



Tdap: Understanding and Implementing Perinatal Prevention Strategies

Erin E. Tracy, M.D., M.P.H.
19th Annual Massachusetts Adult
Immunization Conference
20 May 2014



No disclosures

*Except I'm an
Obstetrician/Gynecologist*



Presenter Disclosure Information

Consultant	No relevant conflicts of interest to declare or relevant conflict
Grant Research/Support	No relevant conflicts of interest to declare or relevant conflict
Speaker's Bureau	No relevant conflicts of interest to declare or relevant conflict
Major Stockholder	No relevant conflicts of interest to declare or relevant conflict
Other Financial or Material Interest	No relevant conflicts of interest to declare or relevant conflict
Off Label Use of Vaccines	Will be discussed, but in accordance with current ACIP recommendations



The American College of Obstetricians and Gynecologists

March 30, 2011

The College has launched a new immunization website for ob-gyns and patients immunizationforwomen.org. The website features pertinent information for ob-gyns and adult and adolescent women, including pregnancy, on:

- Seasonal influenza (flu) and other vaccine-preventable diseases
- Safety of vaccines
- Practice management such as how to set-up an immunization program in your office
- Immunization coding for ob-gyns
- FAQs
- Resources for ob-gyns and patients
- Special populations such as breastfeeding and pregnant women
- Continuing education
- Alerts and other updates
- Surveys and research

Visit the website at www.immunizationforwomen.org or use the widget at www.acog.org



<http://www.cdc.gov/pertussis/images/pertussis-baby-one-lg.jpg> 1/9/14



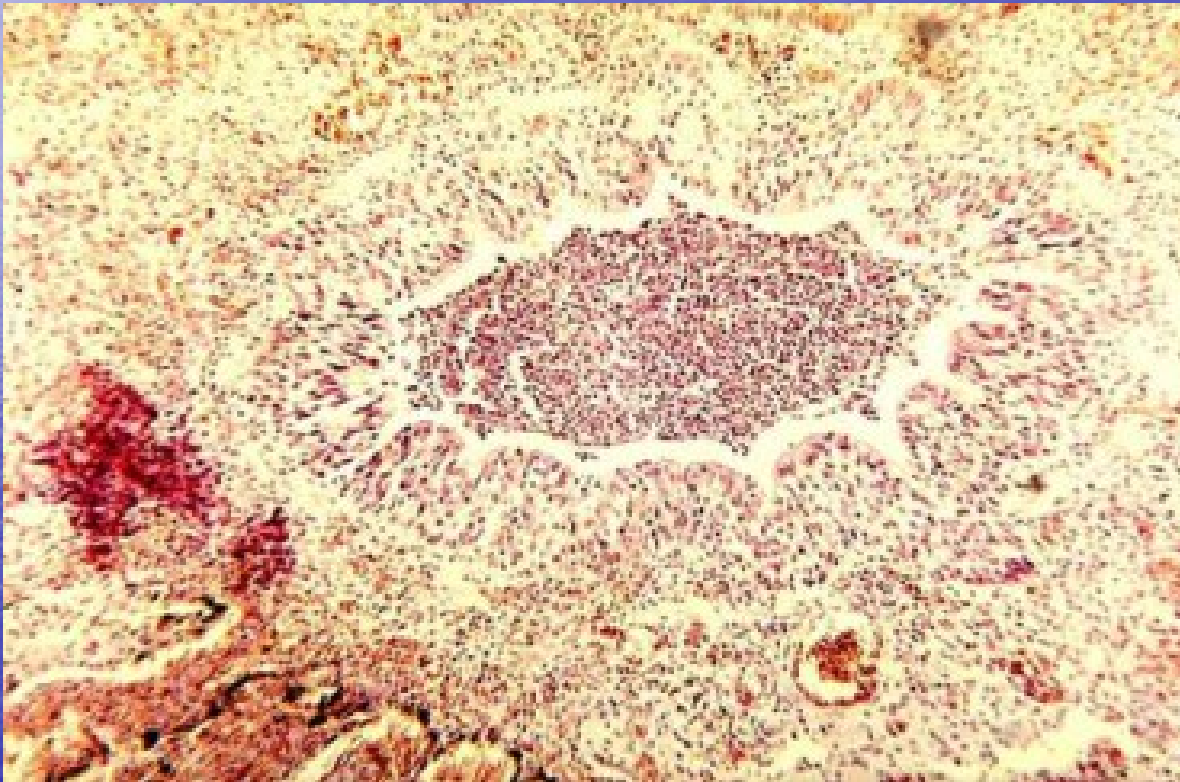
<http://www.cdc.gov/pertussis/images/pertussis-baby-two-lg.jpg> 1/9/14

On ECMO



<http://www.cdc.gov/pertussis/images/pertusree-lg.jpsis-baby-thg> 1/9/14

Bronchiolar Plugging In Neonate With Pertussis Pneumonia



<http://www.vaccineinformation.org/photos/pertaap001.jpg>

ALL THE BEST FOR YOUR FAMILY

Cookie

39

**GREAT
BACK-TO-
SCHOOL
LOOKS**

from just \$7

P. 64, P. 128, P. 144

**The Right
Preschool for
Your Child**

P. 116

**THE EASIEST
WEEKNIGHT
DINNER PLAN**

P. 88

**Workforce
Re-entry 101**

P. 152

PLUS

Fall makeup trends,
kids' haircuts,
new nursery gear, and more

**JENNY
McCARTHY**

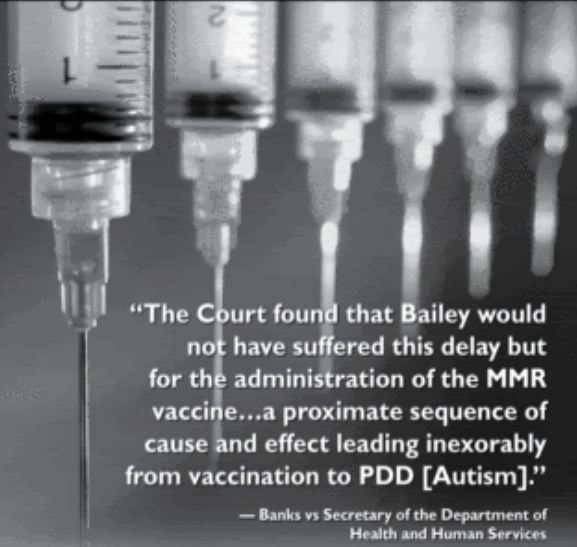
sets the record
straight on
the vaccination
debate

P. 138

imnotobsessed.com



Good Morning America



"The Court found that Bailey would not have suffered this delay but for the administration of the MMR vaccine...a proximate sequence of cause and effect leading inexorably from vaccination to PDD [Autism]."

— Banks vs Secretary of the Department of Health and Human Services

A Little Boy Shouldn't Have to Take on an Entire Industry Alone

Court Again Concedes Vaccines Cause Autism

This week, in a *Huffington Post* exclusive, Robert F. Kennedy Jr. and investigative journalist David Kirby reveal that in the recent case of *Bailey Banks vs HHS*, the Vaccine Court has ruled vaccines caused Bailey's autism and ordered compensation for his family.

Banks is the second case where the government could not deny the overwhelming evidence showing vaccines caused a child's autism. The first was the case of *Hannah Poling* in March 2008. The government conceded the case and awarded her family compensation.

Small victories for these children, but what about the hundreds of thousands of other families struggling with autism? Who and what can they believe in this continuing vaccine-autism controversy?

Congress, at the urging of the pharmaceutical industry, created the mysterious Vaccine Court in 1986, which has not only protected vaccine makers from liability but also led to a tripling in the number of vaccines given to our children.

Why does the Vaccine Court exist? Why are the rulings in favor of the children being suppressed? Where is the justice for these parents?

In this new era of government accountability and transparency, the one in 64 American families dealing with autism deserve more. **It's time the government told the truth about childhood vaccines.**

GENERATION RESCUE

www.generationrescue.org

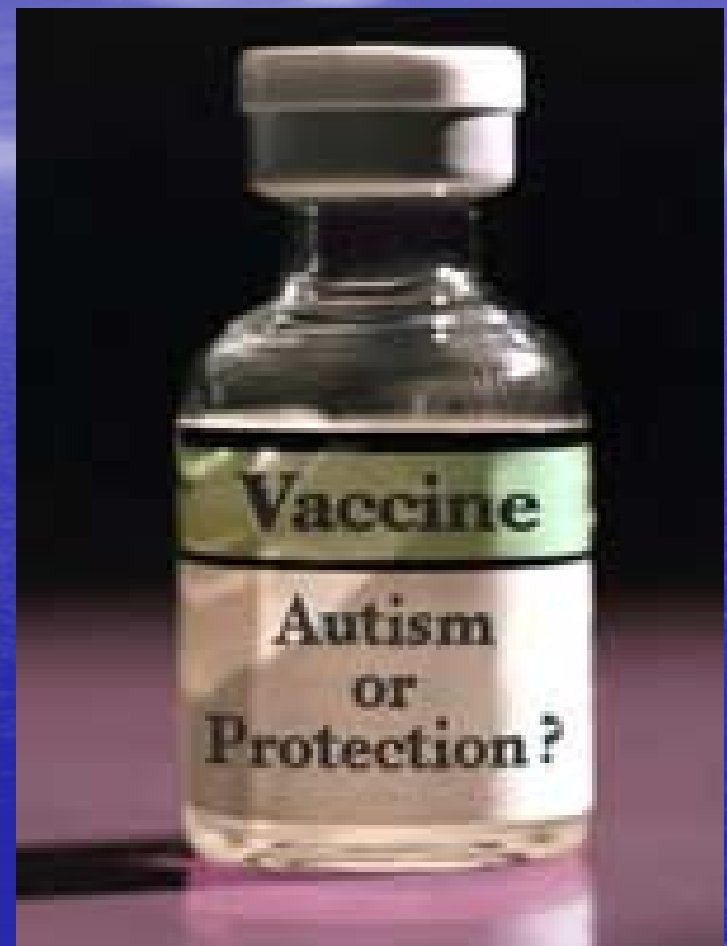
For a complete copy of the Vaccine Court's ruling in *Banks vs HHS*, check out the Age of Autism blog: www.ageofautism.com

We want to thank Jon Corry and Jenny McCarthy for their generous support of Generation Rescue and their repudiating commitment to solving the growing challenges of autism.









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

Evidence re MMR Vax & Autism

<http://www.immunize.org/catg.d/p4026.pdf>

- Feb. 1998 *Lancet* "Ileal-Lymphoid-Nodular Hyperplasia, Non-Specific Colitis, and Pervasive Developmental Disorder in Children"
- 2004 *Lancet* retraction (10 of 13 authors)
- As of 2008: 25 articles refute link (vs3)

25 studies that refute a connection between MMR vaccine and the development of autism

25. *Lack of Association between Measles Virus Vaccine and Autism with Enteropathy: A Case-Control Study*. Hornig M et al. PLoS ONE 2008; 3(9): e3140 doi:10.1371/journal.pone.0003140 *Subjects: 25 children with autism and GI disturbances and 13 children with GI disturbances alone (controls)
24. *Measles Vaccination and Antibody Response in Autism Spectrum Disorders*. Baird G et al. Arch Dis Child 2008; 93(10):832-7. Subjects: 98 vaccinated children aged 10-12 years in the UK with autism spectrum disorder (ASD); two control groups of similar age: 52 children with special educational needs but no ASD and 90 children in the typically developing group
23. *MMR-Vaccine and Regression in Autism Spectrum Disorders: Negative Results Presented from Japan*. Uchiyama T et al. J Autism Dev Disord 2007; 37(2):210-7 *Subjects: 904 children with autism spectrum disorder (Note: MMR was used in Japan only between 1989 and 1993.)
22. *No Evidence of Persisting Measles Virus in Peripheral Blood Mononuclear Cells from Children with Autism Spectrum Disorder*. D'Souza Y et al. Pediatrics 2006; 118(4):1664-75 *Subjects: 54 children with autism spectrum disorder and 34 developmentally normal children
21. *Immunizations and Autism: A Review of the Literature*. Doja A, Roberts W. Can J Neurol Sci. 2006; 33(4):341-6 *Literature review
20. *Pervasive Developmental Disorders in Montreal, Quebec, Canada: Prevalence and Links with Immunizations*. Fombonne E et al. Pediatrics. 2006;118(1):e139-50 *Subjects: 27,749 children born from 1987 to 1998 attending 55 schools
19. *Relationship between MMR Vaccine and Autism*. Klein KC, Diehl EB. Ann Pharmacother. 2004; 38(7-8):1297-300 *Literature review of 10 studies
18. *Immunization Safety Review: Vaccines and Autism*. Institute of Medicine. The National Academies Press: 2004 (www.nap.edu/books/030909237X/ html) *Literature review
17. *MMR Vaccination and Pervasive Developmental Disorders: A Case-Control Study*. Smeeth L et al. Lancet 2004; 364(9438):963-9 *Subjects: 1294 cases and 4469 controls
16. *Age at First Measles-Mumps-Rubella Vaccination in Children with Autism and School-Matched Control Subjects: A Population-Based Study in Metropolitan Atlanta*. DeStefano F et al. Pediatrics 2004; 113(2): 259-66 *Subjects: 624 children with autism and 1,824 controls
15. *Prevalence of Autism and Parentally Reported Triggers in a North East London Population*. Lingam R et al. Arch Dis Child 2003; 88(8):666-70 *Subjects: 567 children with autistic spectrum disorder
14. *Neurologic Disorders after Measles-Mumps-Rubella Vaccination*. Make- la A et al. Pediatrics 2002; 110:957-63 *Subjects: 535,544 children vaccinated between November 1982 and June 1986 in Finland
13. *A Population-Based Study of Measles, Mumps, and Rubella Vaccination and Autism*. Madsen KM et al. N Engl J Med 2002; 347(19):1477-82 *Subjects: All 537,303 children born 1/91-12/98 in Denmark
12. *Relation of Childhood Gastrointestinal Disorders to Autism: Nested Case Control Study Using Data from the UK General Practice Research Database*. Black C et al. BMJ 2002; 325:419-21 *Subjects: 96 children diagnosed with autism and 449 controls
11. *Measles, Mumps, and Rubella Vaccination and Bowel Problems or Developmental Regression in Children with Autism: Population Study*. Taylor B et al. BMJ 2002; 324(7334):393-6 *Subjects: 278 children with core autism and 195 with atypical autism
10. *No Evidence for a New Variant of Measles-Mumps-Rubella-Induced Autism*. Fombonne E et al. Pediatrics 2001;108(4):E58 *Subjects: 262 autistic children (pre- and post-MMR samples)

9. *Measles-Mumps-Rubella and Other Measles-Containing Vaccines Do Not Increase the Risk for Inflammatory Bowel Disease: A Case-Control Study from the Vaccine Safety Datalink Project.* Davis RL et al. Arch Pediatr Adolesc Med 2001;155(3):354-9 *Subjects: 155 persons with IBD with up to 5 controls each
8. *Time Trends in Autism and in MMR Immunization Coverage in California.* Dales L et al. JAMA 2001; 285(9):1183-5 *Subjects: Children born in 1980-94 who were enrolled in California kindergartens (survey samples of 600–1,900 children each year)
7. *Mumps, Measles, and Rubella Vaccine and the Incidence of Autism Recorded by General Practitioners: A Time Trend Analysis.* Kaye JA et al. BMJ 2001; 322:460-63 *Subjects: 305 children with autism
6. *Further Evidence of the Absence of Measles Virus Genome Sequence in Full Thickness Intestinal Specimens from Patients with Crohn's Disease.* Afzal MA, et al. J Med Virol 2000; 62(3):377-82 *Subjects: Specimens from patients with Crohn's disease
5. *Autism and Measles, Mumps, and Rubella Vaccine: No Epidemiological Evidence for a Causal Association.* Taylor B et al. Lancet 1999;353 (9169):2026-9 *Subjects: 498 children with autism
4. *Absence of Detectable Measles Virus Genome Sequence in Inflammatory Bowel Disease Tissues and Peripheral Blood Lymphocytes.* Afzal MA et al. J Med Virol 1998; 55(3):243-9 *Subjects: 93 colonoscopic biopsies and 31 peripheral blood lymphocyte preparations
3. *No Evidence for Measles, Mumps, and Rubella Vaccine-Associated Inflammatory Bowel Disease or Autism in a 14-year Prospective Study.* Peltola H et al. Lancet 1998; 351:1327-8 *Subjects: 3,000,000 doses of MMR vaccine
2. *Exposure to Measles in Utero and Crohn's Disease: Danish Register Study.* Nielsen LL et al. BMJ 1998; 316(7126):196-7 *Subjects: 472 women with measles
1. *Immunocytochemical Evidence of Listeria, Escherichia coli, and Streptococcus Antigens in Crohn's Disease.* Liu Y et al. Gastroenterology 1995; 108(5):1396-1404 *Subjects: Intestines and mesenteric lymph node specimens from 21 persons from families with a high frequency of Crohn's disease

3 studies that suggested a connection between MMR vaccine and the development of autism

3. *Potential Viral Pathogenic Mechanism for a New Variant Inflammatory Bowel Disease.* Uhlmann V et al. Mol Pathol 2002; 55(2):84-90 *Subjects: 91 patients with a confirmed diagnosis of ileal lymphonodular hyperplasia and enterocolitis and 70 controls

★ Read about limitations of this study:

www.cdc.gov/vaccinesafety/concerns/mmr_autism_factsheet.htm

2. *Ileal-Lymphoid-Nodular Hyperplasia, Non-Specific Colitis, and Pervasive Developmental Disorder in Children.* Wakefield AJ et al. Lancet 1998; 351(9103):637-41 *Subjects: 12 children with chronic enterocolitis and regressive developmental disorder

★ Read about limitations of this study:

www.immunize.org/catg.d/p2065.pdf

★ “A Statement by the Editors of the Lancet,” Lancet 2004; 363(9411):820-1, regarding this paper and an undisclosed potential conflict of interest: [www.thelancet.com/journals/lancet/article/PIIS0140-6736\(04\)15699-7/fulltext](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(04)15699-7/fulltext)

★ “Retraction of an Interpretation,” Lancet 2004; 363(9411):750

Go to www.thelancet.com and register (no charge) to access this article.

1. *Evidence of Persistent Measles Virus Infection in Crohn's Disease.* Wakefield AJ et al. J Med Virol 1993; 39(4):345-53 *Subjects: Electron microscopy specimens from Crohn's disease and control patients

★ The validity of this finding has been called into question when it could not be reproduced by other researchers (Nielsen et al., Jones et al., Feeney et al., Hermon-Taylor, Liu et al., Haga, Iizuka, Afzal).

Thimerosal

- Ethylmercury
 - Broken down much more quickly than methylmercury
 - Quickly eliminated metab as ethylmercury and thiosalicylate
- In multidose vaccines
 - To prevent bacterial and fungal growth

TABLE. Number and percentage of reported measles cases among U.S. residents (N = 59), by age group and vaccination status — United States, January 1–April 25, 2008

Age group	Vaccination status								Total		
	Unvaccinated					Vaccinated with 2 doses		Unknown			
	Too young	Born before 1957	Nonmedical exemption*	Reason unknown	Missed opportunity						
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)			
<12 mos	13 (22.0) [†]	—	—	—	—	—	—	—	13 (22.0)		
12–15 mos	—	—	0	6 (10.2) [§]	—	—	1 (1.7)	7 (11.9)			
16 mos–4 yrs	—	—	4 (6.8)	2 (3.4)	5 (8.5) [¶]	—	0	11 (18.7)			
5–19 yrs	—	—	10 (16.9)	0	0	0	0	10 (16.9)			
20–49 yrs	—	—	2 (3.4)	1 (1.7)	0	1 (1.7)	12 (20.3) ^{**††}	16 (27.1)			
≥50 yrs	—	1 (1.7)	0	0	0	0	1 (1.7)	2 (3.4)			
Total	13 (22.0)	1 (1.7)	16 (27.1)	9 (15.3)	5 (8.5)	1 (1.7)	14 (23.7)	59 (100.0)			

* Persons who claimed exemption from vaccination because of religious or personal beliefs.

[†] One infant aged 7 months received a dose of measles, mumps, and rubella (MMR) vaccine (because of an accelerated vaccine schedule) the day before exposure.

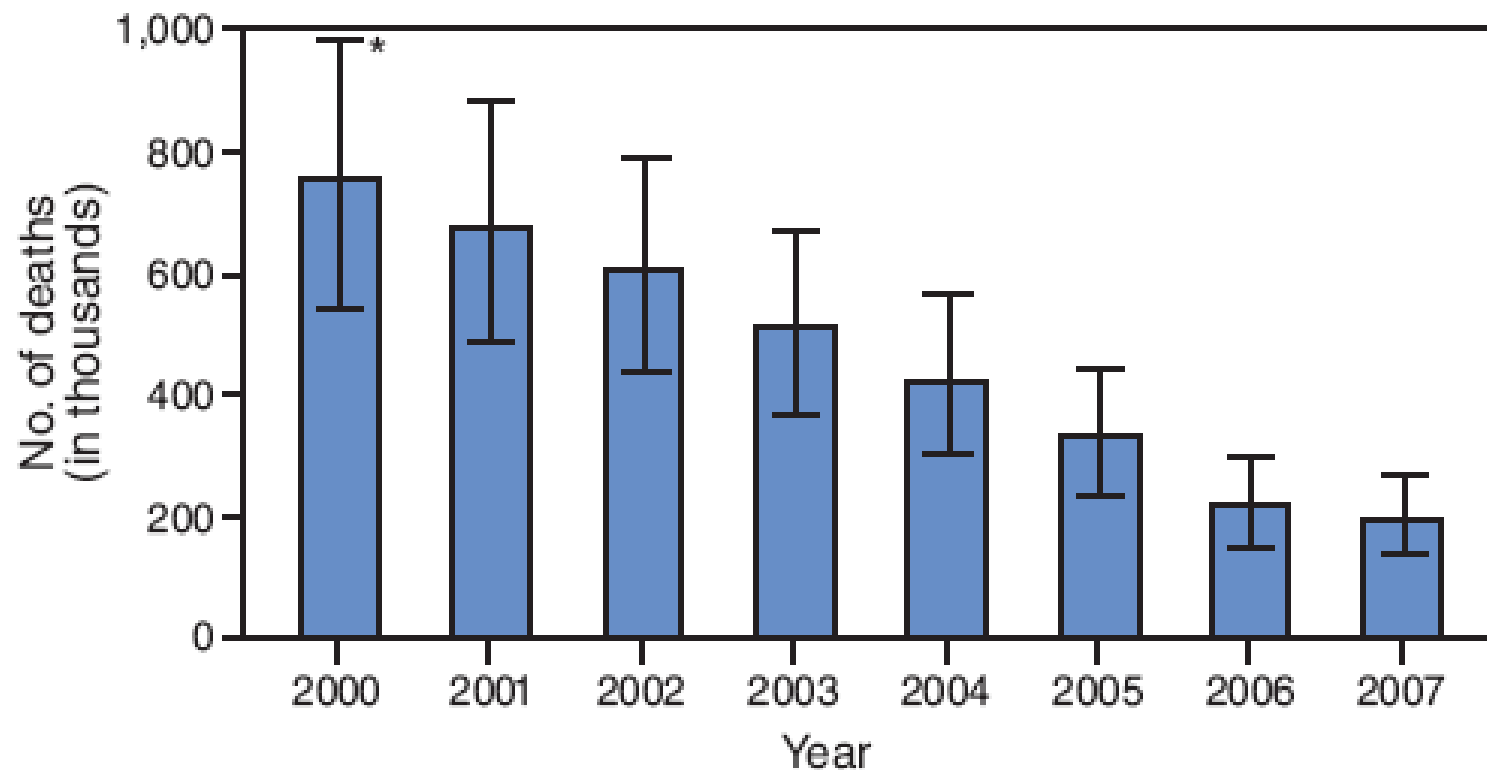
[§] One child aged 12 months received a routine MMR vaccine dose on the day of exposure in a physician's office.

[¶] One child aged 2 years, who was unvaccinated on the day of exposure, received a dose of MMR vaccine 6 days later; the delay was attributed to a parental request for single-antigen measles vaccine because of vaccine safety concerns.

^{**} Includes two self-reports of receipt of 1 or more doses of measles vaccine.

^{††} Two adults received postexposure MMR vaccine (one on the day of exposure and one on the day after exposure).

FIGURE. Estimated number of measles deaths — worldwide, 2000–2007



SOURCE: World Health Organization.

* 95% uncertainty interval. Based on Monte Carlo simulations that account for uncertainty in key input variables (i.e., vaccination coverage and case-fatality ratios).

Parental Refusal

Nonmedical Exemptions to School Immunization Requirements Secular Trends and Association of State Policies With Pertussis Incidence

Saad B. Omer, MBBS, MPH

William K. Y. Pan, DrPH, MS, MPH

Neal A. Halsey, MD

Shannon Stokley, MPH

Lawrence H. Moulton, PhD

Ann Marie Navar, MHS

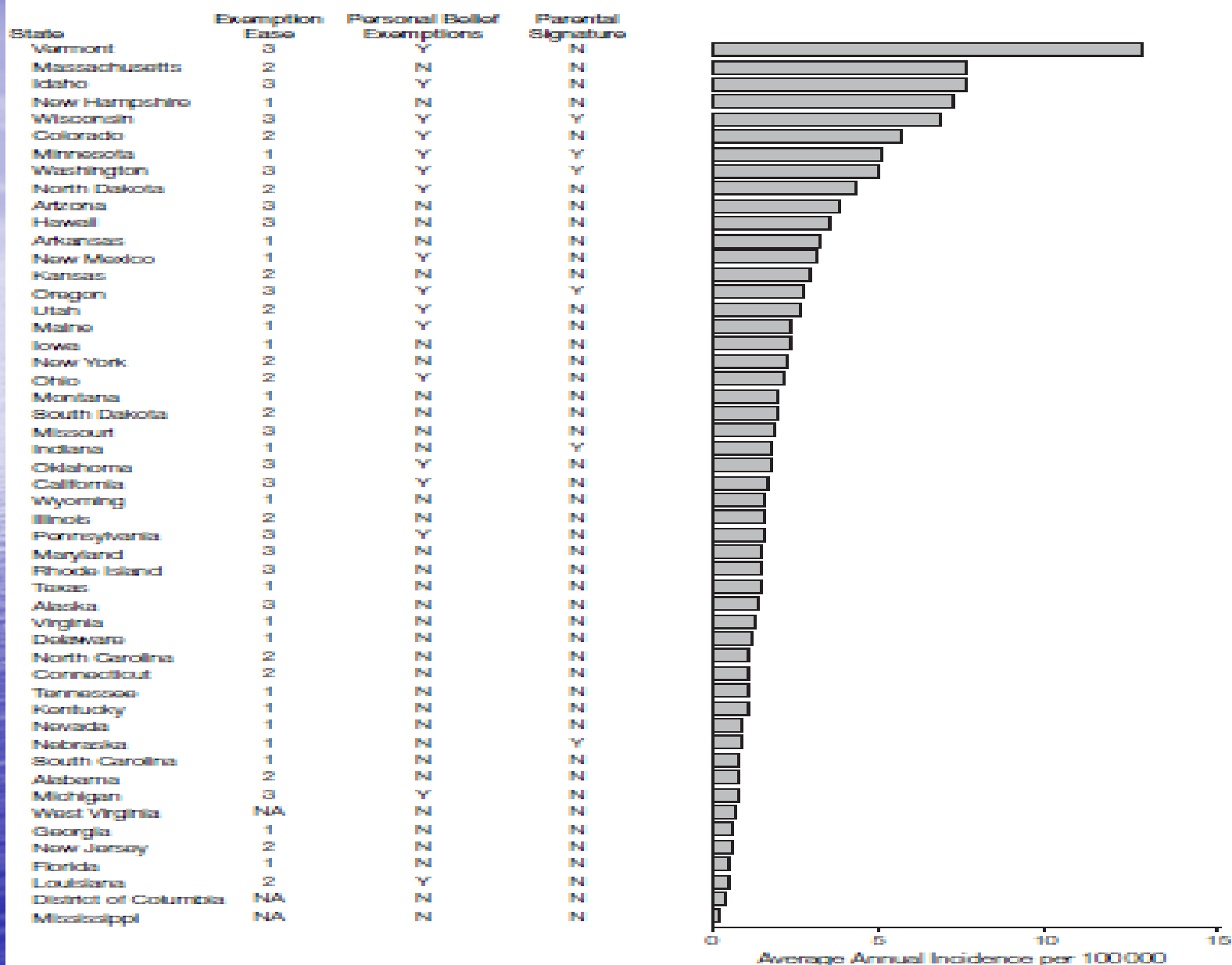
Mathew Pierce, JD, MPH

Daniel A. Salmon, PhD, MPH

Context School immunization requirements have played a major role in controlling vaccine-preventable diseases in the United States. Most states offer nonmedical exemptions to school requirements (religious or personal belief). Exemptors are at increased risk of acquiring and transmitting disease. The role of exemption policies may be especially important for pertussis, which is endemic in the United States.

Objective To determine if (1) the rates of nonmedical exemptions differ and have been increasing in states that offer only religious vs personal belief exemptions; (2) the rates of nonmedical exemptions differ and have been increasing in states that have easy vs medium and easy vs difficult processes for obtaining exemptions; and (3) pertussis incidence is associated with policies of granting personal belief exemptions, ease of obtaining exemptions, and acceptance of parental signature as sufficient proof of compliance with school immunization requirements.

Figure 3. Annual Reported Pertussis Incidence per 100 000



Mean annual reported pertussis incidence by state (1986–2004) among individuals aged 18 years or younger. Exemption ease descriptions: 1, difficult; 2, moderate; 3, easy. NA indicates not applicable: West Virginia and Mississippi do not offer nonmedical exemptions and the District of Columbia was not surveyed.

Maternal Physiology

- Minute ventilation increased (no change RR)
- Functional residual capacity decreased 10-25%
- Immune system modifications/ decreases:
 - Ab responses to soluble Ag
 - Cell-mediated cytotoxicity
 - Numbers of T-lymphocytes
 - Natural killer cell activity



Since 1997 both CDC and ACOG actively promoting flu vax

- 2006 only 14% of pregnant women received
(www.cdc.gov/flu/professionals/vaccination/pdf/vaccinetrend.pdf)
- CDC 2009 estimates, only 15.6% pregnant women vaccinated

http://www.cdc.gov/flu/professionals/pdf/influenza_vaccine_target_populations.pdf

Geneva study

(S Harbarth et al. *Infect Control Hosp Epidemiol* 1998)

- Only 10% of health care providers vaccinated (2009 CDC 45%)
 - 32% immune systems would be effective
 - 23% low exposure risk
 - 19% concerns re efficacy

OB patient study

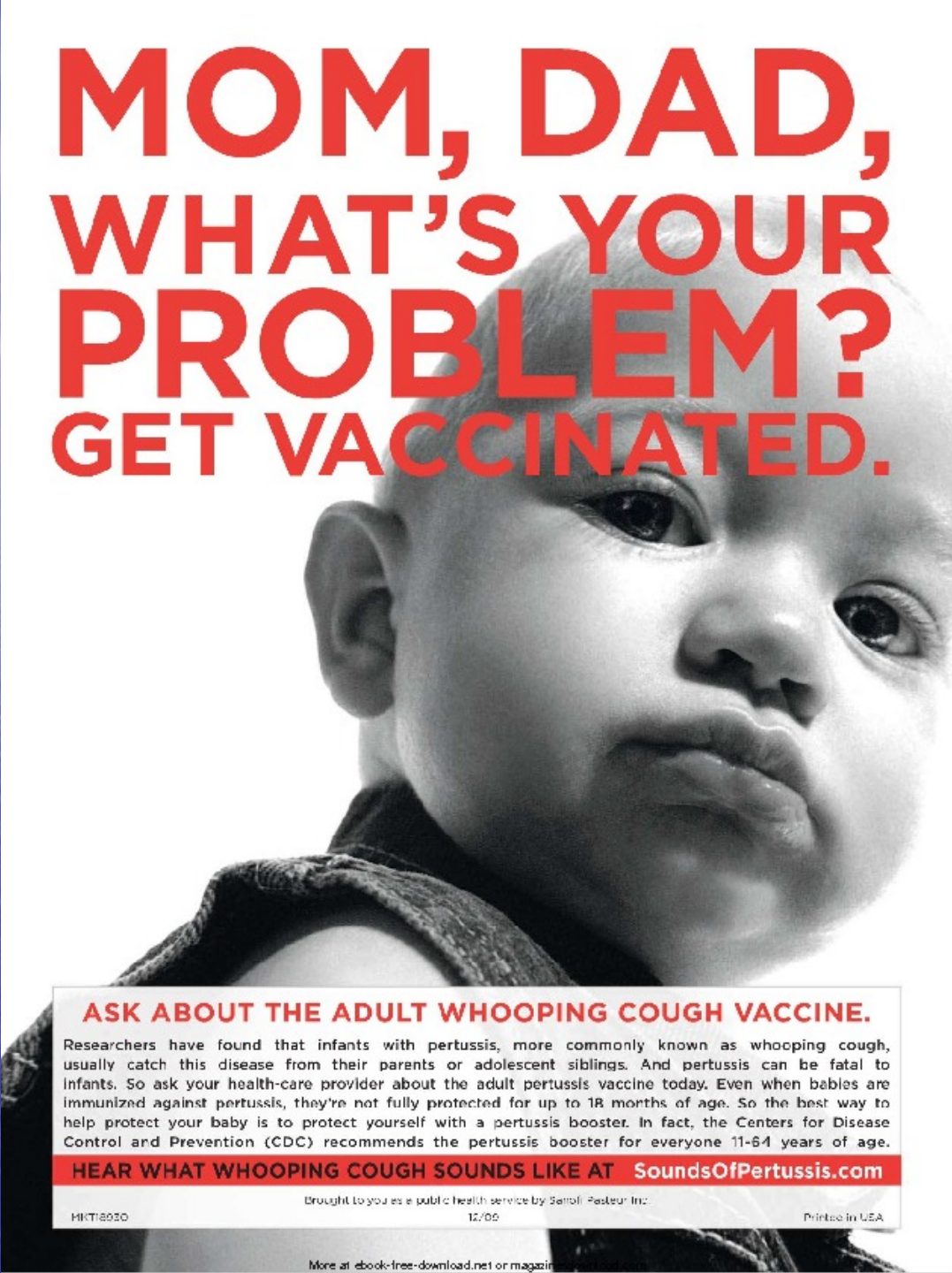
- 48% of 1458 pregnant women “probably or definitely” would not have H1N1 vaccination (S Bosley www.guardian.co.uk/society/2009/sep/01/swine-flu-vaccine-pregnant-pregnancy)

Quinn survey 1543 adults re H1N1 "new" treatments

- "outrage factors"
- Uncertainty, controllability, voluntariness, trust, dread, effects on children, media attention, benefits, familiarity..



MOM, DAD, WHAT'S YOUR PROBLEM? GET VACCINATED.



ASK ABOUT THE ADULT WHOOPING COUGH VACCINE.

Researchers have found that infants with pertussis, more commonly known as whooping cough, usually catch this disease from their parents or adolescent siblings. And pertussis can be fatal to infants. So ask your health-care provider about the adult pertussis vaccine today. Even when babies are immunized against pertussis, they're not fully protected for up to 18 months of age. So the best way to help protect your baby is to protect yourself with a pertussis booster. In fact, the Centers for Disease Control and Prevention (CDC) recommends the pertussis booster for everyone 11-64 years of age.

HEAR WHAT WHOOPING COUGH SOUNDS LIKE AT SoundsOfPertussis.com

ACOG and 8 other organizations call for Pertussis Vaccinations



American Academy
of Pediatrics



DEDICATED TO THE HEALTH OF ALL CHILDREN™

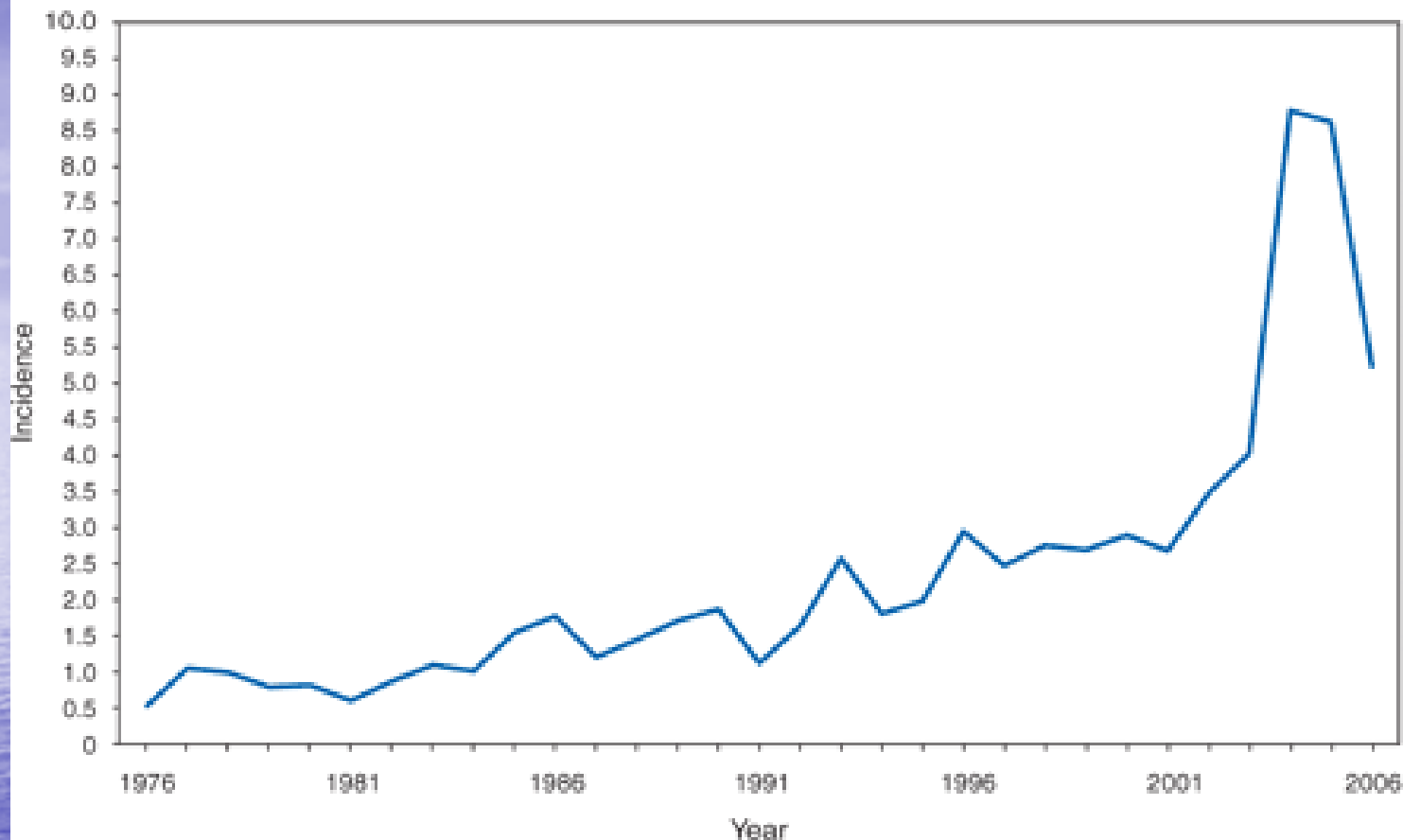


AMERICAN ACADEMY OF
FAMILY PHYSICIANS



The American College of
Obstetricians and Gynecologists
Women's Health Care Physicians

PERTUSSIS. Incidence,* by year — United States, 1976–2006

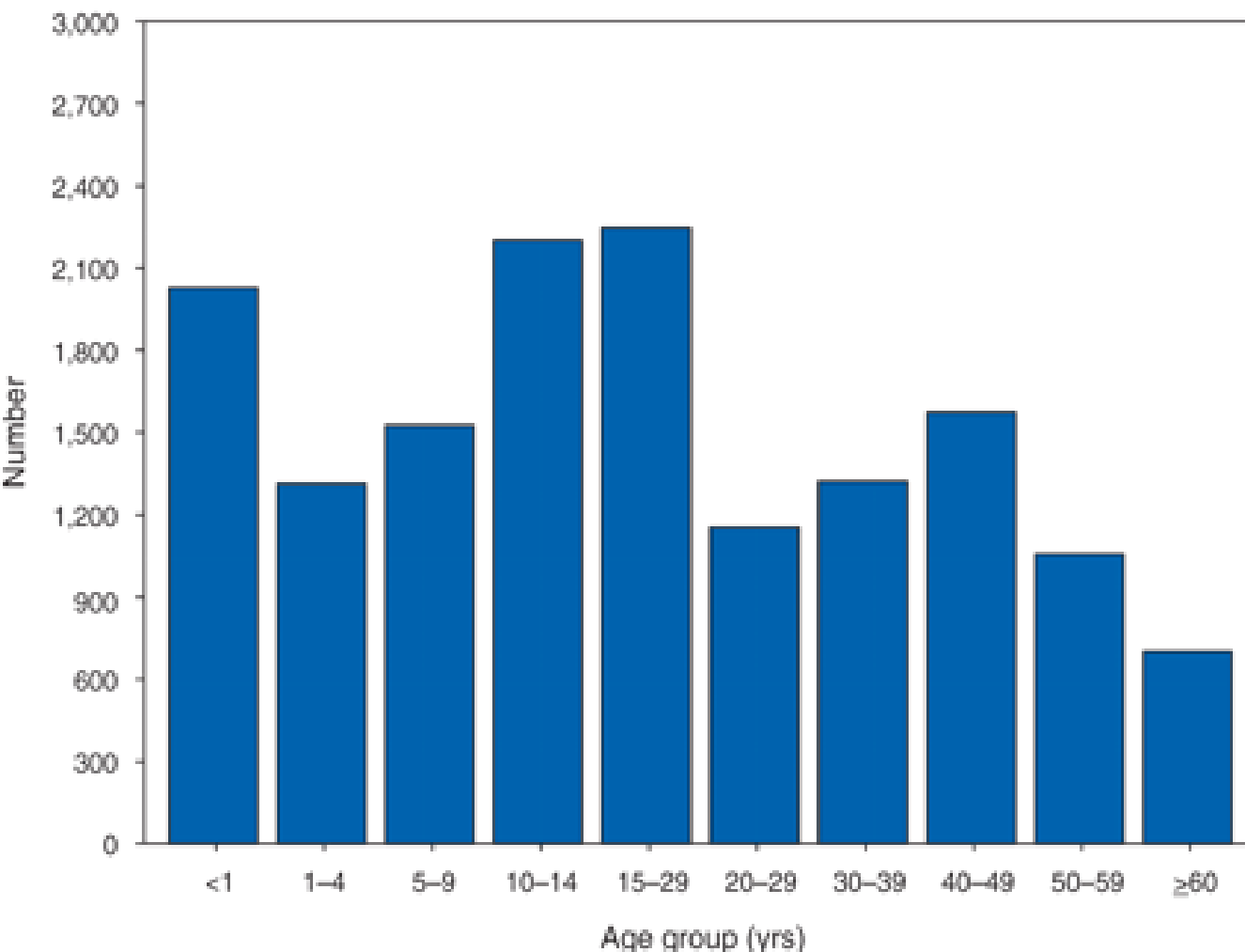


* Per 100,000 population.

In 2006, incidence of reported pertussis dropped sharply from the peak in 2004 but remains higher than in the 1990s. Reasons for this decrease are unknown, but several statewide outbreaks of pertussis contributed reported cases in 2004 and 2005, but not in 2006. Use of tetanus and diphtheria toxoids, acellular pertussis vaccine (Tdap) among adolescents and adults is not likely to have contributed to decreased pertussis reports because coverage with Tdap was low in 2006, the year adolescent and adult recommendations were published.

Pertussis (Whooping Cough) Pertussis Incidence/Yr, U.S., 1976-2006

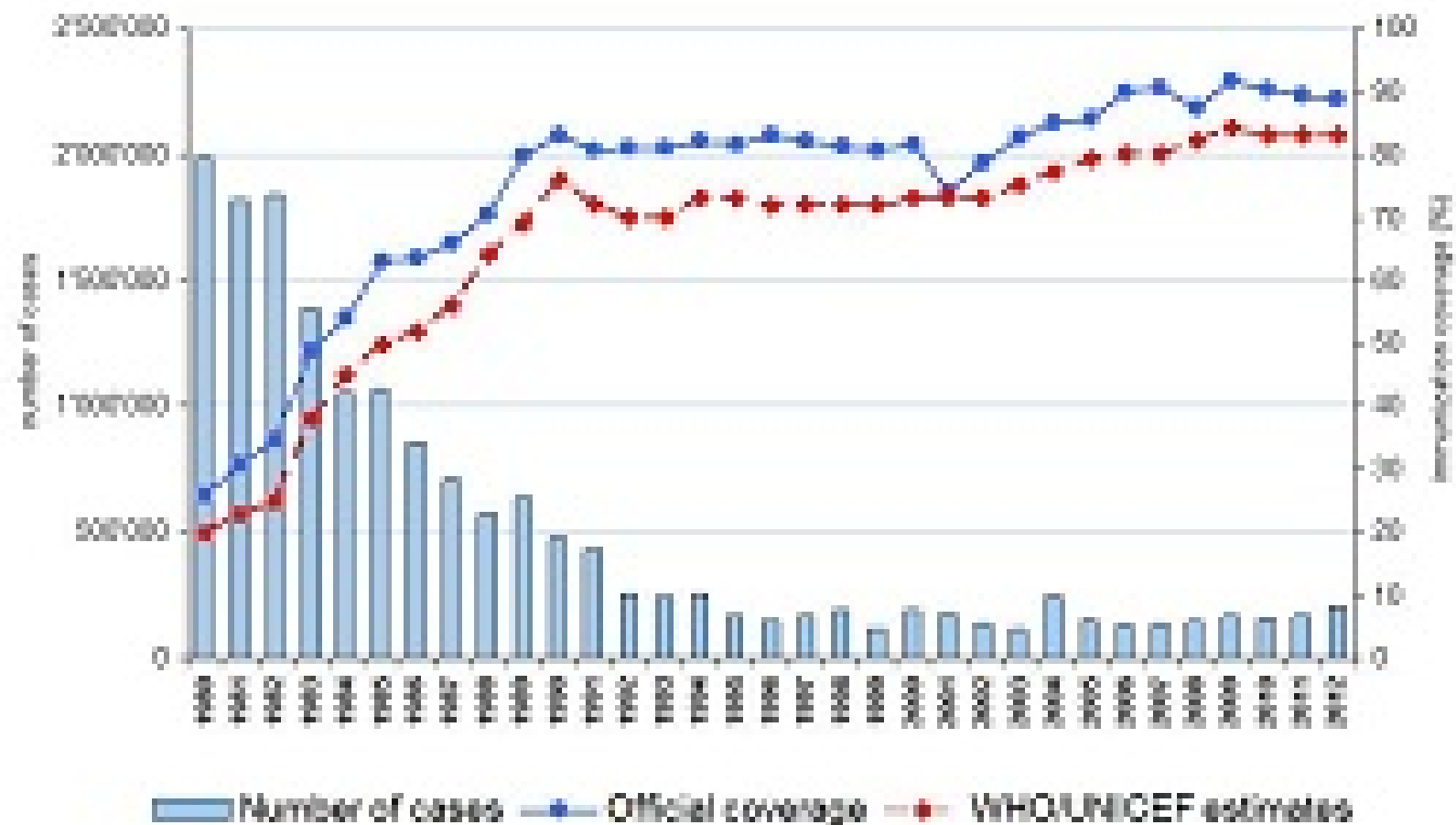
PERTUSSIS. Number of reported cases,* by age group — United States, 2006



* Of 15,632 cases of pertussis, age was reported as unknown for 503 persons.

Pertussis is an acute, infectious cough illness that remains endemic in the United States despite longstanding routine childhood pertussis vaccination. Immunity to pertussis wanes 5–10 years after completion of childhood vaccination, leaving adolescents and adults susceptible to infection. Infants, especially those who are undervaccinated, are at increased risk for complicated infections and death from pertussis. Tetanus toxoid, reduced diphtheria toxoid and acellular pertussis vaccine, adsorbed (Tdap) vaccine is recommended for adolescents and adults, both to reduce the burden of disease in those age groups and to reduce transmission to vulnerable infants.

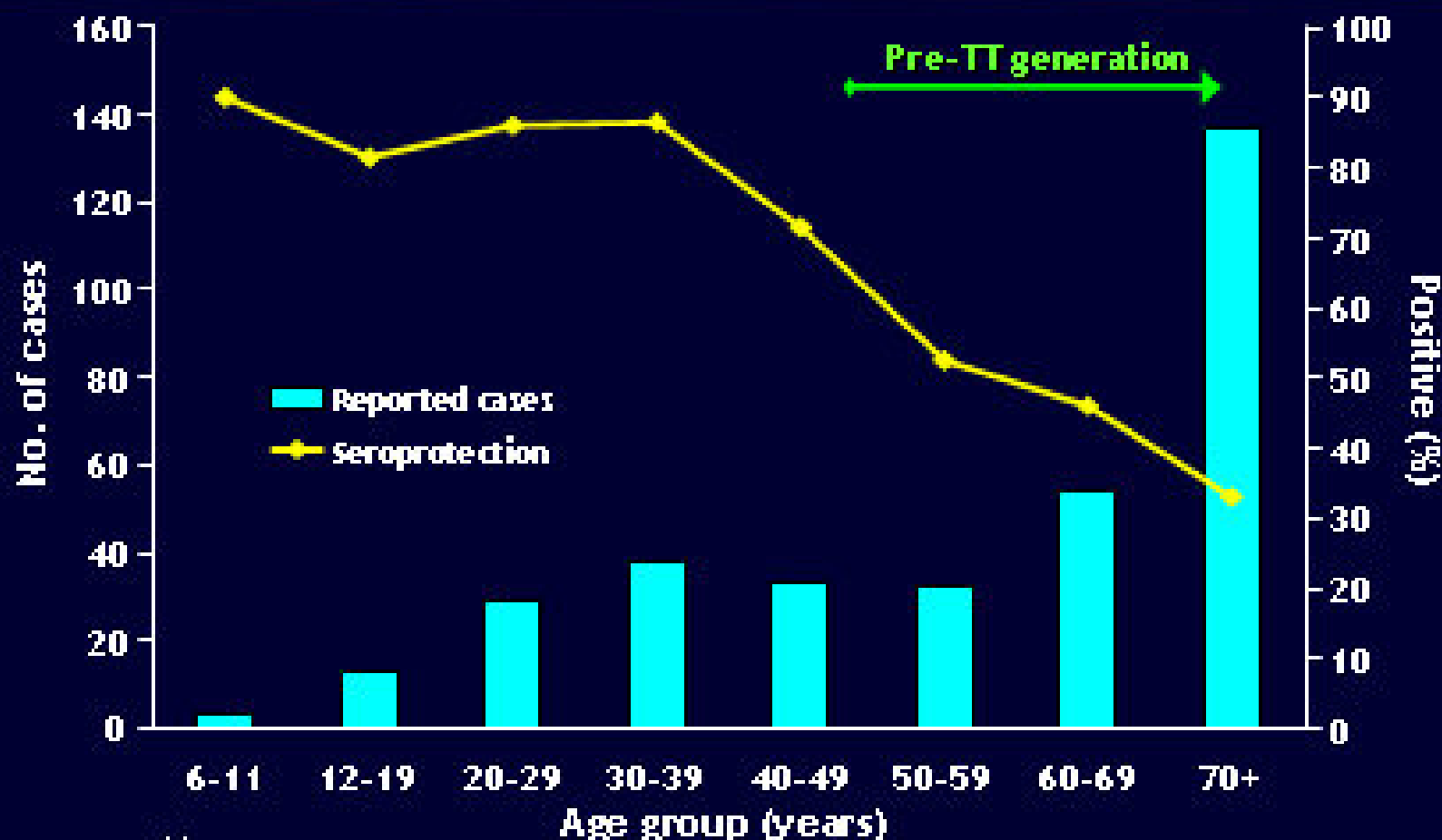
Pertussis global annual reported cases and DTP3 coverage, 1980-2012



- Since 2004 ~90% pertussis related deaths and sig morbidity in infants < 3 months old
- 75% got from household contact



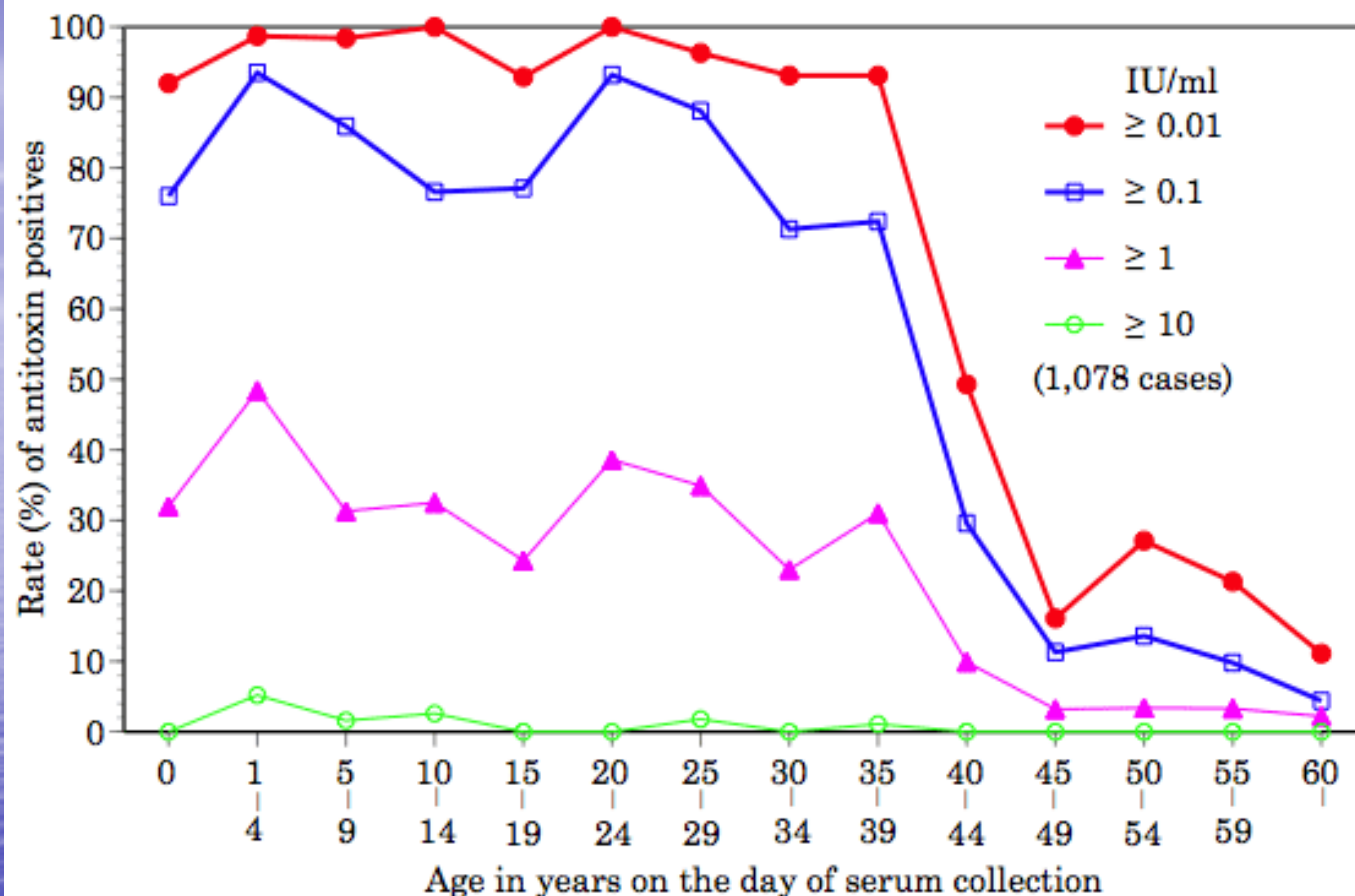
Age-Specific Prevalence of Immunity to Tetanus and Reported Tetanus Cases (1988-1994)



TT=tetanus toxoid.

*McQuillan GM et al. *Ann Intern Med*. 2002;136:690-695.

Figure 4. Tetanus antitoxin prevalence by age, 2008, Japan



(National Epidemiological Surveillance of Vaccine-Preventable Diseases, 2008:
Data based on the reports received before February 19, 2009)

IASR

Infectious Agents Surveillance Report

2010 CDC OB Recommendations (Hx/ rapidly evolving)

- Pregnant last TD >10 yrs ago> Td 2nd or 3rd TM
 - And give Tdap immediate PP
- Tdap
 - Close contacts of babies <1 yo
 - All healthcare personnel w/ direct pt contact
 - Td may be deferred during preg and Tdap substituted immediate PP

Advisory Committee on Immunization Practices

- October 2011
 - Vaccinate pregnant women who haven't been vaccinated as adults w/ Tdap
- October 24, 2012
 - Tdap vax q pregnant woman during every pregnancy

After ACIP 2011 recs

- Only 2.6% of 1,231 OB pts (8/11-4/12) got tdap in preg
- New ev maternal Ab short-lived (CDC *MMWR* Feb 22, 2103:62(07)131-5)

Average American Woman

- 2.06 children
- Of those w/ >1 child, only 2.5% at less than 2 yr interval
 - Majority >13 months
 - Lower SES majority >18 months
- 5% 4 or more children



• (CDC *MMWR* Feb 22, 2103:62(07)131-5)

Antepartum vs Postpartum Vax (2000-2011 CDC data) (CDC *MMWR* Feb 22, 2103:62(07)131-5)

	# would be prevented w/ AP Vax	# would be prevented w/ PP Vax
Annual Mean <1 yo infants w/ pertussis=2,746	906	549
Infant hospitalizations =1,217	462	219
Infant deaths=18	9	3

Our practice Tdap ~32 wks

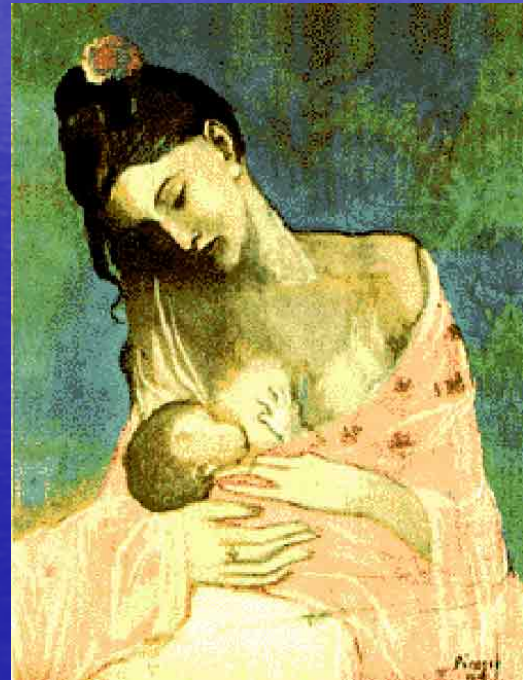
- 2 wks for maximal Ab response
- No sig transplacental IgG til 30 wks
- Tdap 1st or 2nd TM > low levels Ab at term

(CDC *MMWR* Feb 22, 2103:62(07)131-5)

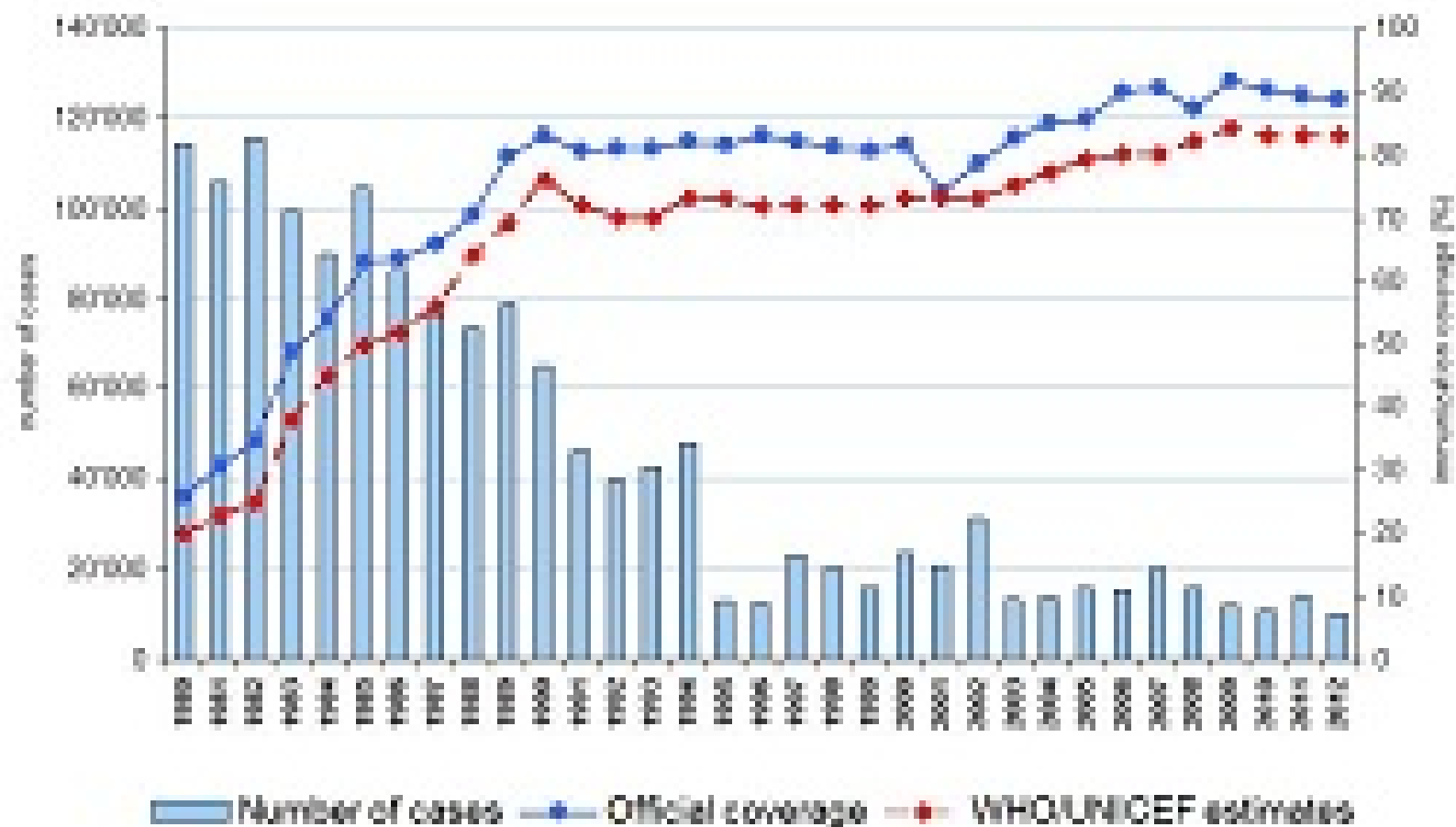


Breastfeeding

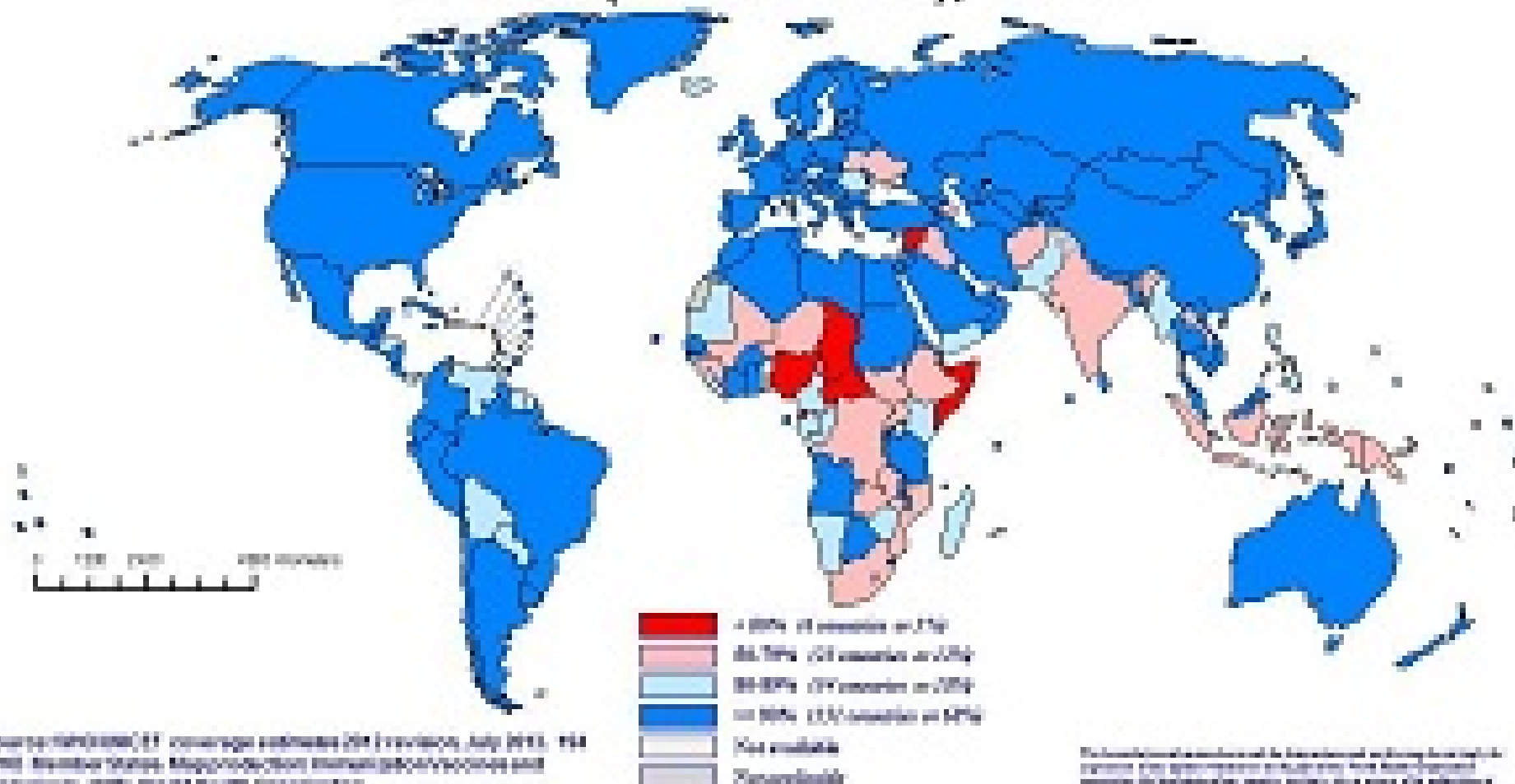
"Neither inactivated nor live vaccines administered to a lactating woman affect the safety of breast-feeding for mothers or infants. Breast-feeding does not adversely affect immunization and is not a contraindication for any vaccine, with the exception of smallpox vaccine."



Total tetanus global annual reported cases and DTP3 coverage, 1980-2012



Immunization coverage with DTP3 vaccines in infants (from <50%), 2012



Source: WHO/UNICEF coverage estimates (24 reviews, July 2013). 154 WHO Member States. Map produced by Immunization Vaccines and Biologicals, WHO, World Health Organization. Data as of 2013-07-15.

This document is published by the Department of Immunization, Vaccines and Biologicals. The information contained in this document is for informational purposes only and should not be used for medical or other purposes. The information is not intended to be used for medical or other purposes. The information is not intended to be used for medical or other purposes. The information is not intended to be used for medical or other purposes.



World Health
Organization

TABLE 1

Administration rates of specific vaccines among those who administer vaccines (15)

Immunization	Percent of Those Who Give Vaccines That Administer This Particular Vaccine	Mean Administrations per Month (SD)
HPV	91.0	20.6 (28.0)
Influenza	66.8	30.07 (31.19)
TDAP	29.9%	8.78 (11.50)
MMR	28.1%	4.25 (5.05)
Varicella	19.1%	5.16 (8.15)
Pneumococcal	14.3%	1.90 (2.59)
HAV	11.0%	2.06 (3.24)
Herpes zoster	8.5%	3.09 (5.75)
Meningococcal	7.3%	0.71 (.76)

ACOG Districts I/ III survey (170)

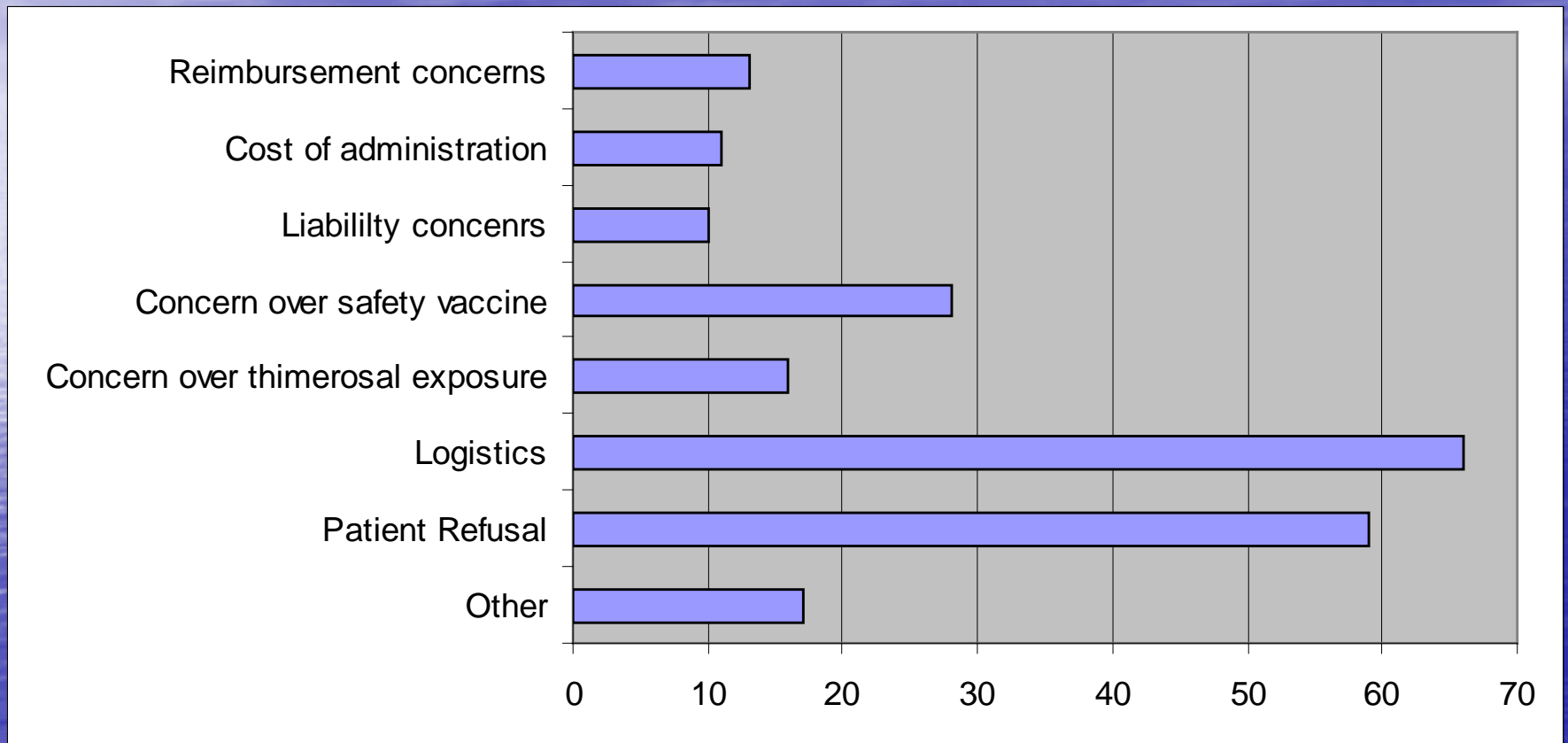


TABLE 1. Vaccines Recommended or High Priority for Investigation During Pregnancy

Vaccine	Safe	Immunogenic	Placental Transport (%)	Persistence of Maternal Antibodies (mo)
Currently recommended for pregnant women:				
Tetanus-diphtheria toxoid*	Yes	Yes	>100	Yes
Influenza, inactivated†	Yes	Yes	94–99	≥2
Meningococcal, polysaccharide‡§	Yes	Yes	30–56	3–4
Pneumococcal polysaccharide‡	Yes	Varies by serotype	24–89	Yes
High priority for investigation in pregnant women:				
Acellular pertussis or Tdap	ND	ND	ND	ND
Group B <i>Streptococcus</i> , type III, conjugate	Yes	Yes	77	≥2
Meningococcal, conjugate	ND	ND	ND	ND
<i>Haemophilus influenzae</i> type b, polysaccharide	Yes	Yes	44	4–6
<i>H. influenzae</i> type b, conjugate	Yes	Yes	35–61.5	4–6
Pneumococcal conjugate	ND	ND	ND	ND
Respiratory syncytial virus	Yes	Moderately	>100	6

*Not previously immunized or booster is required.

†In the United States.

‡Underlying medical conditions.

§Endemic or epidemic exposure.

ND indicates not determined.

New Jersey Coalition For VACCINATION CHOICE



Get Informed. Know Your Rights. Demand Choice.



WAVE

WORLD ASSOCIATION FOR VACCINE EDUCATION

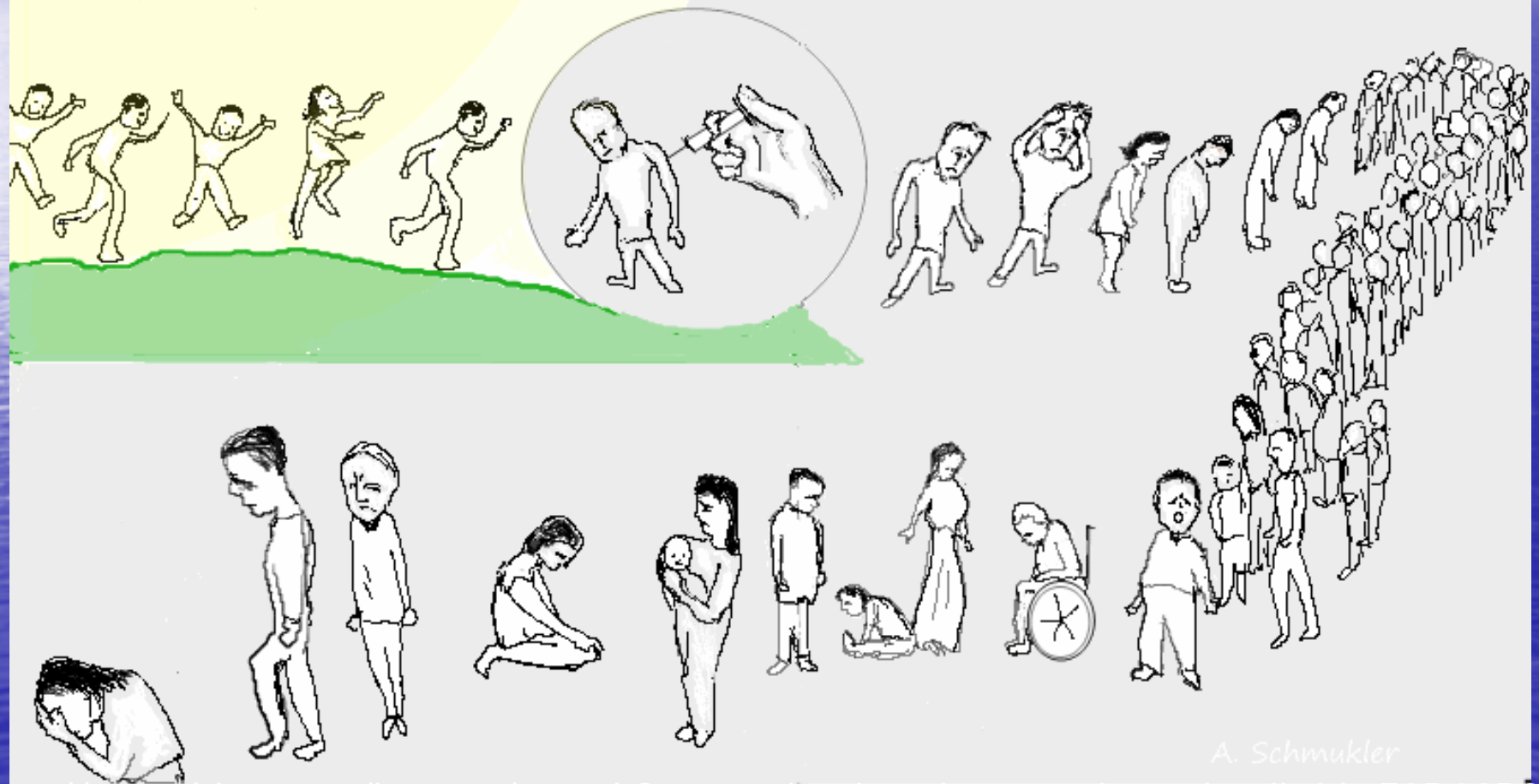


National Vaccine
Information Center
Your Health. Your
Family. Your
Choice.

<http://www.nvic.org/resource-center/statevaccine.aspx>

"U.S. Court Sees No Vaccine-Autism Link"

Justice is Blind



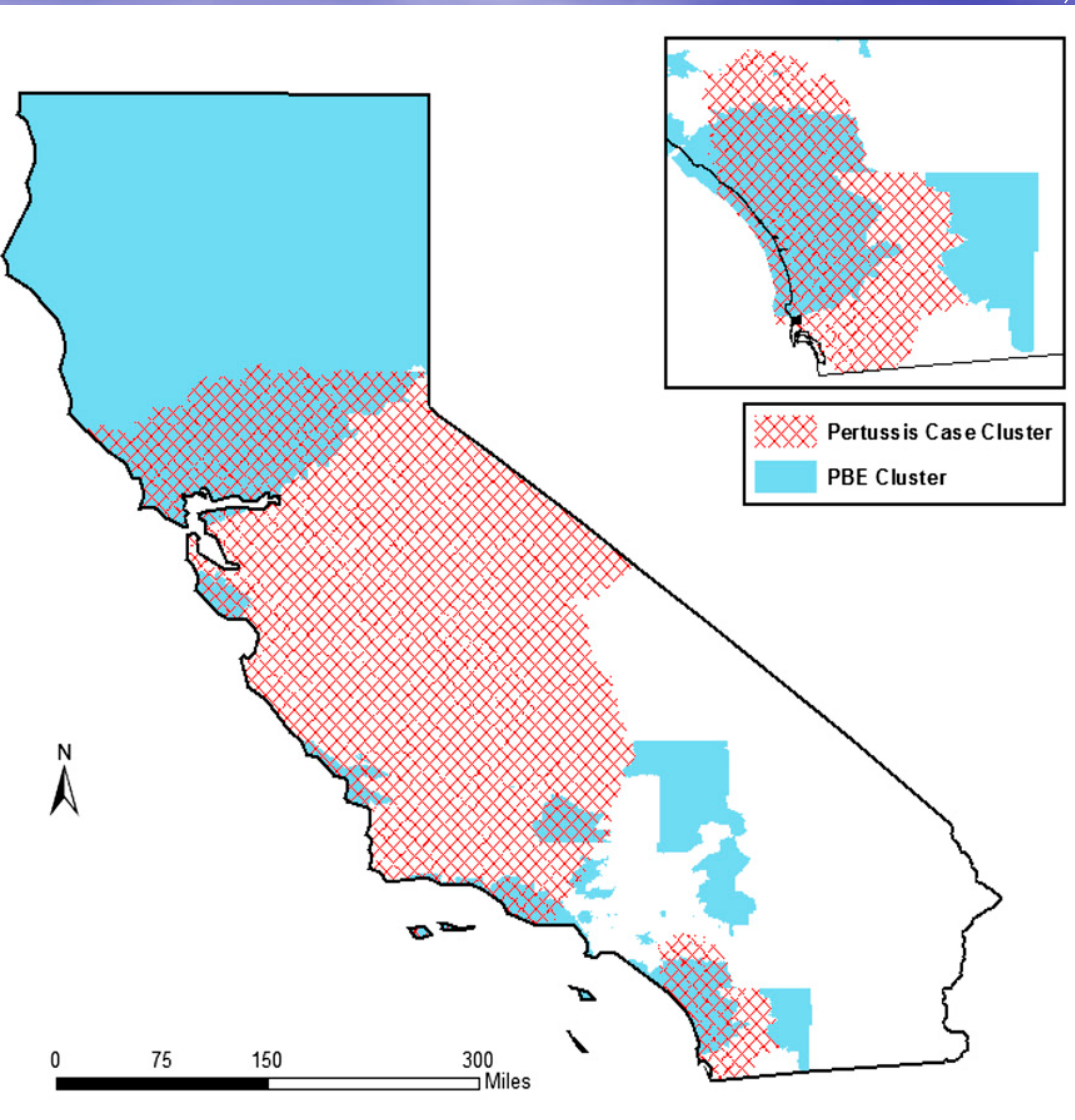
A. Schmukler

<http://www.scientificamerican.com/article/vaccination-opt-outs-found-to-contribute-to-whooping-cough-outbreaks-in-kids/>

Vaccination Opt-Outs Found to Contribute to Whooping Cough Outbreaks in Kids

Several factors may be contributing to recent whooping cough outbreaks, but parents' refusal to immunize their children is one

Oct 2, 2013 | By [Tara Haelle](#)



Relative locations of pertussis space-time clusters and personal beliefs exemption (PBE) clusters from 2005–2006 to 2009–2010. The inset in the top right corner shows the relative locations of pertussis space-time clusters and PBE spatial clusters in San Diego County.



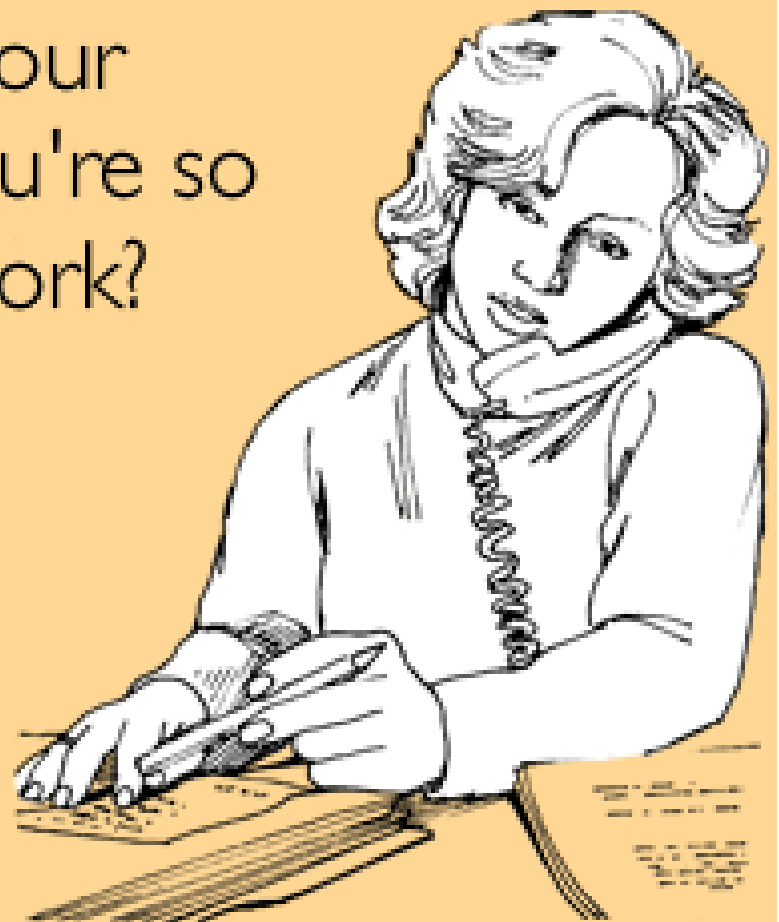
Ingredients: Mercury, Formaldehyde, Aluminum Phosphate, Aspartame, Human Fetal Tissue, Monkey Kidney & Lung Cells, MSG, Bovine Fetal Serum

<http://www.tuberoose.com/Graphics/vaccinations.jpg>



The Cow Pock — or — the Wonderful Effects of the New Inoculation! — Nide. the Publications of y^e Anti-Vaccine Society.

Why would my un-vaccinated kids be a threat to your vaccinated kids, if you're so sure that vaccines work?





SAYING NO^{TO} VACCINES

A RESOURCE GUIDE FOR ALL AGES

DR. SHERRI TENPENNY

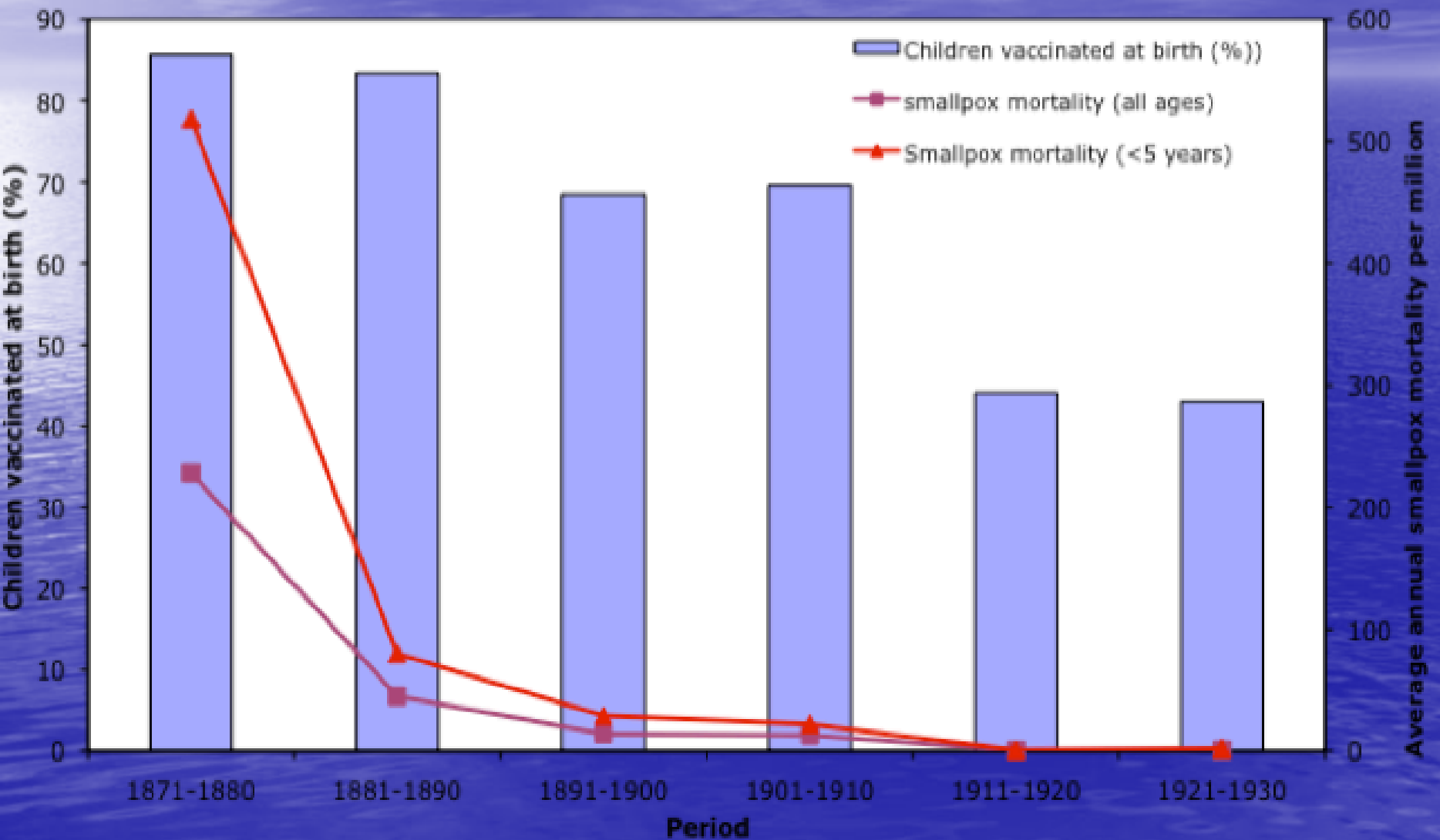
Also includes:

- A (Short) History of Mandatory Vaccination
- Vaccine Exemptions for Schools, Healthcare, Military & Other Special Circumstances
 - Vaccine Ingredients and Schedules
- 350+ Medical References Documenting Vaccine Problems . . .and more!

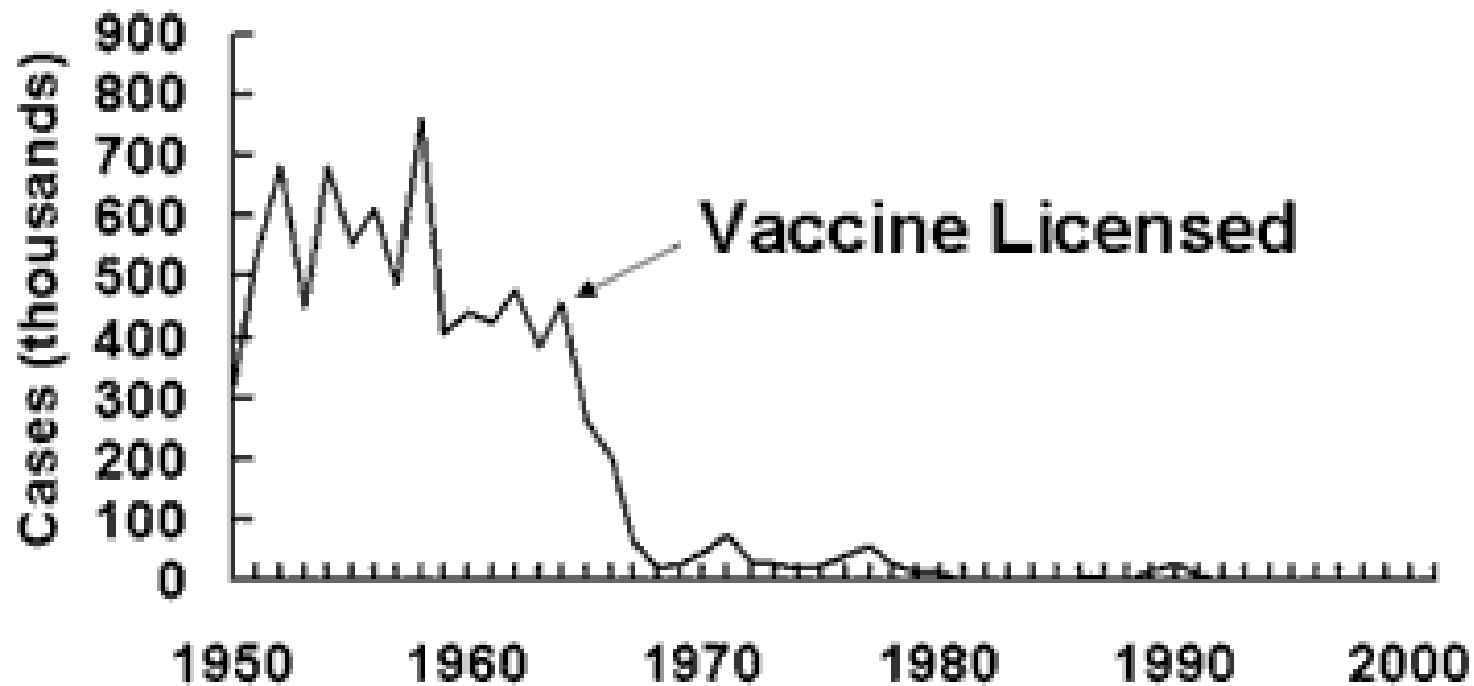


<http://bloggingforautism.com/wp-content/uploads/2011/01/2011-01-13-Vaccination-450x600.jpg>

Deaths from Smallpox and vaccination coverage in England & Wales 1871-1930



Measles–United States, 1950-2001



http://www.google.com/imgres?sa=X&biw=1024&bih=587&tbm=isch&tbnid=9JSaXGlgQSVdFM%3A&imgrefurl=http%3A%2F%2Finsidevaccines.com%2Fwordpress%2F2010%2F02%2F11%2Fvaccine-myths-round-two%2F&docid=HTErQOHahApSoM&imgurl=http%3A%2F%2Fi327.photobucket.com%2Falbums%2Fk460%2Finsidevaccines%2Fmeasles_incidence.gif&w=380&h=230&ei=PxYMU-HID0euyQH9_oCYDg&zoom=1&iact=rc&dur=880&page=8&start=85&ndsp=13&ved=0CNwCEK0DMFY



http://www.vaccineinformation.org/photos/pert_wi001.jpg

