Past and Present Trends in Vaccine Refusal

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Objectives

• Discuss past trends in vaccine refusal and how they relate to current opposition.
• Describe common concerns regarding vaccination and what the science says about these concerns.
Vaccinerd Trivia

• When you see 🎧, there will be a trivia question.
• If you know the answer, please raise your hand.
• If you answer correctly, you get a prize!
Estimated percentage of children enrolled in kindergarten who have been exempted from receiving one or more vaccines* and with <90% coverage with 2 doses of measles, mumps, and rubella (MMR) vaccine — United States, 2013–14 school year
K-12th Grade Students With Personal Belief Exemptions, Texas, 2003-2013

Source: Texas Department of State Health Services
A little history ...
“We’ll turn into cows!”

- Opponents to vaccination have been around as long as vaccines have.
- In Britain in 1853, vaccination against smallpox was required for all small children.
- This was met with resistance.

Source: http://www.historyofvaccines.org/content/articles/history-anti-vaccination-movements; Deadly Choices by Dr. Paul Offit
Vaccination Mandates

• Throughout the 19th century, that anti-vaccine sentiment made its way to the U.S.
• Smallpox outbreaks spurred vaccination mandates as well as anti-vaccine groups.
• Jacobson vs. Massachusetts, 1905
  – Ruled that the state could mandate vaccination in order to protect the public from communicable disease.

Source: http://www.historyofvaccines.org/content/articles/history-anti-vaccination-movements; Deadly Choices by Dr. Paul Offit
DPT/Brain Damage Scare

- **DPT: Vaccine Roulette**
  - Aired on April 19, 1982
  - Asserted that the Diphtheria, Tetanus and Pertussis (DTP) vaccine caused brain damage.
  - Thousands of parents decided not to vaccinate against whooping cough.

Source: [http://www.historyofvaccines.org/content/articles/history-anti-vaccination-movements](http://www.historyofvaccines.org/content/articles/history-anti-vaccination-movements); Deadly Choices by Dr. Paul Offit
MMR vs. Autism

• Andrew Wakefield’s Study
  – Asserted that the MMR vaccine caused autism.
  – Media seized on the article.
  – Led to a decrease in vaccination against MMR.

Source: http://www.historyofvaccines.org/content/articles/history-anti-vaccination-movements; Deadly Choices by Dr. Paul Offit
“Green our Vaccines”

• “Green our Vaccines”
  – Movement to remove “toxins” from vaccines.
  – Purports vaccine ingredients are harmful.

Source: http://www.historyofvaccines.org/content/articles/history-anti-vaccination-movements; Deadly Choices by Dr. Paul Offit
“Green our Vaccines”

- **Mercury**
  - Ethyl mercury vs. methyl mercury

- **Aluminum**
  - 3\textsuperscript{rd} most abundant element on the planet

- **Formaldehyde**
  - Natural byproduct of metabolism

Source: [http://www.historyofvaccines.org/content/articles/history-anti-vaccination-movements; Deadly Choices by Dr. Paul Offit](http://www.historyofvaccines.org/content/articles/history-anti-vaccination-movements; Deadly Choices by Dr. Paul Offit)
“Too Many, Too Soon” & Alternative Schedules

• Belief that too many vaccines can “overload” the immune system.

• Dr. Bob Sears proposed an alternative schedule in his book *The Vaccine Book*. 

Source: http://www.historyofvaccines.org/content/articles/history-anti-vaccination-movements; Deadly Choices by Dr. Paul Offit
"To be perfectly clear, there is no ‘alternative’ immunization schedule. Delaying vaccines only leaves a child at risk of disease for a longer period of time ... it does not make vaccinating safer. There is no alternative if you want the optimal protection for your child."

- Sandra G. Hassink, MD, FAAP, President of the American Academy of Pediatrics

Source: “An Important Immunization Message from the President of the AAP,” healthychildren.org
“More harm than good”

Opponents to vaccination often make claims based on misinformation, or a misunderstanding of the biochemistry and context of vaccine ingredients.

Scientific consensus DOES NOT support them.

- PREVALENCE of CHILDHOOD INFECTIOUS DISEASES:
  - measles, mumps, polio, whooping cough, diphtheria, rubella, smallpox, meningitis

- RISKS ASSOCIATED WITH VACCINATION:
  - autoimmune disease
  - cancer
  - asthma
  - allergies
  - heavy metal toxicity
  - brain damage
  - learning delays
  - autism spectrum disorders

www.immunizeUSA.org
“More harm than good”
Why are we still talking about this?

- Passion and conviction
- Distrust of industry
- Controversy bias in Media
- “University of Google”
- Perception of legitimacy:
  - National Vaccine Information Center
  - Sympathetic doctors/nurses
- Word of mouth
Why are we still talking about this?

• But also...
  – “Science” speak
  – Lack of emotional appeal when talking about vaccines
  – Dismissal of vaccine-refusers
  – Fear of conflict
  – Limited time with patients
Summary

• Vaccine opposition has been around for as long as vaccines have.
• Competing voices can confuse or misguide patients and parents.
• Science is on your side. Vaccines are safe and effective.
Questions?

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