Vaccine Hesitancy

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Learning objectives

At the end of this lecture, the participant will:

- Be able to define vaccine hesitancy
- Hear some of the history of vaccine resistance
- Understand some of the factors that lead to vaccine hesitancy
- Understand the key principles on communicating with vaccine hesitant individuals
- Be able to better respond to parental concerns regarding vaccine safety and effectiveness

Conflict of Interest statement

I have no conflict of interest to disclose pertaining to this lecture.

What is vaccine hesitancy? WHO Definition

A delay in acceptance or **refusal of vaccines,** despite availability of vaccination services

- *How do we identify someone who is vaccine hesitant?*
- *How do we listen to and understand their concerns?*
- *How do we respond to their concerns in a helpful way?*
- *How do we help move them towards vaccination?*

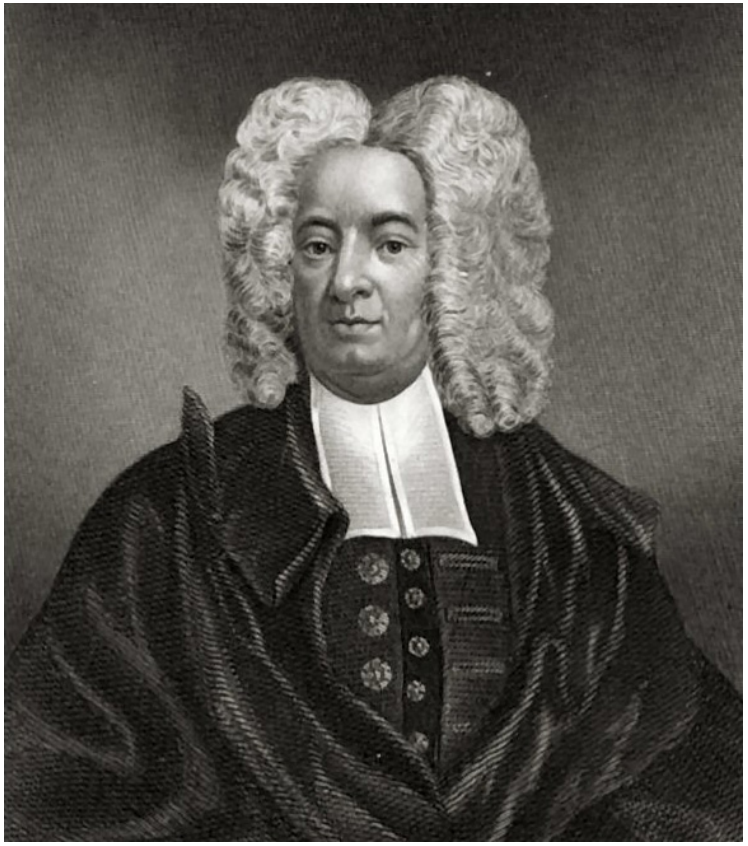
Why hesitate? Vaccines Work!

DISEASE	PRE-VACCINE ERA ESTIMATED ANNUAL MORBIDITY[1]	MOST RECENT REPORTS OR ESTIMATES OF U.S. CASES	PERCENT DECREASE
Diphtheria	21,053	0[2]	100%
H. influenzae (invasive, <5 years of age)	20,000	22[2,3]	>99%
Hepatitis A	117,333	3,500[4]	97%
Hepatitis B (acute)	66,232	19,800[4]	70%
Measles	530,217	69[2]	>99%
Meningococcal disease	2,886[5]	340[2]	88%
Mumps	162,344	5,311[2]	97%
Pertussis	200,752	15,737[2]	92%
Pneumococcal disease (invasive, <5 years of age)	16,069	1,700[6]	89%
Polio (paralytic)	16,316	0[2]	100%
Rotavirus (hospitalizations, <3 years of age)	62,500[7]	11,250[8]	82%
Rubella	47,745	5[2]	>99%
Congenital Rubella Syndrome	152	1[2]	99%
Smallpox	29,005	0[2]	100%
Tetanus	580	33[2]	94%
Varicella	4,085,120	151,149[9]	96%

Vaccine Hesitancy

- Unlike other medicines and medical treatments, vaccines work at both the **individual** and **community** level. Most physicians tend to see vaccinations as good for the individual patient. So, vaccine hesitancy is a puzzle to most physicians.
- Because vaccination is also a societal concern, with a long history of laws mandating vaccinations, the process is **political.** It involves laws, police action by the state and forced obedience. Political processes have a history of resistance in human history.
- Vaccine hesitancy is not a new social phenomenon, but it's beginning dates back to the 18th century and smallpox outbreaks in New England.

Cotton Mather



mezzotint portrait (Feb. 12, 1663 - Feb. 13, 1728), public domain

- Puritan Minister and community leader in Boston.
- He purchased an African slave and named him Onesimus. This slave introduced Mather to the concept of variolation for smallpox.
- In 1721, during a Boston smallpox outbreak, Mather promoted inoculation in partnership with a Boston physician Dr. Zabdiel Boylston, who risked his life by inoculating his own children, his black servants and many of his patients.
- He was opposed by James Franklin, Benjamin Franklin's older brother in a new newspaper: The New England Courant.

Source: American Medical Biography, by James Thacher, 1828

Smallpox epidemic, Boston 1721

- Dr. Boylston continued the practice of inoculation to all who would submit to it.
  - 286 would be inoculated, of whom only six died.
  - 5,759 had taken the natural smallpox, 844 died of it, being more than one in six. The Boston population at the time was 11,000 people.
- The smallpox finally ceased its ravages in Boston in May, 1722.
- The utility of the practice of inoculation was now established beyond dispute; and its success encouraged it’s more general practice in England.
- Benjamin Franklin would take the side of variolation and would argue in favor of inoculation for smallpox, becoming one of variolation's strongest proponents.

Benjamin Franklin's son: "Franky" –Francis Folger Franklin

"In 1736 I lost one of my sons, a fine boy of four years old, by the small-pox, taken in the common way. I long regretted bitterly, and still regret that I had not given it to him by inoculation.

This I mention for the sake of parents who omit that operation, on the supposition that they should never forgive themselves if a child died under it, my example showing that the regret may be the same either way and that, therefore, the safer should be chosen."

Benjamin Franklin from his autobiography

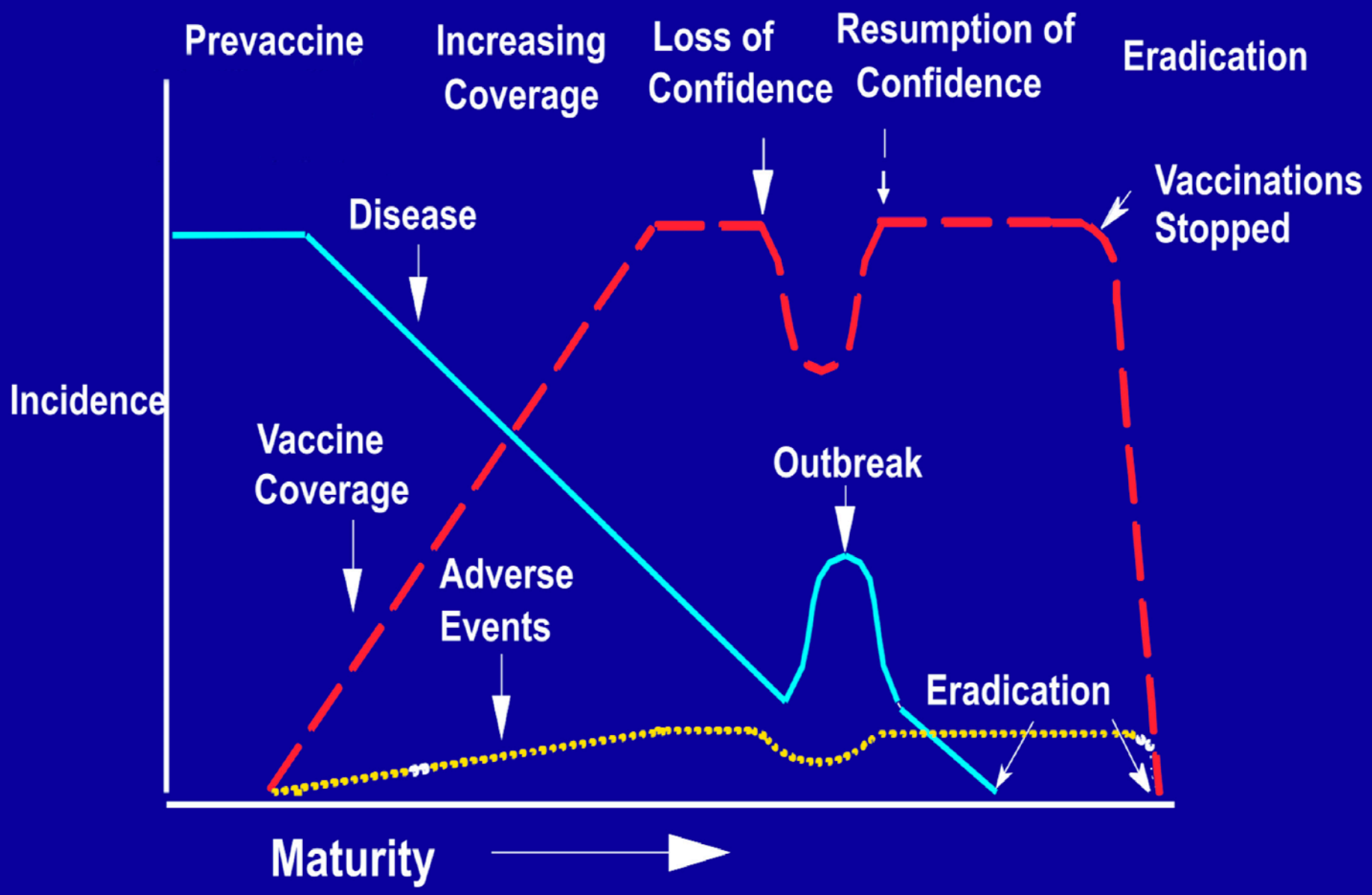
Posthumous portrait of Francis, possibly by Samuel Johnson, a neighbor of B. Franklin, c. 1736–37

Edward Jenner “vaccinating” James Phipps, 1796
Painting by Ernest Board (early 20th century), public domain

Smallpox Vaccine History

- 1796 – Edward Jenner vaccinates James Phipps with vaccinia virus (cowpox)
- 1853 –Smallpox vaccination made compulsory in the United Kingdom
- 1866 –Anti-compulsory Vaccination League formed –United Kingdom
- 1879 –Anti-Vaccination League of America formed
- 1885 –Compulsory smallpox vaccination law reversal in UK
- 1905 – *Jacobson v Massachusetts*, US Supreme Court Case that upheld the authority of states rights to enforce compulsory vaccination (smallpox).
- 1922 *Zucht v. King*, US Supreme Court Case that upheld the authority of states and the school district of San Antonio, Texas, to exclude unvaccinated students from attending the schools in the district.
- 1971 routine smallpox vaccinations stopped in the US

Mariner WK, Annas GJ, Glantz LH. "Jacobson v Massachusetts: It's Not Your Great-Great-Grandfather's Public Health Law." *Am J Public Health* 2005; 95:581-590.



Chen, RT, Orenstein, WA, Epidemiology Rev. 1996; 18 (2): 102. Oxford Press

Current recommended vaccines by disease (18)

- Diphtheria (1940s)
- Pertussis (1940s)
- Tetanus (1940s)
- Polio (1950s)
- Measles (1963)
- Mumps(1967)
- Rubella (1969)
- Hepatitis B (1981)
- H. Flu (1985)
- Varicella (1996)
- DTaP(1997)
- Rotavirus (1998, 2008)
- Pneumomococcus(2001)
- Influenza (1974, 2002)
- Hepatitis A (2006)
- HPV (2006)
- Shingles (2006)
- Meningococcus(2005, 2015)

Non-routine vaccines by disease (7)

- Anthrax
- Japanese Encephalitis (JE)
- Rabies
- Smallpox
- Tuberculosis
- Typhoid Fever
- Yellow Fever

Modern Vaccine Hesitancy, new concerns

- 1970s –Pertussis vaccine controversy
  - Dissatisfied Parents together –Barbara Loe Fisher.
  - The National Vaccine Information Center (NVIC)
- 1998 –Andrew Wakefield's flawed paper on MMR and autism
  - Measles vaccination rates fall in the UK, 90.8% to 79.9% (2004)
  - This publication triggered numerous studies that compared groups of children who did and did not receive the MMR vaccine with the subsequent development of autism: "evidence favors rejection of a causal relationship between the MMR vaccine and autism." National Research Council.
  - 1990 - 2000s –Marin County, California. Some of the lowest MMR vaccination rates in the country.
- 2007 – Jenny McCarthy appears on Oprah
- 2007 – Dr. Bob Sears alternative vaccination schedule appears in "The Vaccine Book: Making the Right Decision for Your Child"

What is vaccine hesitancy?

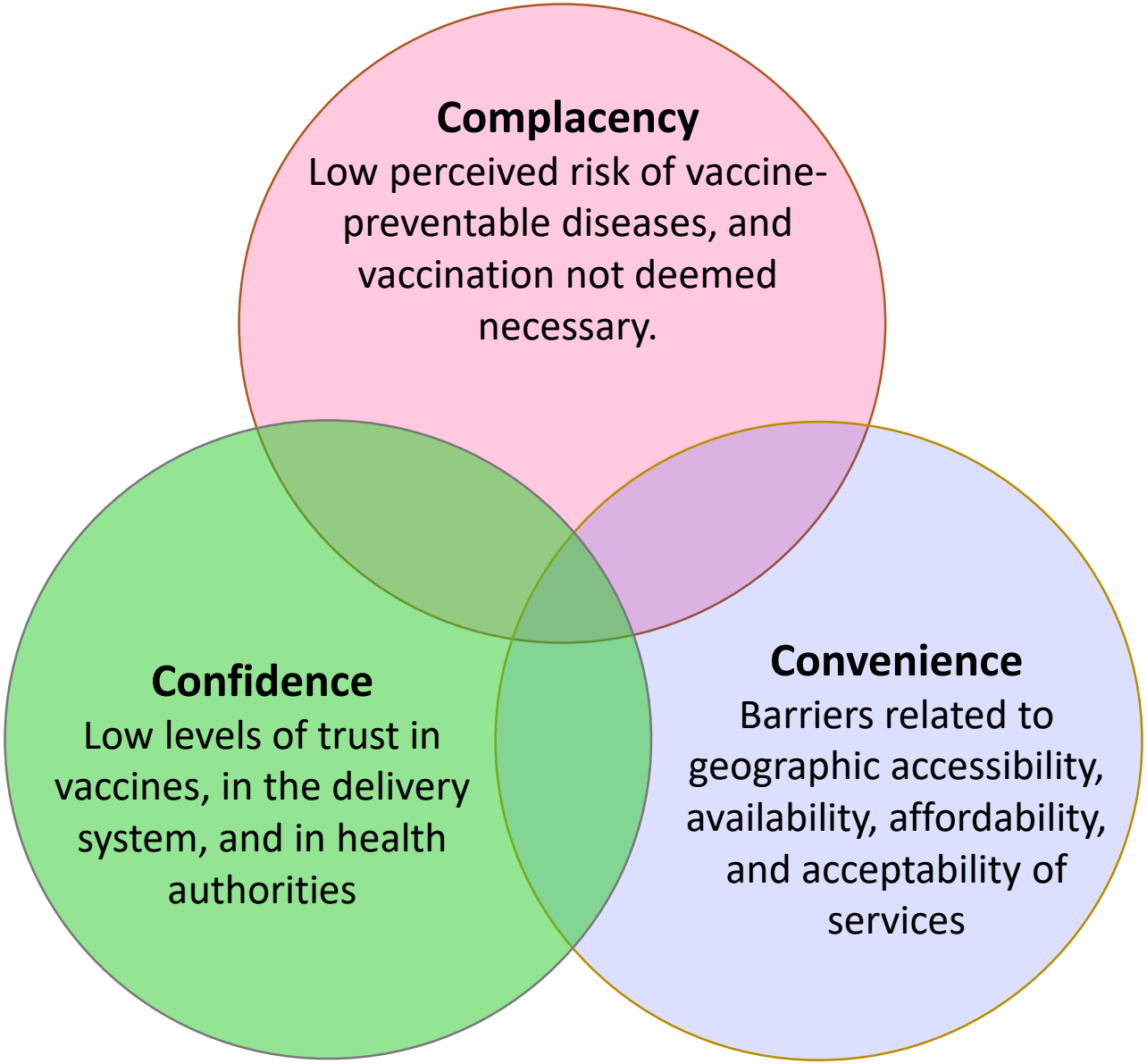
- **A delay in acceptance** or **refusal of vaccines,** despite availability of vaccination services
- **Complex and context** specific, varying across time, place and vaccine

Epidemiology of vaccine refusal

- The majority of physicians report more than one vaccine refusal per month
- More than 90% of physicians report requests to spread out vaccines (alternative schedule)
- 13% of parents followed an alternative vaccination schedule.
    - Of these, 53% refused certain vaccines
    - 55% delayed some vaccines until the child was older.
    - 17% reported refusing all vaccines.

SOURCE: Glanz JM, *JAMA Pediatr.* 2013;167(3):374-281: Gowda, et al., *Hum Vac Imm* 2013; Kempe A, *Pediatrics* 2015

Factors contributing to vaccine hesitancy

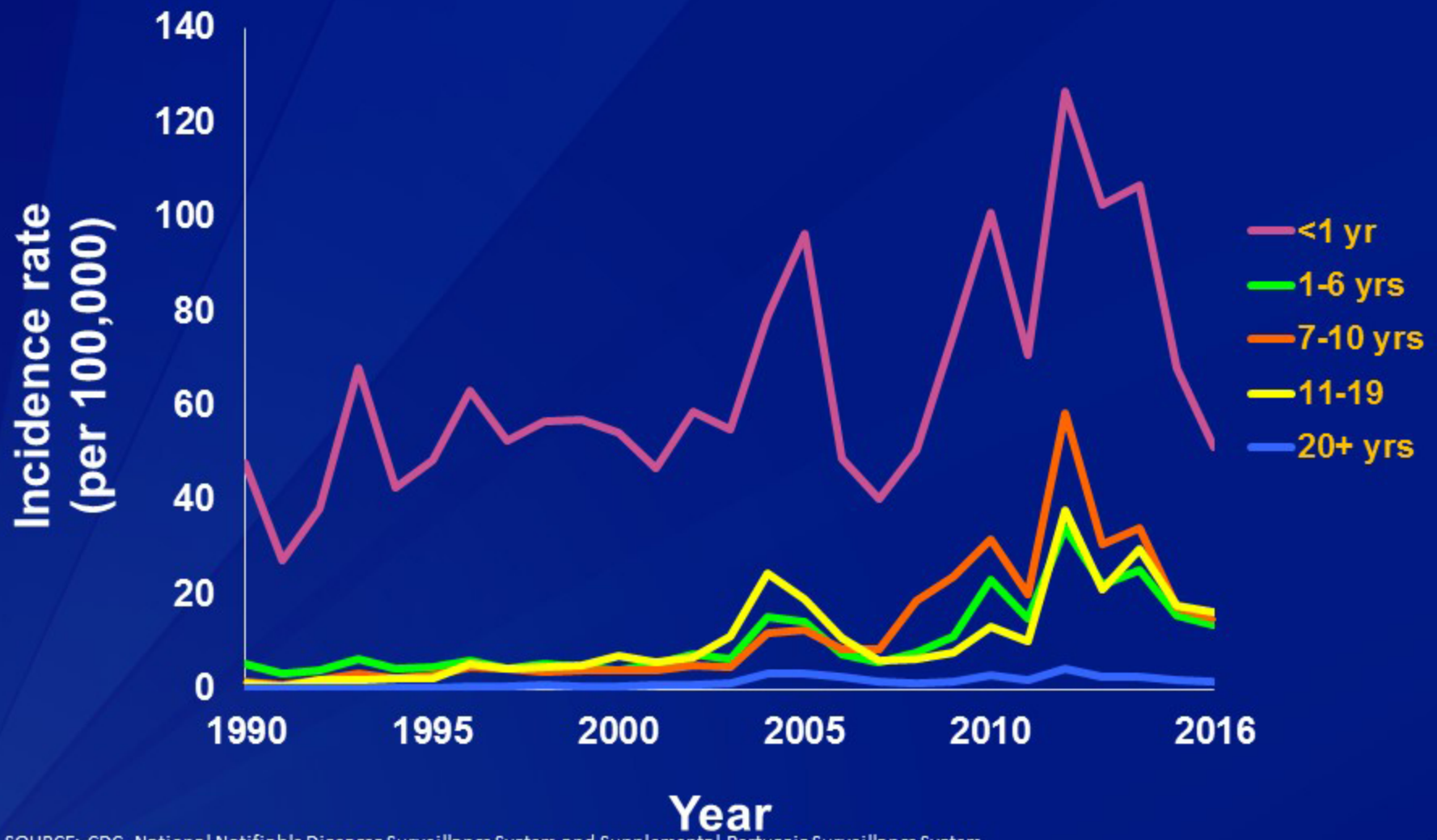


World Health Organization

Complacency: The necessity of Vaccines questioned

- **To the public, vaccine-preventable diseases have for the most part disappeared and are perceived as not being a threat (the definition of complacency)**
  - Respond with education and information to the contrary.
    - Dr. Roger Bost, renowed Arkansas pediatrician.
  - An important disease to talk about regarding complacency is pertussis in infants and children.

Reported pertussis incidence by age group: 1990-2016



SOURCE: CDC, National Notifiable Diseases Surveillance System and Supplemental Pertussis Surveillance System

2017 Provisional Pertussis Surveillance Report

Reported Pertussis Incidence and Cases

STATES	Incidence (per 100,000)	No. of Cases
ALABAMA	4.59	223
ALASKA	5.80	43
ARIZONA	6.02	417
ARKANSAS	6.56	196
CALIFORNIA	4.44	1742
COLORADO	12.22	677
CONNECTICUT	1.57	56
DELAWARE	0.95	9
D.C.	2.50	17
FLORIDA	1.90	392
GEORGIA	1.58	163
HAWAII	2.17	31
IDAHO	4.99	84
ILLINOIS	3.30	423
INDIANA	5.23	347
IOWA	4.88	153
KANSAS	6.16	179
KENTUCKY	9.04	401
LOUISIANA	1.05	49
MAINE	27.71	369
MARYLAND	1.75	105
MASSACHUSETTS	4.45	303
MICHIGAN	5.86	582
MINNESOTA	10.07	556
MISSISSIPPI	1.14	34
MISSOURI	7.06	430
MONTANA	9.98	104
NEBRASKA	4.88	93
NEVADA	2.62	77
NEW HAMPSHIRE	4.57	61
NEW JERSEY	4.04	361
NEW MEXICO	7.35	153
NEW YORK	4.75	532
NEW YORK CITY	1.57	134
NORTH CAROLINA	3.35	340
NORTH DAKOTA	6.73	51
OHIO	7.36	855
OKLAHOMA	3.64	143
OREGON	5.33	218
PENNSYLVANIA	7.04	900
RHODE ISLAND	5.11	54
SOUTH CAROLINA	3.20	159
SOUTH DAKOTA	0.92	8
TENNESSEE	2.87	191
TEXAS	5.32	1483
UTAH	11.90	363
VERMONT	16.49	103
VIRGINIA	2.50	210
WASHINGTON	8.15	594
WEST VIRGINIA	0.71	13
WISCONSIN	10.54	609
WYOMING	3.07	18
TOTAL	**4.89**	**15,808**

Notice to Readers:
Provisional 2017 Reports of Notifiable Diseases
January 5, 2018 / 66 (52)
https://www.cdc.gov/mmwr/volumes/66/wr/mm6652md.htm?s_cid=mm6652md_w

Reported Pertussis Cases
2016: **17,972** 2017: **15,808**

Reported Pertussis Cases and Percent Hospitalization by Age Group

Age	No. of Cases (% of total)	Age Inc /100,000	% Hospitalized by age**
< 6 mos	1280 (8)	64.5	44.2
6-11 mos	612 (3.9)	30.8	11.5
1-6 yrs	3051 (19.3)	12.7	2.8
7-10 yrs	2221 (14.1)	13.5	1
11-19 yrs	5139 (32.5)	13.7	0.9
20+ yrs	3429 (21.7)	1.4	7.6
Unknown Age	76 (0.5)	N/A	N/A
Total	**15,808 (100)**	**4.9***	**6.6**

*Total age incidence per 100,000 calculated from 15,732 cases with age reported.
**Age-specific proportion of cases that were hospitalized, calculated from those with a known hospitalization status.

Reported Pertussis Deaths

Age	Deaths*
Cases, aged < 1 yr	4
Cases, aged ≥ 1 yr	9
Total	**13**

*Deaths reported through NNDSS to CDC. Confirmation of non-infant deaths is ongoing and may result in changes to the final pertussis-related death count for 2017
†4 of the 7 deaths were female.

Reported DTaP Vaccine Status of Children with Pertussis, Ages 6 months through 6 years

Age	Vaccine History Unknown	Unvaccinated	Undervaccinated (1-2 doses)	Completed Primary DTaP Series (3+ doses)	Total
	No. (%)	No. (%)	No. (%)	No. (%)	No.
6-11 mo	239 (39)	55 (9)	98 (16)	220 (36)	612
1-4 yrs	931 (40)	247 (11)	111 (5)	1026 (44)	2315
5-6 yrs	271 (37)	72 (10)	19 (2)	374 (51)	736
Total*	**1441 (40)**	**374 (10)**	**228 (6)**	**1620 (44)**	**3663**

Source: NCHS Bridged Race Intercensal Population Estimate for 2016; 2017 estimates were not available at the time of publication.

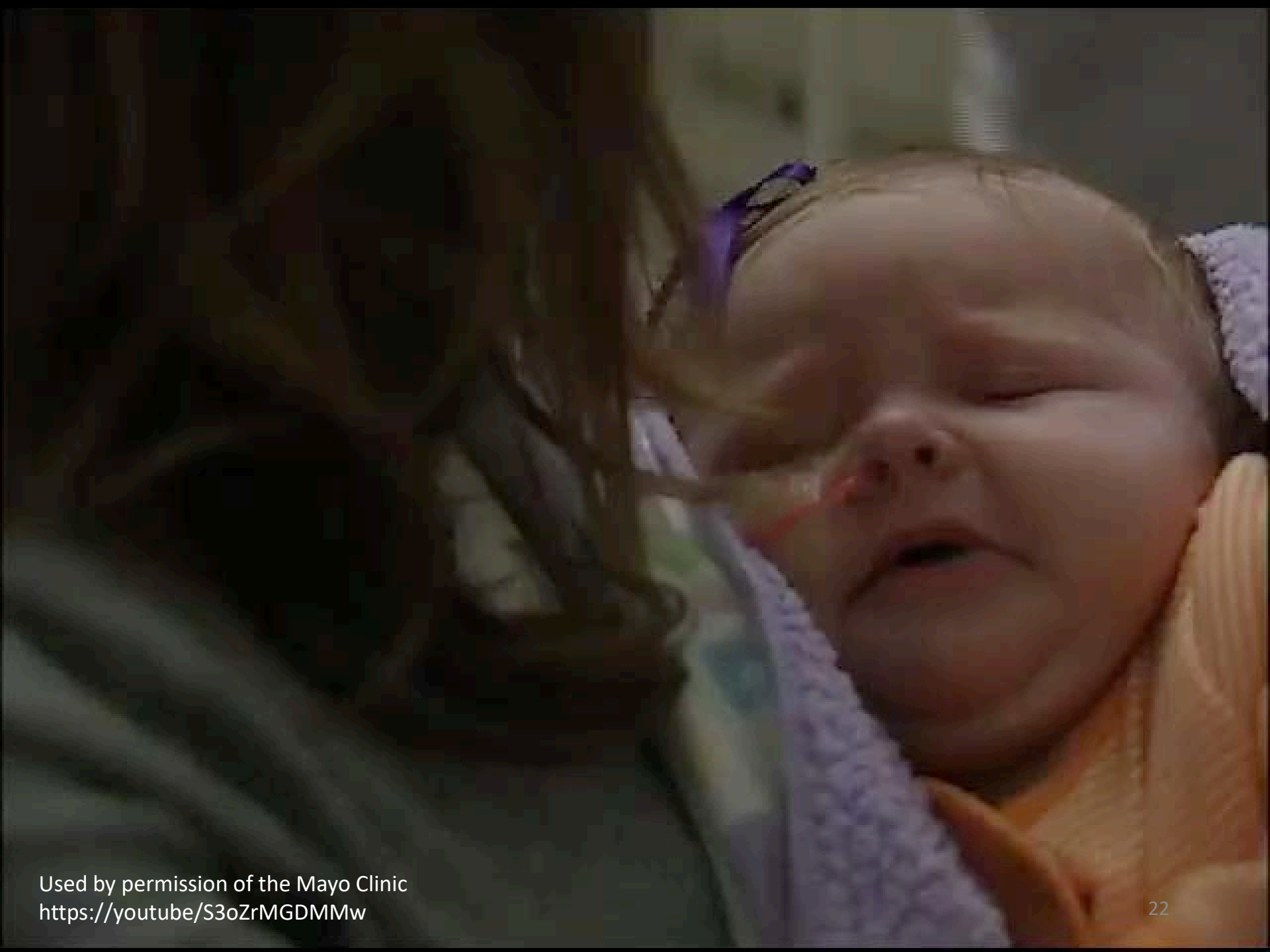
*Percent calculated from total cases aged 6 months to 6 years, n=3,663.

National Center for Immunization and Respiratory Diseases
Division of Bacterial Diseases

CS292279 Weeks 1-52, 2016 CDC/NCIRD/DBD/MVPDB April, 2018

Pertussis is still a big problem. Over 15,000 people had the disease last year in the US!

And, the vast majority of these cases were in children! (12,303)



Used by permission of the Mayo Clinic
https://youtube/S3oZrMGDMMw

Complacency: The necessity of Vaccines questioned

- Vaccine-preventable diseases have disappeared and are perceived as not being a threat (the definition of complacency)
- Vaccines are not natural. Disease is more “natural” than vaccines.
- Parents do not believe some diseases being prevented are serious enough to warrant vaccination
  - So, not all vaccines are needed (e.g. Chicken pox)
- Vaccines do not work, so why get them. (e.g., the Flu vaccine)

Convenience: Freedom of choice

- Parents have the right to choose whether to immunize their child
  - They don't like being forced into a political decision made by the state regarding their child's healthcare.
- Parents feel that they know what's best for their child and they believe that the risks outweigh the benefits of vaccination
- They do not trust
  a) organized medicine, public health
  b) government health authorities
  c) pharmaceutical companies
- Other ethical, moral, or religious reasons

Confidence: Vaccine safety –reported parental concerns

- Too many vaccines
- Vaccine additives (thimerosal, aluminum)
- To many antigens at once, overloading the immune system
- Serious adverse reactions and potential for long-term adverse events
- Inadequate research performed before licensure
- May cause pain to the child during administration
- May make the child sick
- **<u>The development of autism</u>**

Primary Vaccine Hesitancy driver

In my practice the primary driver of vaccine hesitancy is:

Fear

Autism Features: What is autism?

The essential features of Autistic Spectrum Disorder are:

a) impaired reciprocal social interactions
b) delayed or unusual communication styles
c) restricted or repetitive behavior patterns

Autism Severity is based on social communication impairments and restricted, repetitive patterns of behavior.

a) Stereotyped or repetitive motor movements, use of objects, or speech (e.g., simple motor stereotypes, lining up toys or flipping objects, echolalia, idiosyncratic phrases).
b) Insistence on sameness, inflexible adherence to routines, or ritualized patterns of verbal or nonverbal behavior (e.g., extreme distress at small changes, difficulties with transitions, rigid thinking patterns, greeting rituals, need to take same route or eat same food every day).
c) Highly restricted, fixated interests that are abnormal in intensity or focus (e.g., strong attachment to or preoccupation with unusual objects, excessively circumscribed or perseverative interests).
d) Hyper- or hyporeactivity to sensory input or unusual interest in sensory aspects of the environment (e.g. apparent indifference to pain/temperature, adverse response to specific sounds or textures, excessive smelling or touching of objects, visual fascination with lights or movement).

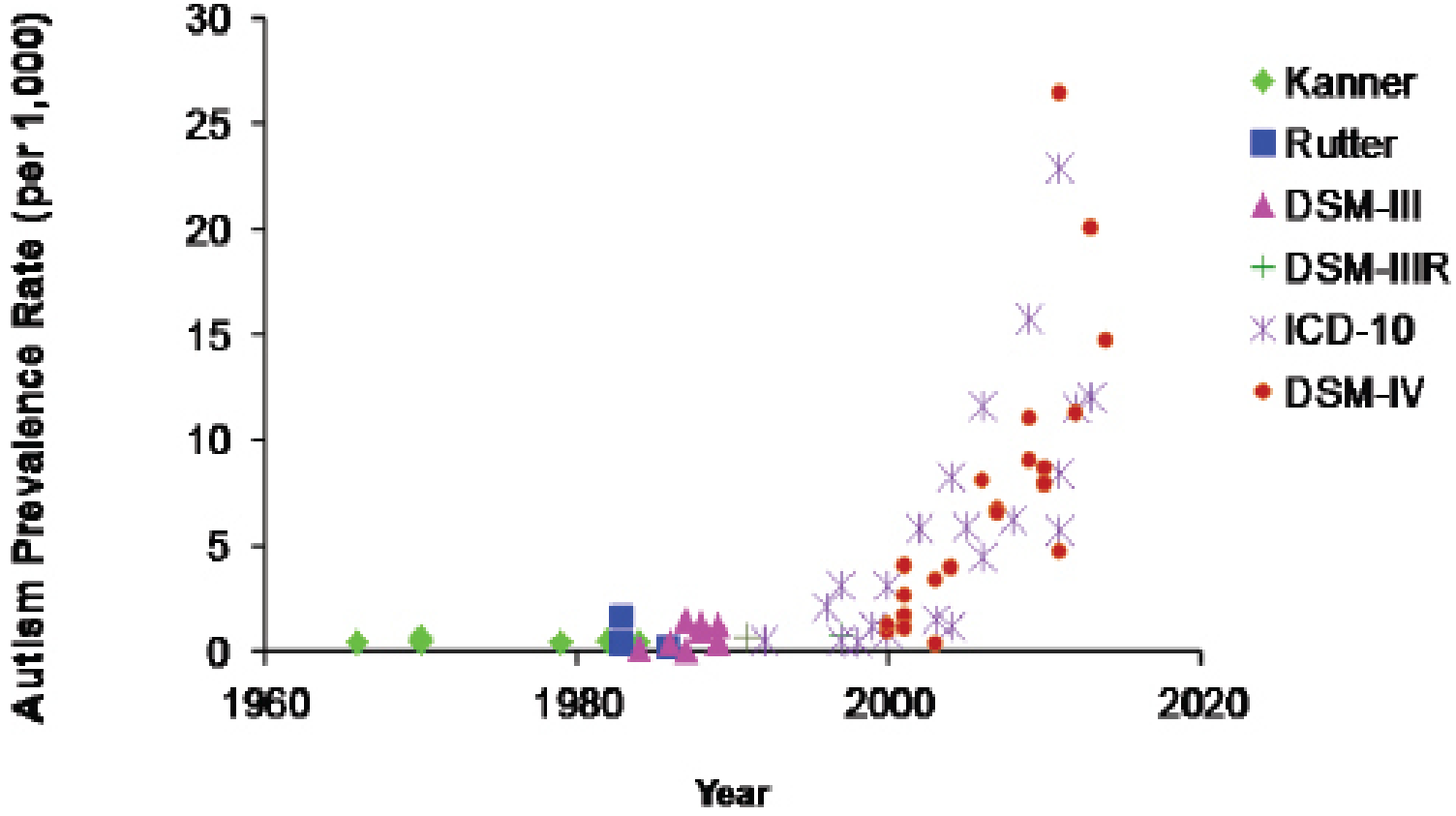
Source: The American Psychiatric Association's Diagnostic and Statistical Manual, Fifth Edition (DSM-5)

History of Autism at a Glance:

- **1943** Leo Kanner publishes "Autistic Disturbance of Affective Contact" describing 11 socially isolated children who share an obsessive desire for sameness.
- **1944** Hans Asperger "Autistic psychopathy in childhood" published
- **1950s-1960s** Autism widely regarded as a form of "childhood schizophrenia."
- **1970s** Autism understood as a biological disorder of brain development.
- **1980** DSM-III distinguishes autism from childhood schizophrenia.
- **1987** DSM-IIIR lays out a checklist of criteria for diagnosing autism.
- **1994-2000** DSM-IV and DSM-IV-TR expand definition of autism and include Asperger syndrome.
- **2013** DSM-5 folds all subcategories into one umbrella diagnosis of autism spectrum disorder (ASD). It is defined by two categories: impaired social communication and/or interaction and restricted and/or repetitive behaviors.

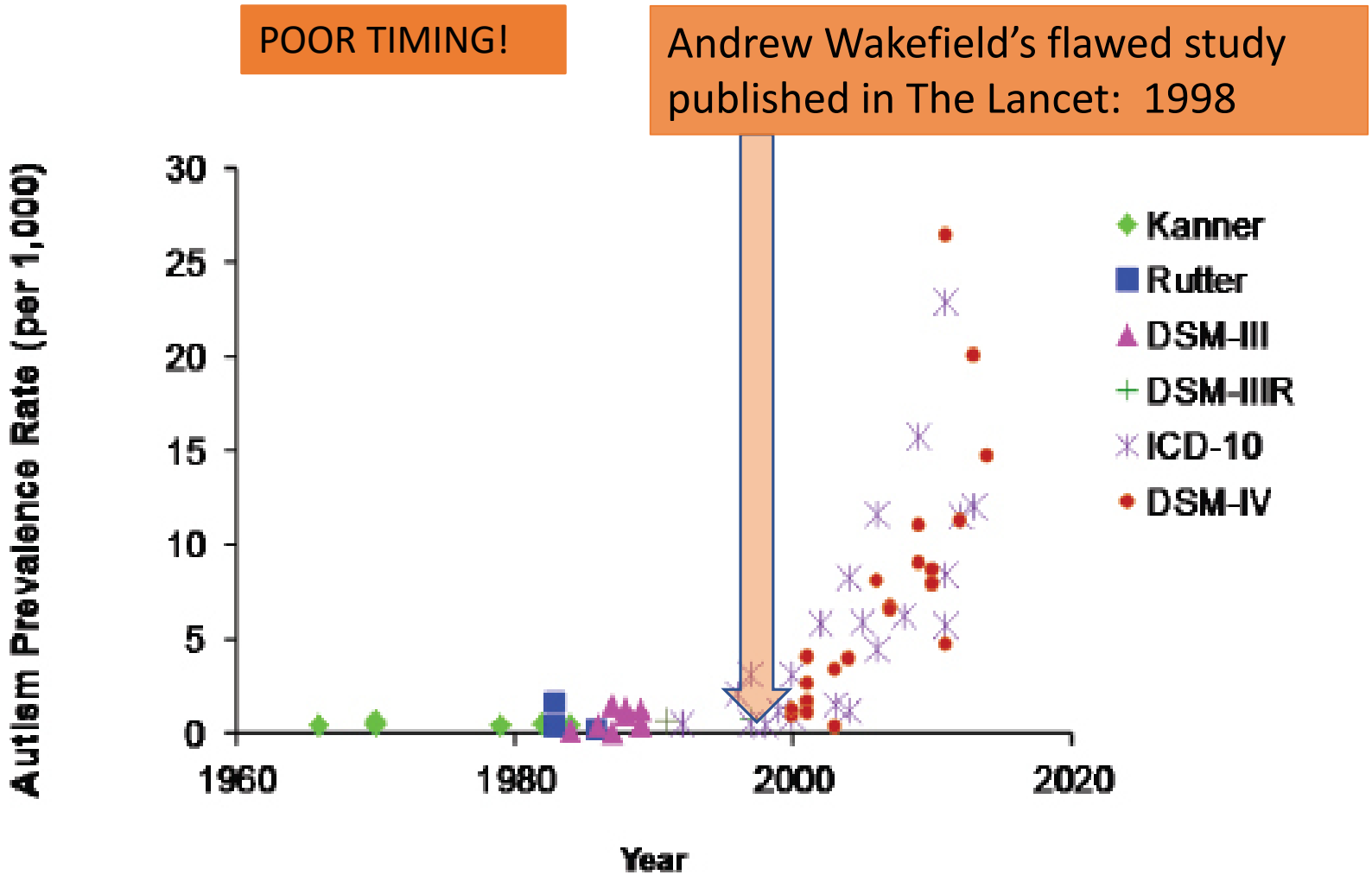
Source: N Engl J Med 2013; 369:1089-1091

Explosion of autism prevalence over time



Source: Rice C. Encyclopedia of autism spectrum disorders. Volkmar F, editor. New York: Springer; 2013. pp. 3120–3125.

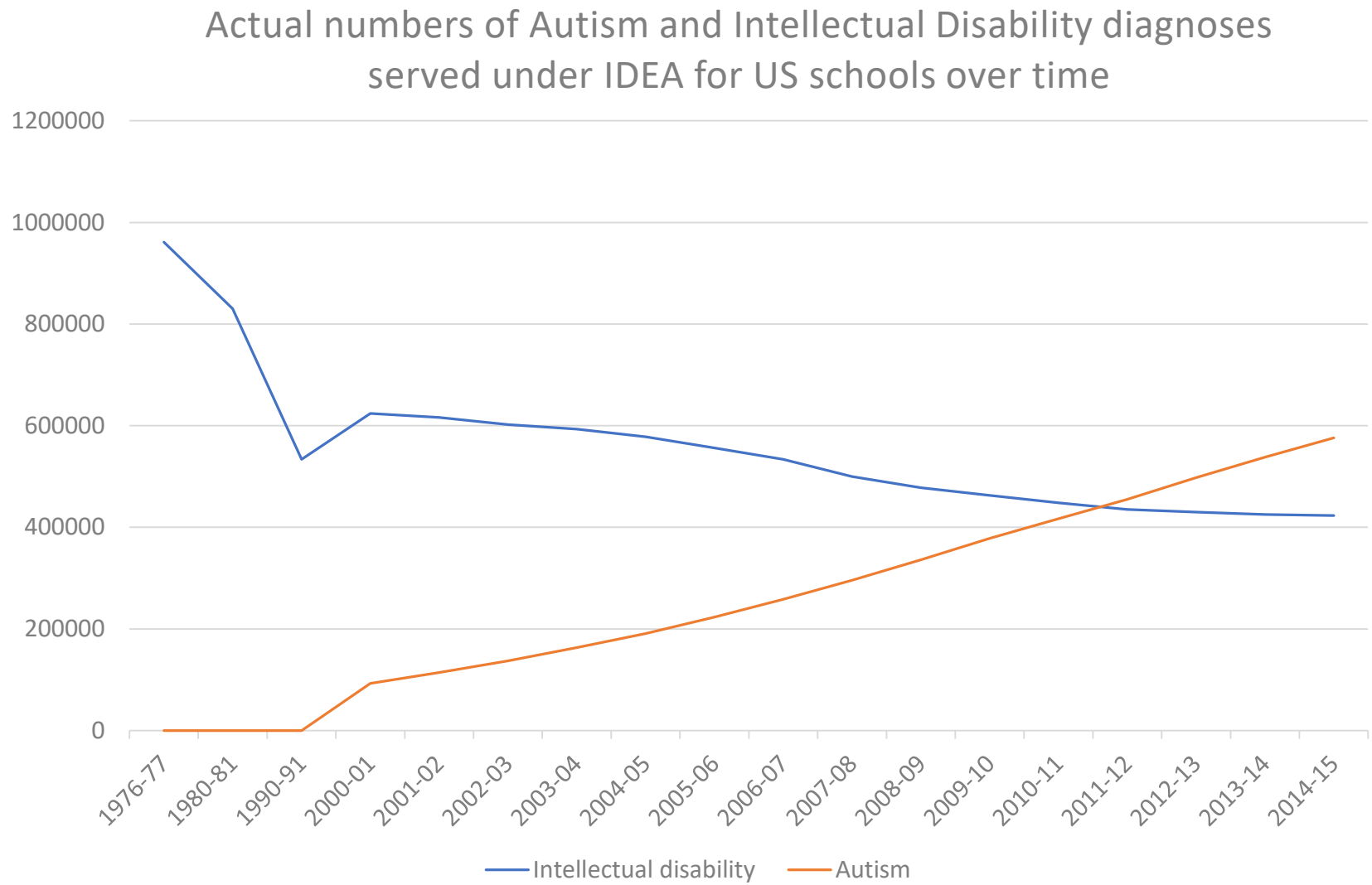
Explosion of autism prevalence over time



Source: Rice C. Encyclopedia of autism spectrum disorders. Volkmar F, editor. New York: Springer; 2013. pp. 3120–3125.

National Center for Educational Statistics

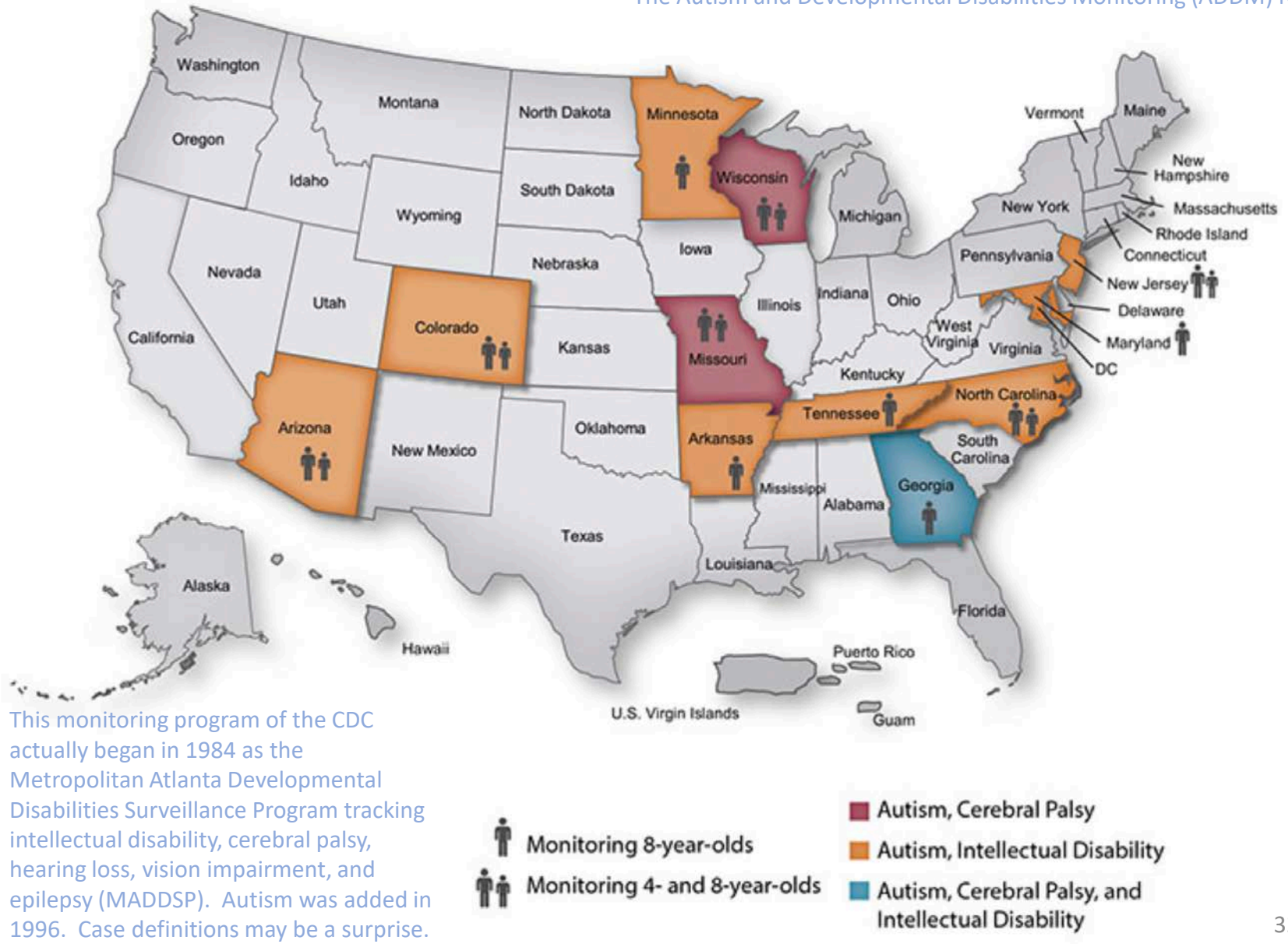
The Individuals with Disabilities Education Act (IDEA), enacted in 1975, 3-21 yrs



Source: U.S. Department of Education, National Center for Education Statistics. (2018). *Digest of Education Statistics, 2016* (NCES 2017-094), Chapter 2.

Current ADDM Network Sites, Tracking Years 2014–2016

The Autism and Developmental Disabilities Monitoring (ADDM) Network



This monitoring program of the CDC actually began in 1984 as the Metropolitan Atlanta Developmental Disabilities Surveillance Program tracking intellectual disability, cerebral palsy, hearing loss, vision impairment, and epilepsy (MADDSP). Autism was added in 1996. Case definitions may be a surprise.

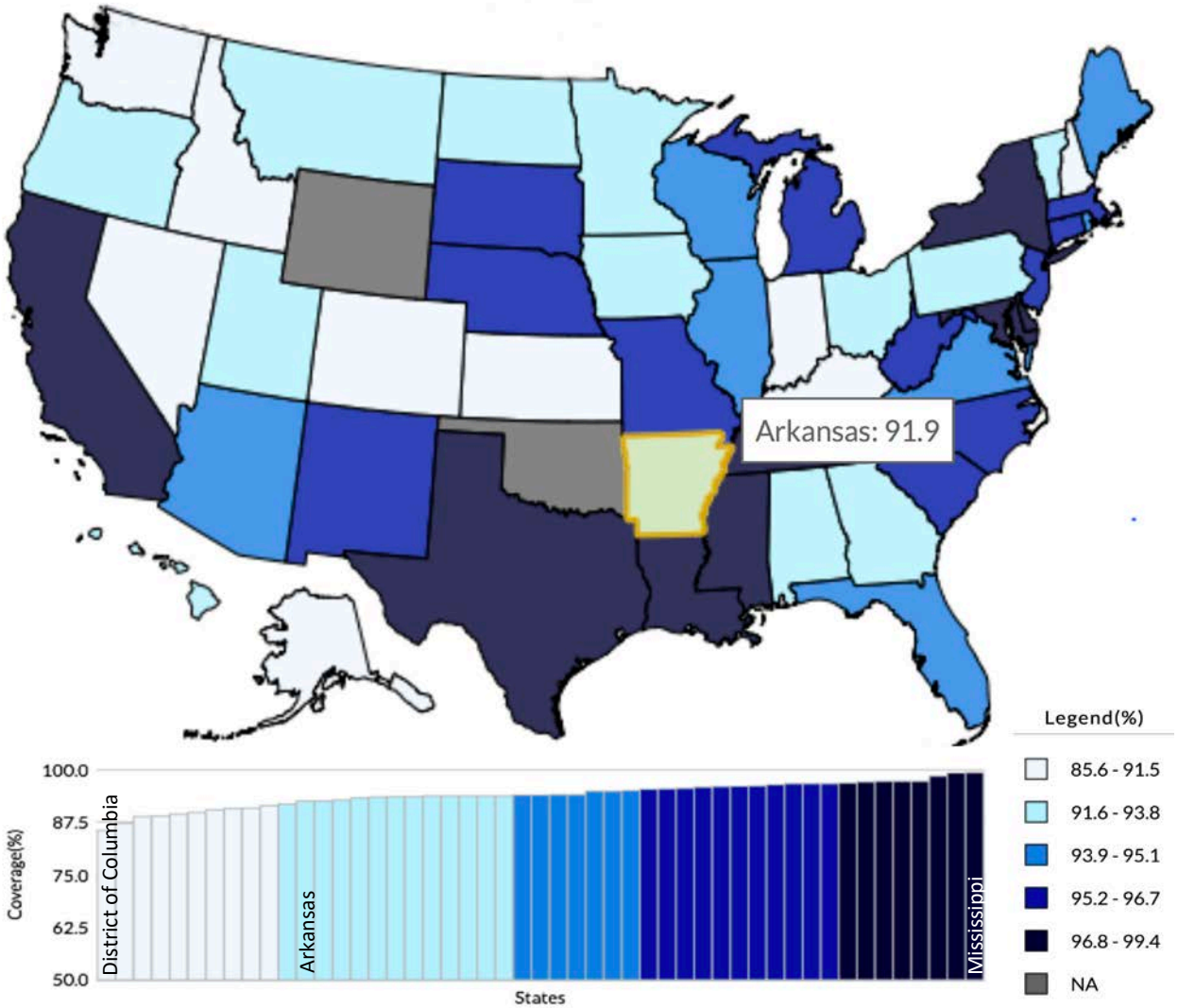
What Do ADDM Data Tell Us About Autism Spectrum Disorder (ASD)?

- **About 1 in 59 or 1.7% of children** have been identified with ASD, based on tracking in multiple areas of the United States.
- **Almost half of children identified with ASD have average or above average intellectual ability**; a decade ago, a third of children identified with ASD had average or above average intellectual ability.
- **ASD occurs among all racial, ethnic, and socioeconomic groups.** While a higher percentage of white children have been identified with ASD compared to black children, and even more so compared to Hispanic children, these differences are narrowing.
- **Boys are 4 times more likely** to be identified with ASD than girls.
- **Most children with ASD are diagnosed after age 4**, even though ASD can be diagnosed as early as age 2.

https://www.cdc.gov/ncbddd/autism/materials/addm-factsheet.html

Despite lingering autism concerns, MMR coverage remains high

Estimated MMR vaccination coverage among children enrolled in kindergarten by State and the United States, School Vaccination Assessment Program, 2016-17 school year



https://www.cdc.gov: schoolvaxview, 2016-17

The Power of vaccine Laws

California Senate Bill 277

- Eliminates personal and religious exemptions
- 93.2% vaccine coverage, up from 77.9% in 2011!

COUNTY OF MARIN

NEWS RELEASE

www.marincounty.org/news

For Immediate Release
April 13, 2017

Contact:
Dr. Matthew Willis
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Marin Childhood Vaccine Rates Highest Recorded
Evaluators credit statewide vaccine law in effect this school year

San Rafael, CA – Kindergarten immunization rates in Marin County are the highest they have been since 2000 according to new statewide data. This school year, 93.2 percent of Marin kindergarten students have received all of the immunizations required for school, an increase of 4.7 percent from last year. This is a dramatic change from the 2011/12 school year, when local immunization rates were at its lowest point, or 77.9 percent of kindergarten students.

This revelation is part of a new assessment conducted by the California Department of Public Health looking at children attending kindergarten in California in the 2016-17 school year. The report found that vaccination rates among kindergartners statewide are at their highest point since 2001. California state law requires immunizations to protect against measles, whooping cough, chicken pox and several other diseases.

One explanation for the statewide trend is the passage of Senate Bill 277, legislation enacted in 2016 that eliminates personal and religious exemptions from immunization requirements for children in childcare and public and private schools. This was the first school year that new Kindergarten and 7th-grade students were no longer allowed to submit a personal belief exemption (PBE). Students in their second

What factors influence decisions about vaccination?

Contextual	Individual and group influences	Vaccine/vaccination specific issues
• **Media and public communication** • Local politics • Religion, culture • Accessibility of services • **Trust in authorities**	• Beliefs and attitudes about health and disease prevention • **Knowledge and awareness** • Poor quality health service experience	• **Mode of administration** • Source of the vaccine • **Vaccination schedule** • Any costs associated with vaccination • Knowledge/attitudes of healthcare professionals

How is Vaccine hesitancy expressed?

World Health Organization

Addressing vaccine hesitancy

- **No single strategy** can address all of the different dimensions of hesitancy
- **What health workers (HW) say** and **how they interact** with the patient/caregiver can strongly influence vaccine acceptance

World Health Organization

How can a health worker identify hesitant individuals?

Open the conversation with a **presumptive statement or announcement, presenting vaccination as a default:**

"Now it's time for Sarah's vaccines."
"Today we'll give Sarah her vaccines"

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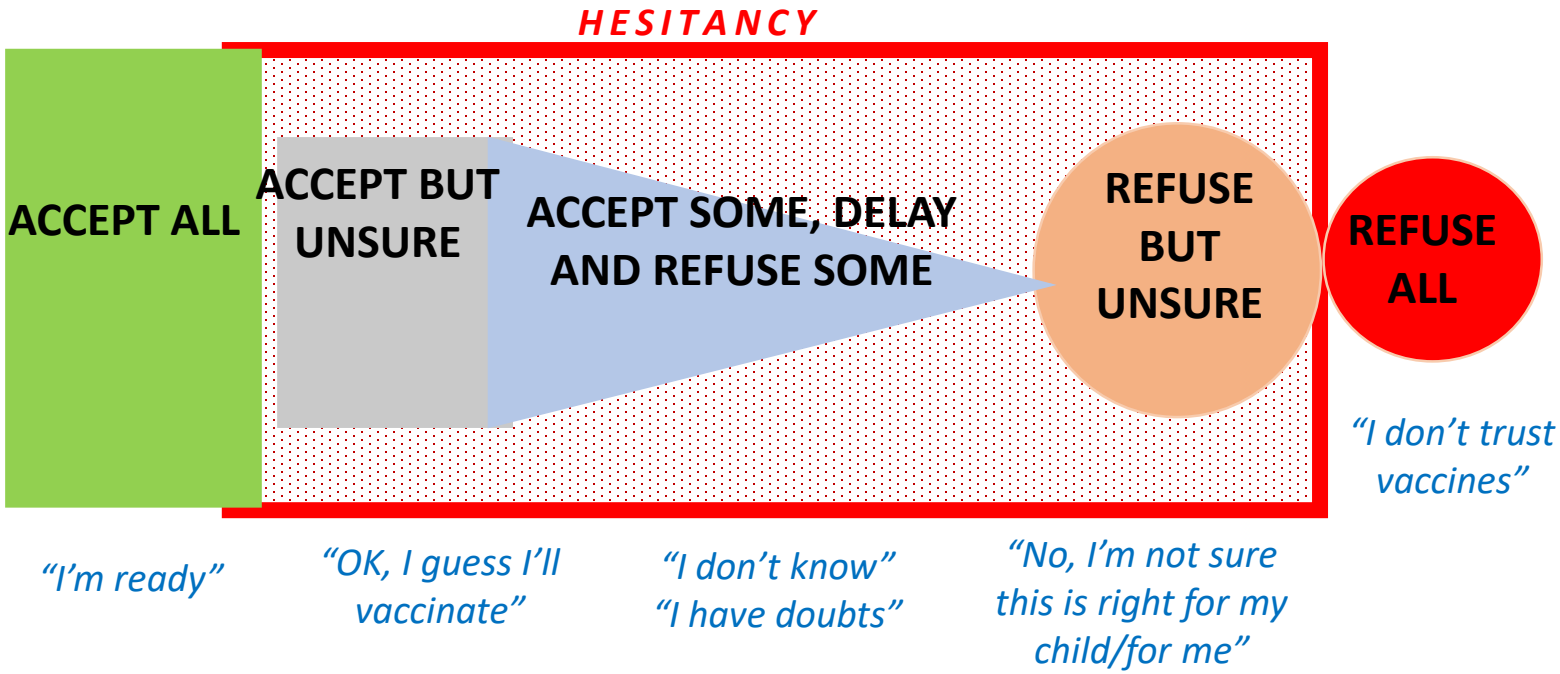
Is the caregiver/patient hesitant?

Examples of some responses…



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If hesitant, how to proceed?

Accept all	Vaccine hesitant	Refuse all
Offer positive encouragement: *"That is great!"* **Administer the vaccines**	**A conversation guided by the MOTIVATIONAL INTERVIEWING method**	• Do not **dismiss from the clinic (debated)** • **Not a debate -** focus on **their concerns** • **Leave space** for any discussion • Offer **to refer to other health professionals** who can discuss further (if available) • Explain **their responsibilities** if not accepting vaccination, e.g. not protected against diseases, may get ill, may need specialised health care…, and to watch for signs and symptoms of diseases in the community.

World Health Organization

Motivational Interviewing: What is it?

- Motivational interviewing is a counseling method that helps people resolve ambivalent feelings and insecurities to find the internal motivation they need to change their behavior. It is a practical, empathetic, and short-term process that takes into consideration how difficult it is to make life changes.
- In a supportive manner, a motivational interviewer encourages clients to talk about their need for change and their own reasons for wanting to change. The role of the interviewer is mainly to evoke a conversation about change and commitment. The interviewer listens and reflects back the client's thoughts so that the client can hear their reasons and motivations expressed back to them. Motivational interviewing is generally short-term counseling that requires just one or two sessions.

Source: https://www.psychologytoday.com/us/therapy-types/motivational-interviewing

For conversations with hesitant individuals:

Motivational interviewing

- Aimed at **exploring** reasons (such as fear) for hesitancy and **changing attitudes and behaviour**

Collaborative

Patient-centred

With a specific objective

It is frequently observed that, incorrectly…

Hesitant caregivers/patients may be offered a response such as:

- *"Vaccines are good for you. You must get them."* **(Directive)**
- *"You are wrong. Research supports vaccines."* **(Argumentative)**

Further, little or no time is spent on **exploring the reasons and motivations** behind the hesitancy about vaccination.

This style of communication can contribute to DECREASING TRUST between the health workers and the caregivers/patients.

→ *Vaccine uptake does not improve*

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What is the objective for the health worker?

To move the caregiver to accept vaccination

To move the caregiver/patient who is hesitant to accept vaccination, and increase vaccine uptake

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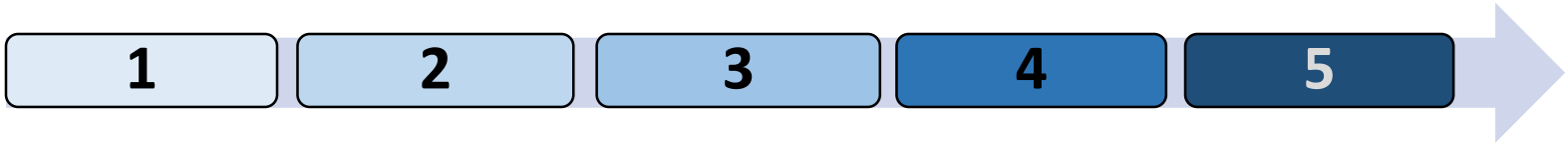

If the individual is hesitant, proceed with the following 5 steps for a more effective conversation

1

Ask **open-ended questions**

Open questions using *"what", "why", "how", "tell me…"* to explore reasons behind hesitancy

Close ended questions *Answer is only a yes or no*	**Open ended questions** **Answer goes beyond a simple yes or no**
Do you agree? *Did you understand?*	**What do you think?** **What did you understand?**

"Tell me, what are your concerns about your child receiving their needed vaccines today?"

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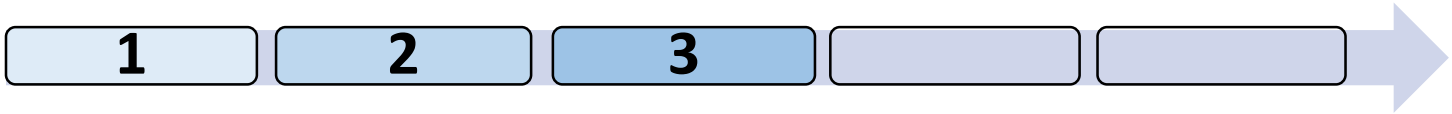
Reflect and respond -empathy

Simple reflection: directly repeating what the person says.
Complex reflection: repeating what you think the person means.

Caregiver: "I know vaccinating will help my child but I am afraid."

- *Simple reflection: "I understand that you are afraid."*
- *Complex reflection: "You want to make the best choice for your child but you are nervous."*

→ Use both types of statements to acknowledge concerns.



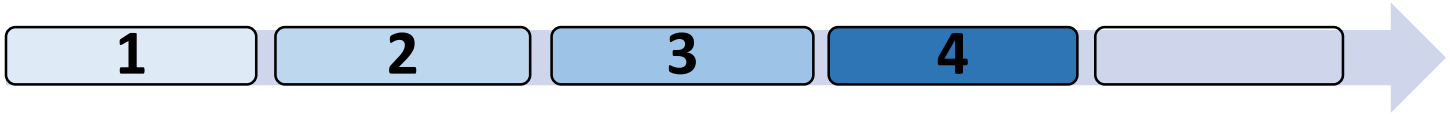
Affirm the strengths

"It is great that you are starting to think about vaccines."

Validate concerns

"The health of your children is important to you."

"Protecting yourself from illness is important for you and the health of your community."



Ask-Provide-Verify

As the conversation evolves, explore the concerns further:

Ask

Ask information on what the client knows about vaccines

"So what do you already know about vaccination?"

Provide

Share information on vaccines

"Could I provide you with some information, based on what you just shared?"

Verify

Verify what they understood and will do with this information

"Given our discussion, how do you view the decision now? Remember I am here to help talk through any concerns you may have."

Please note: Be careful not to add potential concerns by mentioning issues not raised by the parent/caregiver.

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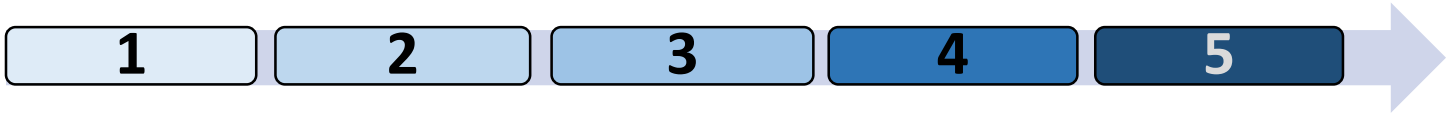

Determine the action

IF YES: Vaccinate and offer praise to affirm the positive decision.

IF FOR FOLLOW-UP: Schedule another visit for more time or Refer caregiver/patient to a specialist/community vaccine advocate:

"Let's revisit this once you have had a chance to think more about vaccination. When could you come back?"

IF REFUSAL: Do not debate. Leave the door open:

"I understand. Please know that if you change your mind and want to talk about vaccinating, we are always available."

If the caregiver/patient's wishes are NOT to vaccinate, **ensure they understand their decision, and explain their responsibilities** for protecting the health of their child/themselves and others.

"I understand that you have decided not to vaccinate today. Please know you are taking an important responsibility. What this means is…

1) *If your **child/you are ill**, you **must seek medical assistance***
2) *When talking to medical/clinic staff, you **must tell them** that you/your child has not received all the vaccines recommended.*
3) *You **must learn about the signs and symptoms** of vaccine preventable diseases."*
4) *Have them sign the vaccine refusal form from the AAP.*

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Reference reading on caregiver roles and responsibilities for not accepting vaccines:
http://www.euro.who.int/data/assets/pdffile/0004/160753/If-you-choose_EN_WHO_WEB.pdf?ua=1

Legal concerns

Refusal to Vaccinate

Child's Name _____ Child's ID# _____

Parent's/Guardian's Name _____

My child's doctor/nurse, _____, has advised me that my child (named above) should receive the following vaccines:

Recommended	Declined
☐ Hepatitis B vaccine	☐
☐ Diphtheria, tetanus, acellular pertussis (DTaP or Tdap) vaccine	☐
☐ Diphtheria tetanus (DT or Td) vaccine	☐
☐ *Haemophilus influenzae* type b (Hib) vaccine	☐
☐ Pneumococcal conjugate or polysaccharide vaccine	☐
☐ Inactivated poliovirus (IPV) vaccine	☐
☐ Measles-mumps-rubella (MMR) vaccine	☐
☐ Varicella (chickenpox) vaccine	☐
☐ Influenza (flu) vaccine	☐
☐ Meningococcal conjugate or polysaccharide vaccine	☐
☐ Hepatitis A vaccine	☐
☐ Rotavirus vaccine	☐
☐ Human papillomavirus (HPV) vaccine	☐
☐ Other _____	☐

I have been provided with and given the opportunity to read each Vaccine Information Statement from the Centers for Disease Control and Prevention explaining the vaccine(s) and the disease(s) it prevents for each of the vaccine(s) checked as recommended and which I have declined, as indicated above. I have had the opportunity to discuss the recommendation and my refusal with my child's doctor or nurse, who has answered all of my questions about the recommended vaccine(s). A list of reasons for vaccinating, possible health consequences of non-vaccination, and possible side effects of each vaccine is available at www.cdc.gov/vaccines/pubs/vis/default.htm. I understand the following:

- The purpose of and the need for the recommended vaccine(s).
- The risks and benefits of the recommended vaccine(s).
- That some vaccine-preventable diseases are common in other countries and that my unvaccinated child could easily get one of these diseases while traveling or from a traveler.
- If my child does not receive the vaccine(s) according to the medically accepted schedule, the consequences may include
  - Contracting the illness the vaccine is designed to prevent (the outcomes of these illnesses may include one or more of the following: certain types of cancer, pneumonia, illness requiring hospitalization, death, brain damage, paralysis, meningitis, seizures, and deafness; other severe and permanent effects from these vaccine-preventable diseases are possible as well).
  - Transmitting the disease to others (including those too young to be vaccinated or those with immune problems), possibly requiring my child to stay out of child care or school and requiring someone to miss work to stay home with my child during disease outbreaks.
- My child's doctor and the American Academy of Pediatrics, the American Academy of Family Physicians, and the Centers for Disease Control and Prevention all strongly recommend that the vaccine(s) be given according to recommendations.

Nevertheless, I have decided at this time to decline or defer the vaccine(s) recommended for my child, as indicated above, by checking the appropriate box under the column titled "Declined." I know that failure to follow the recommendations about vaccination may endanger the health or life of my child and others with whom my child might come into contact. I therefore agree to tell all health care professionals in all settings what vaccines my child has not received because he or she may need to be isolated or may require immediate medical evaluation and tests that might not be necessary if my child had been vaccinated.

I know that I may readdress this issue with my child's doctor or nurse at any time and that I may change my mind and accept vaccination for my child any time in the future.

I acknowledge that I have read this document in its entirety and fully understand it.

Parent/Guardian Signature: _____ Date: _____

Witness: _____ Date: _____

I have had the opportunity to rediscuss my decision not to vaccinate my child and still decline the recommended immunizations.

Parent's Initials: _____ Date: _____ Parent's Initials: _____ Date: _____

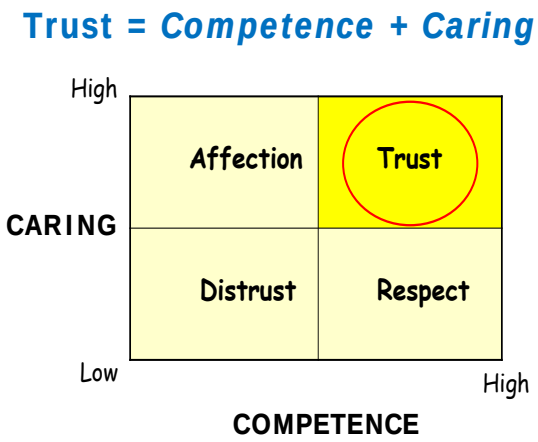
https://www.aap.org/en-us/Documents/immunization_refusaltovaccinate.pdf

- Vaccine refusal does carry significant risks to the child, to those exposed to the child should they become ill with a VPD and legal risks to health providers. It is incumbent of a physician to provide the needed vaccines to their patient. It must be proven that the parent has indeed refused to give their child the needed vaccines.
- Clear written explanation of risks and a signed release of liability are a must to continue patient care.
- Document the ICD-10 code for the the vaccine refusal: Z28.82 -refusal to vaccinate

Opportunities for building trust in vaccines

Health workers can build trust in vaccines by being transparent and competent:

- Sharing data on diseases that can be prevented by vaccination
- Sharing information on safety and risk
- Explaining why vaccines are recommended and when (including schedules and doses)
- Vaccine manufacturing safety standards and national licensing
- Building trust in national decision-making processes



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Emotions matter when building trust

Remember to take into account the feelings and concerns of caregivers:

- Offer the time, space, and the environment for caregivers to digest information and ask questions
- Acknowledge and validate the perceptions of caregivers before advising them
- Demonstrate listening, be authentic and show you care
- Always tell the truth, even if admitting you do not know

When applying these approaches…

Always ADAPT the communication

to YOUR setting

Be sensitive to culture, social norms, religion, level of education, etc.

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Frequently asked questions

BY HEALTH WORKERS

How long should my conversation take with a vaccine hesitant individual?

- Guided conversations about vaccinations do take more time. Develop a plan as to how to implement this into your practice. The 1 month visit is a great time to begin this conversation at the office on a routine basis.
- We suggest focusing on one concern during your interaction, discussed in a competent and caring manner.
- If more time is needed, ask if the caregiver/patient can wait until after others are vaccinated, or book another visit for more time.
- Proper CPT and ICD10 coding provides the financial resources needed to provide vaccine counselling.

Vaccine Hesitancy cases, Case #1

- Case #1

  A term newborn baby is born to a primiparas woman and her husband. The baby is normal in all respects. As you begin rounds for the day, the nurse informs you that the parents have refused the hepatitis B vaccination that is on the routine orders at the birthing hospital. What to do next?

  -Communicate using motivational interviewing techniques:

  As you speak the parents it becomes clear that they were not expecting to receive a vaccination in the hospital. This was a surprise. They intend to fully immunize their child. As you explain the reasoning behind the timing of the hepatitis B vaccination, to prevent maternal to infant hepatitis B transmission, their hesitancy fades and the child is cleared to receive the hepatitis B vaccination.

  Time spent counselling: 5 minutes.

Vaccine Hesitancy cases, case #2

- Case #2

  1 month old baby presents to your office for a routine health supervision visit. The child is normal in growth and development. The physical exam is normal. Upon completion of the exam, you explain to the mother that you plan vaccinations on the next visit at 2 months of age. The mother responds that she is considering delaying vaccinating her child. She has read a lot on the internet about vaccine dangers. She believes that vaccines are now unnecessary: the diseases that vaccines prevent are gone. Why get the vaccines anyway? Her boyfriend got the flu last year despite getting a flu shot. They don't really work anyway.

  How to proceed?

Vaccine Hesitancy cases, case #2

- Case #2

  Strategy:

  1. Address complacency by showing her a video of an infant with pertussis. VPD are real and present now. 2 minutes.
  2. Talk about the relative efficacy of different vaccines. 8 minutes.

  Listen to her concerns.

  Have the mother download "Vaccines on the Go"

  Provide Vaccine information sheet for DTaP vaccine

  Extra time spent: 15 minutes. Extra time counseling is including in the preventative medicine services. Coding the visit:

ICD-10-CM	CPT
Z00.129 Well child exam	99391, Preventive med. Services, <1 yr
Z71.89 other specified counseling	

Vaccine Hesitancy cases, Case #3

- Case #3

  A 23 month old male presents to your office as a new patient for a sick visit. The child has been ill with URI symptoms for two days and has a fever to 100.5 degrees F. The child is normal in all respects except that he has rhinorrhea, low grade fever and has had no immunizations to date. The family history is positive for a 5 year old sibling with severe autism who has been partially immunized. The patient was recently dismissed from another pediatric practice for vaccine refusal.

  How to proceed?

Vaccine Hesitancy cases, Case #3

- Case #3

  Proceed with care for the URI. Nasal suction, humidity, fluids.

  Address the vaccine hesitancy with motivational interviewing. You find that the mother is fearful that her older child's autism was caused by previous vaccinations that were received. Listen with empathy. Hear the concerns. Validate the emotion. Schedule another appointment for vaccination counselling.

ICD 10 CM	CPT
J06.9 -URI	99202 25 Office visit, new pt.
Z28.82 -refusal to vaccinate	99401, Individual preventive medicine counseling, 15 minutes
Z71.89 –other specified counselling	

Summary: How to handle vaccine hesitancy

- Providers should:
  1. Normalize Vaccination. Communicate your intention to vaccinate the patient.
  2. Know the vaccine schedule. Check vaccine status at every visit.
  3. Take every chance to vaccinate (not just well child visits).
  4. Develop standing orders to administer vaccinations.
  5. Follow-up with between visit reminders to help remind parents to vaccinate (texts, EHR reminders)

Summary: How to handle vaccine hesitancy

- Provide vaccine safety information
  - Emphasize vaccine safety with good websites, videos, and iphone apps. e.g. Dr. Paul Offit, CHOP
    - Vaccines on the go, iphone and Andoid app
    - Children's Hospital of Philadelphia vaccine education center
    - www.vaccineinformation.org
    - www.vaccinateyourbaby.org
- Seek to stop disease complacency
    - e.g. Mayo Clinic Pertussis Video
- Communicate state vaccine laws and requirements
- Lobby your state officials to eliminate personal and religious vaccine exemptions
- Prove vaccine information handouts
    - CDC vaccine information sheets
- Clear, consistent vaccine recommendations. Don't waffle!

Summary

- Parents are concerned about vaccine safety. They are deluged with information, both accurate and false and often cannot make sense of it all.
- Parents want to do what is best for their child. What is best for them many times is not clear.
- After careful conversation aimed at addressing their concerns and fears with reliable information almost all parent are convinced of the importance of vaccinating their children and they will give the needed vaccinations.
- Some parents cannot be convinced no matter how long you talk to them. So, wisely budget your time.

Assessment question 1

Complacency about vaccine preventable diseases contributes to vaccine hesitancy in the population because of:

a) Resistance of a subset of the population to political pressure mandating vaccination.

b) Concerns over the safety of vaccines.

c) A low perceived risk of vaccine preventable disease risk by a subset of the population

d) All of the above

Assessment question 2

The case definition and prevalence of autism has been stable for the past 18 years.

a) True

b) False

Assessment question 3

Current pertussis reported prevalence and disease severity is disproportionally tilted toward adults.

a) True

b) False

Paul

Suriname River Boat driver
2018