PLAY HARDBALL!

Slide Courtesy of Ed Marcuse MD
Improving Childhood Vaccination

We need to set an example