

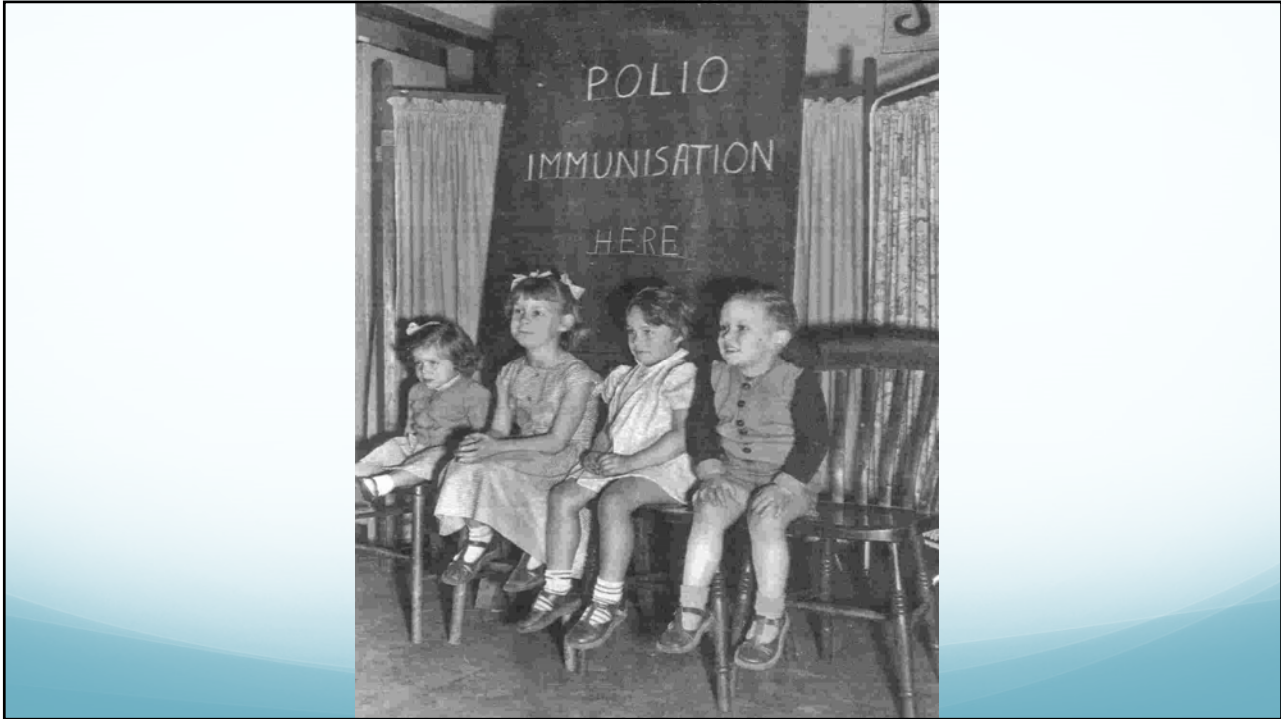
Take Your Best Shot

*Adolescent Immunizations for the
Primary Care Physician*

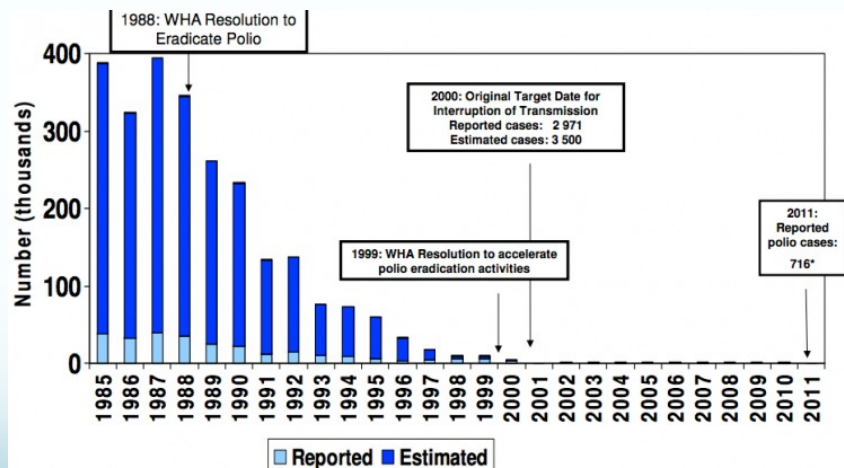
Are Immunizations Even Necessary Anymore?

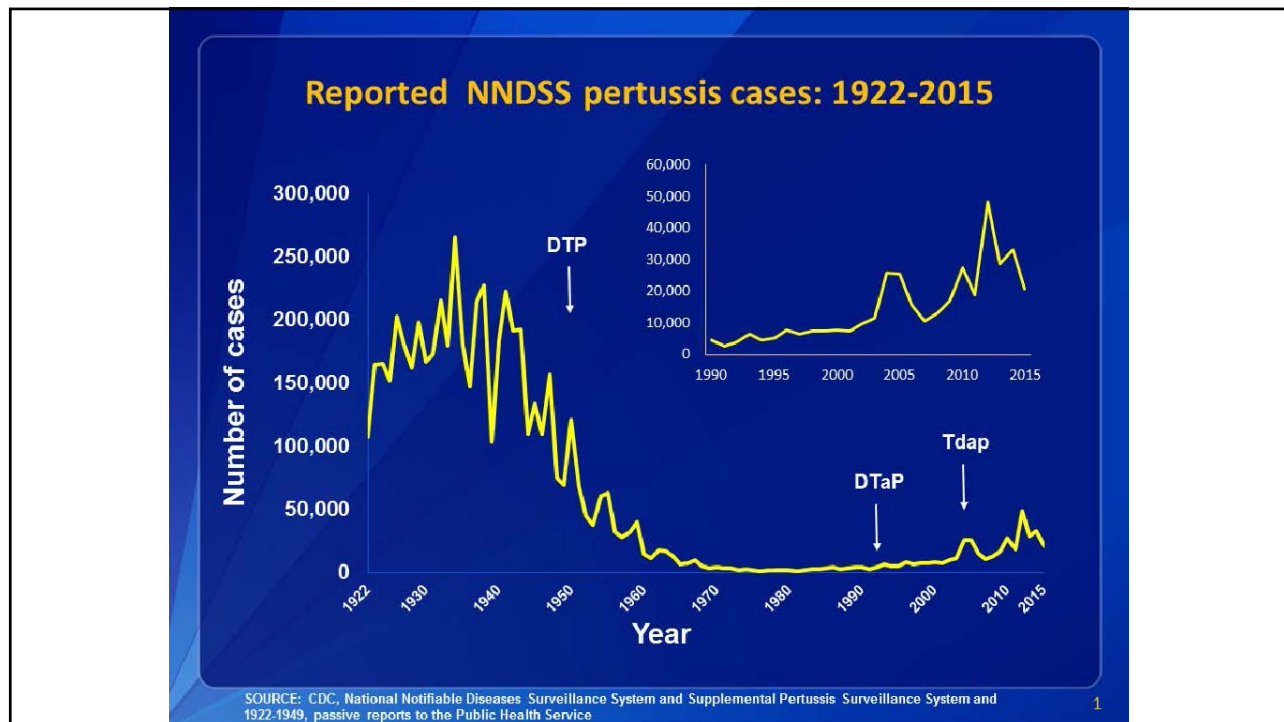
2017 (OSHD)

- 143 cases of pertussis
- 168 cases of mumps
- 113 cases of invasive H. influenza disease – pneumonia, septicemia, epiglottitis
- 45 deaths from Influenza, 1429 hospitalized



Polio Eradication





Why Do Teens Need Vaccines?

Fading Immunity

No Previous Exposure

Social Habits

Changing Viruses



What Immunizations Do They Need?

Meningococcal Vaccine

Tetanus-Diphtheria-Acellular Pertussis Vaccine

Influenza Vaccine

Human Papillomavirus (HPV) Vaccine

Meningococcal Disease

Neisseria meningitidis

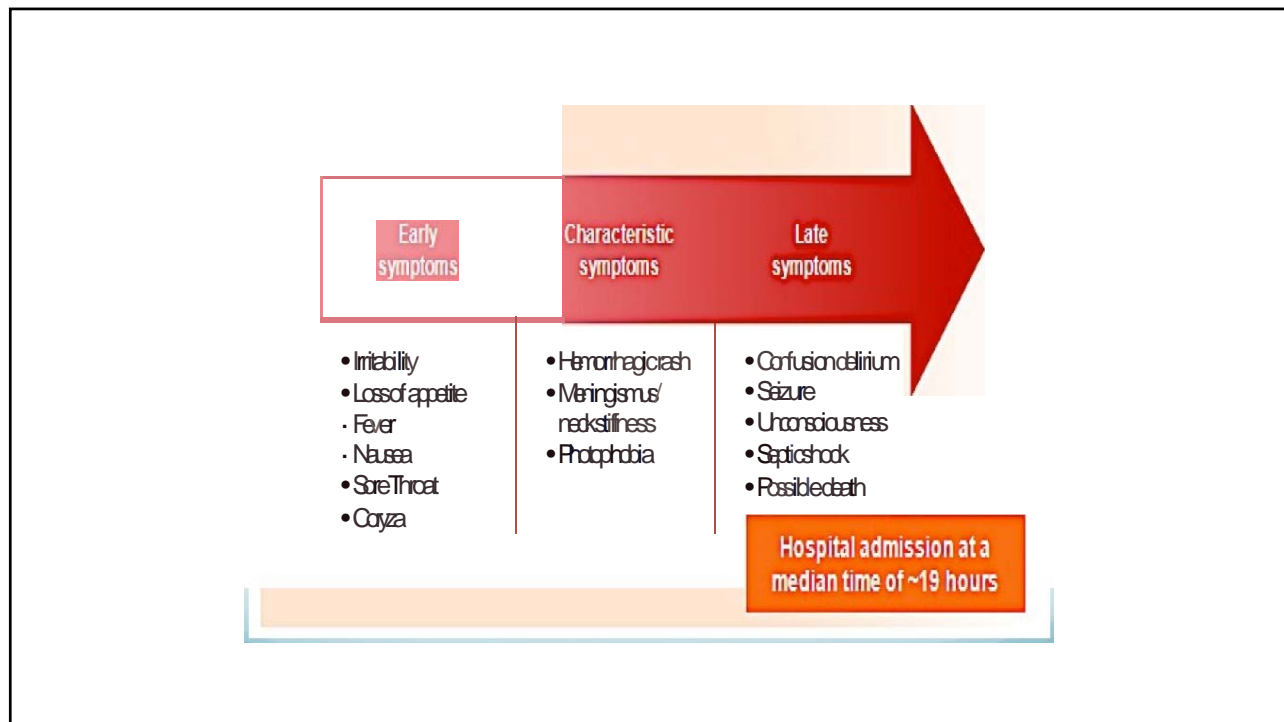
Infects 1000 to 1200 people in U.S. yearly

Mortality 10 – 15%

Morbidity 11 – 19%

Infants and Young adults most at risk





Complications of Meningococcal Infections

Seizures

Amputation

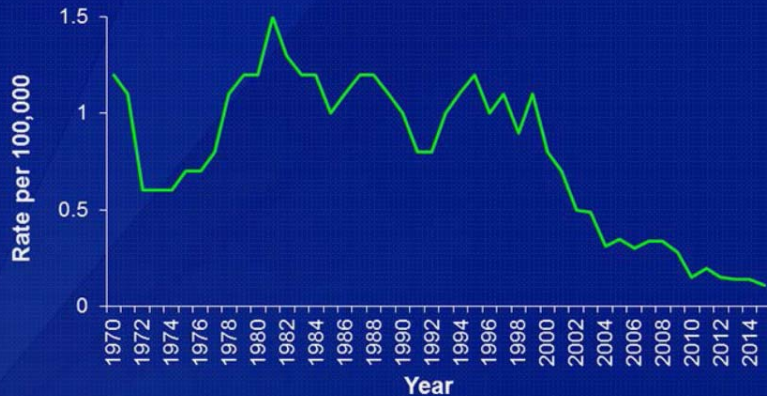
Hearing loss

Mental retardation

Strokes



Meningococcal Disease Incidence, United States, 1970-2015



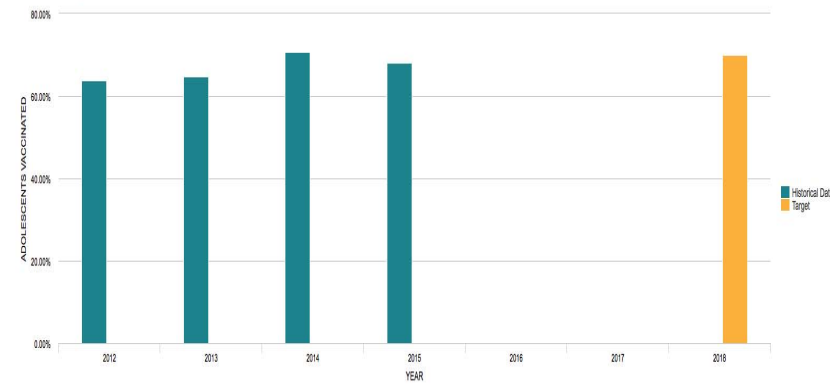
SOURCE: CDC; 1970-1996 National Notifiable Diseases Surveillance System, 1997-2015 Active Bacterial Core surveillance estimated to U.S. population

Meningococcal Vaccines

- **Conjugate Vaccine (MCV4)**
- Preferred for patients 9 months to 55 years
- For serotypes A,C, Y, and W-135
- Two commercial vaccines available
- Two doses recommended
- **Serogroup B Vaccine**
- Recommended for ages 16-23
- Optional for high risk groups
- Two commercial vaccines available
- 90% not vaccinated

Oklahoma

Meningococcal Vaccination



Who Should Get the Meningococcal Vaccine?

- College freshman living in dormitories
- Travelers or residents living in endemic areas
- Persons possibly exposed to someone infected
- Patients after splenectomy
- Patients with an immune system disorder
- Adolescents entering middle school (11 to 12 years) or high school (15 years)

Meningococcal Vaccine Side Effects

- Local redness or pain
- Fever
- Fainting spells
- Severe allergic reactions – dyspnea, weakness, wheezing, tachycardia, urticaria
- Possible temporal relationship with Guillian Barre Syndrome



Tdap – More Important Than Ever

- First vaccine to protect teenagers and adults from pertussis

Pertussis – Still a Killer

- 27,550 cases reported in 2010
- 15-20 infant deaths yearly
- Vaccine prevents transmission to vulnerable populations
- Cocooning prevents disease spread
- Decreases the incidence of transmission by 90%

Tdap: What You Should Know

One dose recommended for adolescents 11-12 years of age

Few side effects

Contraindicated in persons with a history of anaphylaxis or encephalopathy

Recommended for every unvaccinated pregnant woman

Can be used in wound management



Influenza

225,000 hospitalizations

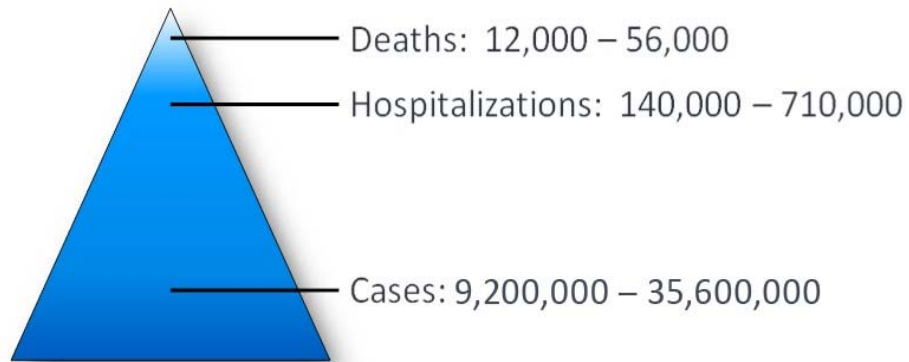
36,000 deaths

Highest rates of serious illness in children, the elderly and patients with pre-existing conditions

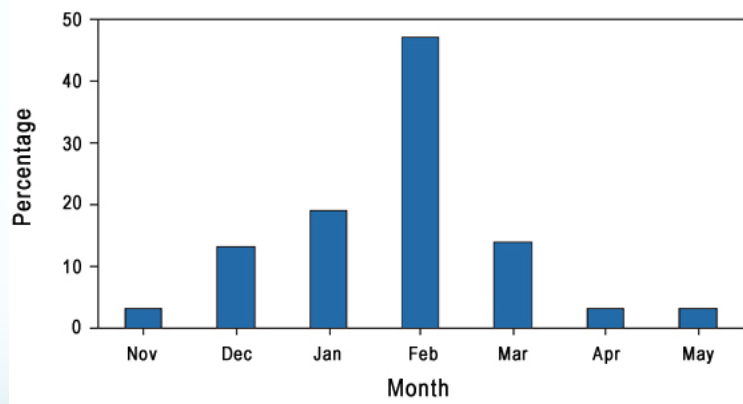
People can shed virus particles 1-3 days before illness



Impact of Influenza in the US since 2010



Influenza Cases by Month



Who Should Definitely Get the Flu Vaccine?

- Children younger than 5
- Adults age 65 years and older
- Pregnant women
- American Indians and Alaskan natives
- Chronic illness- asthma, diabetes mellitus, COPD, heart disease, obesity
- Weakened immune systems – cancer, HIV
- Neurologic kidney, endocrine, liver or metabolic disorders



Which Flu Shot to Choose?

Inactivated vaccine, trivalent

- Standard dose trivalent shot – grown in eggs
- High dose trivalent shot – age 65 and older
- Recombinant trivalent shot – age 18+, pregnant women
- Trivalent shot made with adjuvant – age 65+ (new)

Inactivated vaccine, quadrivalent

- Quadrivalent flu shots- for various ages, grown in eggs
- Intradermal quadrivalent flu shot – 18-64 years
- Quadrivalent flu shot containing virus grown in cell culture – age 4 and above
- Recombinant quadrivalent flu shot – age 18+, pregnant women (new)

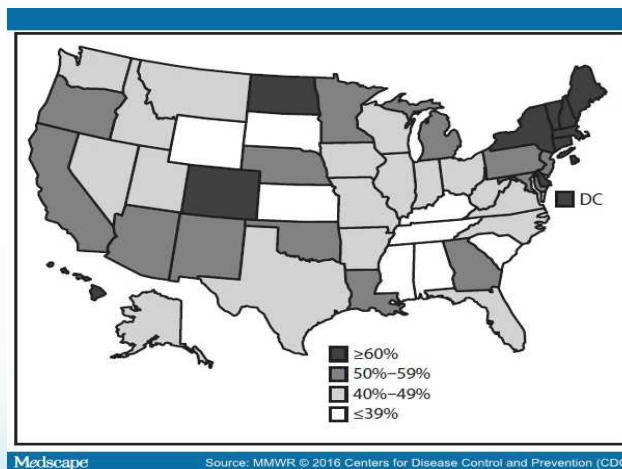
The HPV Disease Burden

- 4% of all cancers associated with HPV
- Sexually transmitted
- Peak prevalence between age 18 and age 30
- Lifetime risk of infection 50-80%
- Most infections clear with time, 10-20% don't
- Men have significant disease role

HPV Vaccines- A Step Forward

- Two vaccines licensed in the United States
- Recommended for men and women between ages 9 through 26
- Two dose regimen
- Most common side effects – local inflammation, mild fever, fainting, headache, G.I complaints
- Contraindications – pregnancy, allergy to HPV vaccine, moderate to severe illness

HPV Coverage by State



Medscape

Source: MMWR © 2016 Centers for Disease Control and Prevention (CDC)

A Word About Catch-up Vaccines

Hepatitis A

Hepatitis B

Polio

Varicella

Measles, Mumps and Rubella
(MMR)



Vaccines for Extra Health Risks

- Special work environments
- Teens with chronic diseases
- Behaviors that increase risk

So Why Don't They Get Their Shots?



Parental and Patient Barriers

- **I DON'T LIKE SHOTS!**
- Parents may not know what vaccines are needed.
- Parents may not know child's vaccine status.
- Parents have concerns about vaccine safety.
- Parents may face time or cost barriers.
- Lack of concern over need for vaccines

“Some doctors will say anything to get parents to vaccinate, even if it doesn't make sense or is an outright lie. They spread this incredible baloney to make parents like you feel guilty, and to create tension between parents of vaccinated and non-vaccinated children. It is a ploy to coerce you into vaccinating your child.”

ThinkTwice Global Vaccine Institute

Provider Barriers to Vaccination

- Time
- Cost
- Lack of Information



How To Increase Vaccination Rates

- Recommend the vaccine
- Send patient reminders
- Use true contraindications only
- Give all recommended vaccines
- Stay open during times when patients can come in.
- Use a team approach to vaccination
- Document all vaccinations and keep records handy

How Can I Get More Information?

- Centers for Disease Control and Prevention
www.cdc.gov/vaccines
1-800-232-4636
- Vaccine Information Center
www.vaccine.chop.edu
- Immunization Action Coalition
www.immunize.org
- Contact your local or state health department

Call

