VACCINE HESITANCY
WHAT’S A PROVIDER TO DO?

DENNIS COOLEY MD, FAAP
Disclosure

• I have no relevant financial relationships with the manufacturers of any commercial products and/or provider of commercial services discussed in this CME activity.

• I do not intend to discuss an unapproved/investigative use of a commercial product/device in my presentation.
OBJECTIVES

• Understand the importance of vaccine
• Understand the underlying causes of parents refusing vaccines for their children
• Become knowledgeable of the best approaches to discuss immunization concerns with parents
IMPACT OF VACCINES

• One of 10 most important Public Health initiatives in history
• 3 million deaths/year in children prevented
• Saves money by preventing medical complications, loss of income

SOURCE: DIEKAMA, 2005
IMPACT OF VACCINES

• Routine Childhood Immunizations 2009 cohort
• Prevents
  – 42,000 early deaths
  – 20 million cases of disease
• Saves
  – $13.5 billion direct costs
  – $68.8 billion societal costs

SOURCE: ZHOU et al. Pediatrics, April 2014
# IMPACT OF VACCINES

The table below shows the impact of vaccines on various diseases in the 20th century and the percentage decrease in cases reported in 2010. The data is sourced from JAMA 2007; MMWR JAN 7 2011.

<table>
<thead>
<tr>
<th>DISEASE</th>
<th>20TH CENTURY ANNUAL MORBIDITY</th>
<th>2010 REPORTED CASES</th>
<th>% DECREASE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIPHTHERIA</td>
<td>21,053</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>PERTUSSIS</td>
<td>200,752</td>
<td>21,291</td>
<td>89</td>
</tr>
<tr>
<td>TETANUS</td>
<td>580</td>
<td>8</td>
<td>99</td>
</tr>
<tr>
<td>POLIO</td>
<td>16,316</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>MEASLES</td>
<td>530,217</td>
<td>61</td>
<td>&gt;99</td>
</tr>
<tr>
<td>MUMPS</td>
<td>162,344</td>
<td>2,528</td>
<td>98</td>
</tr>
<tr>
<td>RUBELLA</td>
<td>47,745</td>
<td>6</td>
<td>&gt;99</td>
</tr>
<tr>
<td>CRS</td>
<td>152</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>HFLU</td>
<td>20,000 (EST)</td>
<td>270</td>
<td>99</td>
</tr>
<tr>
<td>SMALL POX</td>
<td>29,005</td>
<td>0</td>
<td>100</td>
</tr>
</tbody>
</table>
VACCINE REFUSAL

Love them. Protect them. *Never inject them.*
There are NO safe vaccines!

Shaken Baby Syndrome
Chronic Ear Infections
Death
SIDS
Seizures
ADD
Allergies
Asthma
Autism
Diabetes
Meningitis

and polio are caused by adverse reactions to vaccine poisons.

Go to: VaccineTruth.com
or call Vaccination Liberation: 1-888-249-1421

AUTISM SCIENCE DIGEST
The Journal of AutismOne

JENNY MCCARTHY
ON THE AUTISM GENERATION RESCUE CONFERENCE
HOW BIG IS THE PROBLEM?

• Diekama 2005 (AAP Surveys)
  – 7/10 pediatricians experienced refusal on an immunization in the last 12 months
  – MMR #1 refused vaccine
  – 4% pediatricians reported refusing an immunization for their own children
HOW BIG IS THE PROBLEM?

• National Immunization Survey 2003-2004
  – 6% parents have refused a vaccine
  – 85% pediatricians have had a parent refuse all or some vaccines in the last 12 months
  – 13% parents delayed a vaccine

• National Immunization Survey 2010
  – 1% refuse ALL vaccines
HOW BIG IS THE PROBLEM?

- Kansas AAP Immunization Survey 2012
  - 88% members have had parent refuse a vaccine
  - 96% members have had a parent ask to delay or alter vaccine schedule
  - 64% members have 1-5% parents refuse all vaccines

SOURCE: KAAP IMMUNIZATIONSURVEY 2012
HESITANCY vs. REFUSAL

• Acceptance group
  – 70%
  – Interested in vaccine information
  – High trust level

• Hesitant group
  – 30%
  – Interested in vaccine information
  – Want to trust

• Anti-vaccine group
  – 1%
  – NO Interest in vaccine information
  – NO trust

SOURCE: OPEL 2012
DEMOGRAPHICS

- White
- Female
- 30 years of age or older
- More than 1 child
- Higher income
- More educated

SOURCE: OPEL 2012
PARENTAL CONCERNS

- Too Many: 36%
- Autism: 30%
- Fevers: 30%
- Unsafe ingredients: 25%
- Not tested enough: 15%
- Causes the disease: 15%

SOURCE: OPEL 2012
PARENTAL CONCERNS

• Gellin 2000
  – Too many vaccines
  – Vaccines may weaken the immune system

• National Immunization Survey 2009
  – Worried about safety
  – Serious side effects
  – Too many vaccines overwhelm the immune system
PARENTAL CONCERNS

• KAAP Immunization Survey
• Top Parental concerns
  – Serious side effects
  – Too many shots
  – Autism
  – Lack trust in Public Health/Government
COMMON DENOMINATOR

Seth Mnookin

THE PANIC VIRUS

A True Story of Medicine, Science, and Fear
FEAR

- Consumerism
- Vaccine success
- Lack of trust in public health/government
- Lack of trust in science
- Alternative medicine
- Media
- Misinformation
WHO CAN BE CONVINCED?

- Halperin - 5 groups vaccine hesitant parents
  - Uninformed but correctable
  - Misinformed but correctable
  - Well read and open minded
  - Content and Convinced
  - Committed and missionary

SOURCE: HEALY, PICKERING
WHAT CHANGES PARENTS MINDS?

• Health Care Provider
  – Most important Source
  – “Firing” patients
• More information
  – Handouts
  – Web site
  – IOM Report questions effectiveness of these

SOURCE: OPEL 2012
MESSAGING

• Message
  – Evidence from CDC on MMR and Autism
  – Text information from VIS
  – Images of children with diseases
  – Dramatic narrative from fact sheet

• Result
  – Corrected misconception- no change in refusal
  – No change
  – Increase concerns about autism from vaccines

SOURCE: NYHAN et.al., Pediatrics, April 2014
WHAT CHANGES PARENTS MINDS?

• Health Styles Survey 2009
  – 82% reported health care provider most trusted source of vaccine information
  – 79% reported vaccines were important
  – 79% vaccines were safe

Kennedy et.al, Pediatrics 2011
TALKING TIPS

• The parent wants what is best for the child
• Understand this is an emotional issue
• Make sure you know which “fear” the parent has
• Don’t assume scientific evidence is understood or very effective
• Understand the importance of anecdotes
TALKING TIPS

• Listen
• Take time
• Welcome questions
• Don’t interrupt
• Don’t be offended
• Don’t be judgmental
• Be honest
• Correct misconceptions/Provide information
• Speak without using medical jargon
• Respect parental authority
TALKING TIPS

• Participatory vs. Presumptive Initiative

  • Participatory
    – Are we going to do shots?

  • Presumptive Initiative
    – We will do 3 shots today is that ok?

• Aggressive pursuit
  – Toll on providers
AUTISM

• MMR
  – Wakefield
  – National Vaccine Compensation Program Rulings

• Thimerosal
  – Danish Studies
  – Has been removed from vaccines since 2001

• 2004 IOM Study
TOO MANY SHOTS

- Average child exposed to 2000-6000 antigens daily
- 1990 Vaccine antigen load was 10,000
- Current total antigen exposure for TOTAL vaccines to age 2 is 315
ALTERNATE SCHEDULES

• Born out of concern about too many vaccines
• Popularized by Dr. Bob Sears book
• Based on misinformation
• No scientific evidence of a benefit
“In this most comprehensive examination of the immunization schedule to date, the IOM committee uncovered no evidence of major safety concerns associated with adherence to the childhood immunization schedule, which should help to reassure a diverse group of stakeholders.”

Indeed, rather than exposing children to harm, following the complete childhood immunization schedule is strongly associated with reducing vaccine-preventable diseases.”
# Adolescent Immunizations

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Kansas</th>
<th>US average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tdap</td>
<td>92.2%</td>
<td>84.6%</td>
</tr>
<tr>
<td>Meningococcal</td>
<td>55.9%</td>
<td>74%</td>
</tr>
<tr>
<td>HPV#1</td>
<td>42.7%</td>
<td>53.8%</td>
</tr>
<tr>
<td>HPV#2</td>
<td>32.8%</td>
<td>43.4%</td>
</tr>
<tr>
<td>HPV#3</td>
<td>25.1%</td>
<td>33.4%</td>
</tr>
</tbody>
</table>
ADOLESCENT VACCINE REFUSAL

- National Immunization Survey 2008-2010
- Reasons parental refusal Tdap and Menactra
  - Not recommended
  - Not necessary
  - Lack of knowledge
  - Don’t know

Darden et al. Pediatrics 2013
HPV HESITANCY

• Reasons parental refusal
  – Vaccine not needed
  – Lack of knowledge
  – Daughter not sexually active
  – Safety of vaccine

MMWR, 2013
## PROVIDER RECOMMENDATION

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tdap</td>
<td>46.9%</td>
<td>50.0%</td>
</tr>
<tr>
<td>Menactra</td>
<td>28.6%</td>
<td>35.8%</td>
</tr>
<tr>
<td>HPV</td>
<td>46.8%</td>
<td>52.4%</td>
</tr>
</tbody>
</table>

Darden et.al. Pediatrics 2013
PERCEIVED PROVIDER BARRIERS

- Concerns about financing issues
- Concerns about parental attitudes
- Logistical difficulties
- Safety of HPV vaccine
- Uncertainty of the need
OTHER FACTORS

• Infrequent preventative care visits
• School entry requirements
VACCINE REFUSAL

• 2% of children
• Not likely to change parental decision
• Provider decision
  – “Fire” the patient and family
  – Continue to see them and continue discussion
VACCINE REFUSAL

- KAAP Immunization Survey
- Percent ask patients to leave practice
  - Refuse all immunizations-16%
  - Refuse some immunizations- 3%
VACCINE REFUSAL

• Reasons to “fire” patient
  – Protection of other patients
  – Parent- provider trust concerns
  – Standard of Care
  – Documentation

• AAP, AAFP, AMA positions
SUMMARY

• Vaccine refusal and hesitancy is a growing problem
• Poses a public health problem
• Poses individual health problem
• Can result in significant financial burden
• Providers caught in the middle
“The committee identified a need for further study of parental attitudes and concerns about immunization. Based on the committee’s review of the literature and public testimony, the committee strongly endorses research to understand parents’ knowledge, beliefs, and concerns about vaccines and vaccine-preventable diseases, which is a key component of the 2010 National Vaccine Plan.”

“all health care providers who immunize children should receive training in communication with the goal of improving provider-parent communication of immunization issues”
Resources

• KAAP Survey. Vaccine Hesitancy and Avoidance. 2012