



May 14, 2019

Agenda

- Didactic: *Inpatient Vaccinations*
- Case Discussions

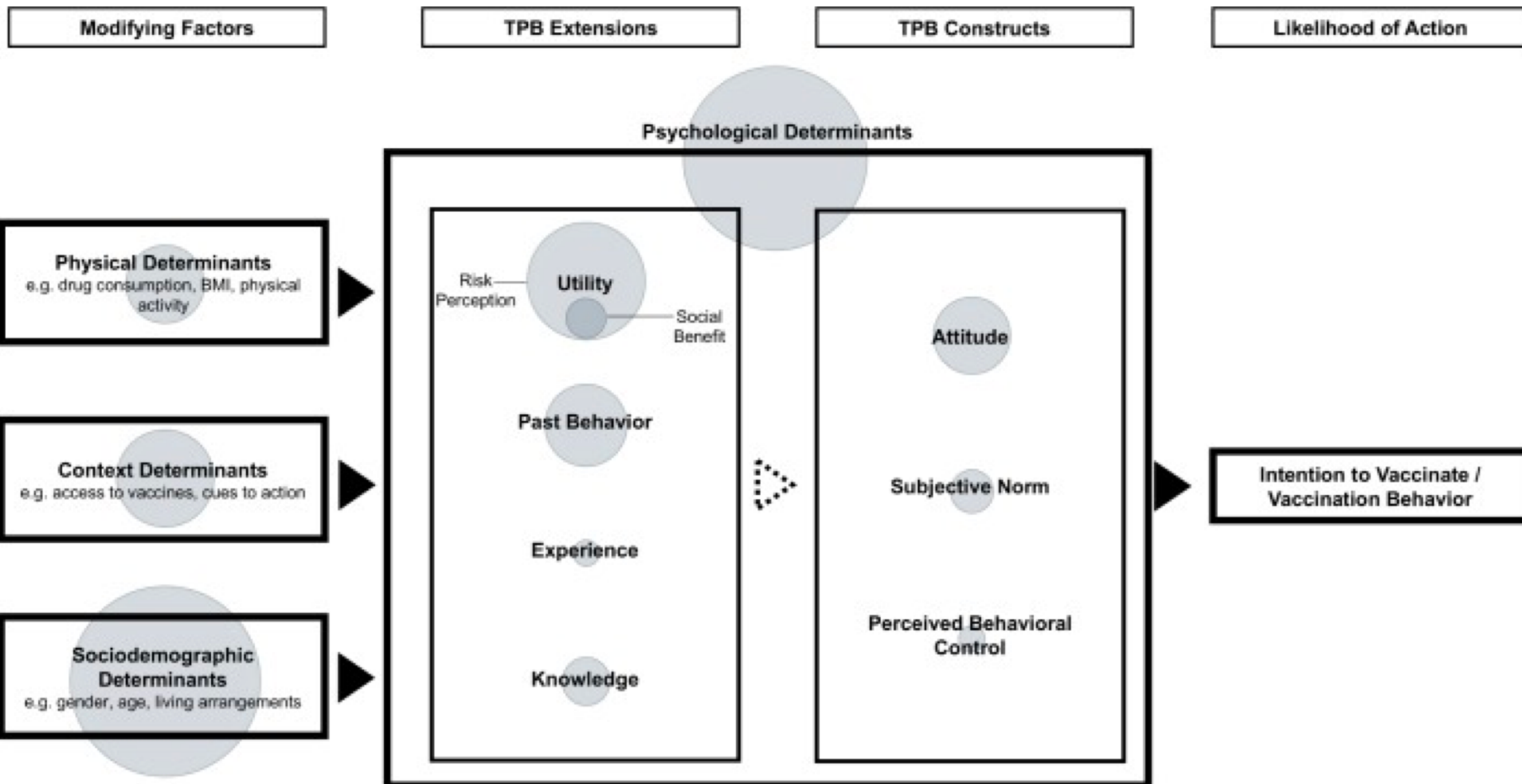
Questions

What vaccine(s) does your facility provide for inpatients?

- None
- Influenza
- Pneumococcus
- Influenza and pneumococcus
- Other



Barriers to Vaccination



Vaccines in the Adult Schedule

- *Haemophilus influenzae* type B
- Hepatitis A
- Hepatitis A and hepatitis B
- Human papillomavirus virus
- Influenza
- MMR
- Meningitis A/C/W/Y/B
- PCV-13
- PPSV-23
- TDaP
- Varicella
- Zoster

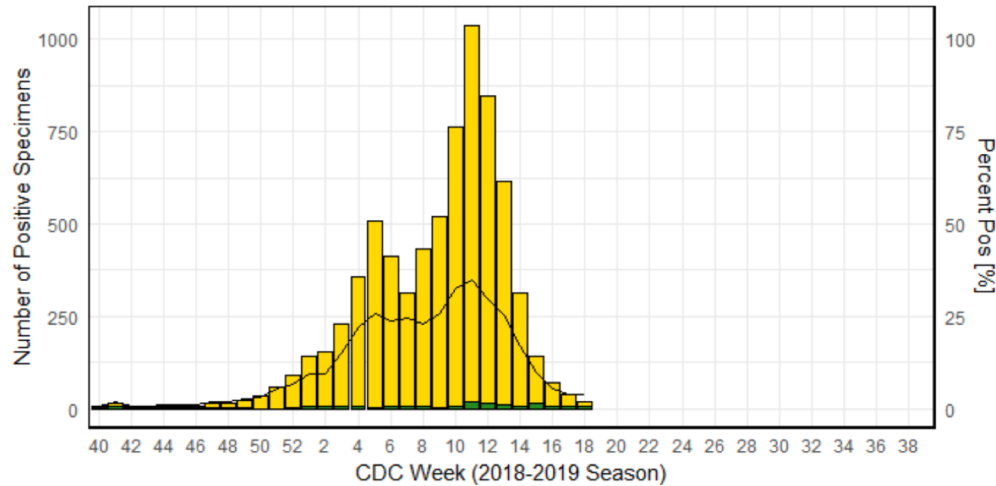


Why Vaccinate Inpatients?

- **Ideal opportunity for vaccination**
 - Time to identify risk factors
 - Can review available data
 - Short cycle time for reminders and reasonable to track
 - Conversations/Q&A by MD, APP, RN, PharmD
- The Joint Commission, 2012
 - IMM-1a Pneumococcal immunization (PPV23) overall
 - IMM-1b Pneumococcal immunization (PPV23) $\geq 65y$
 - IMM-1c Pneumococcal immunization (PPV23) high risk populations 6y-64y
 - IMM-2 Influenza immunization
 - (1a, 1b, 1c retired in 2014, 2 no longer required)



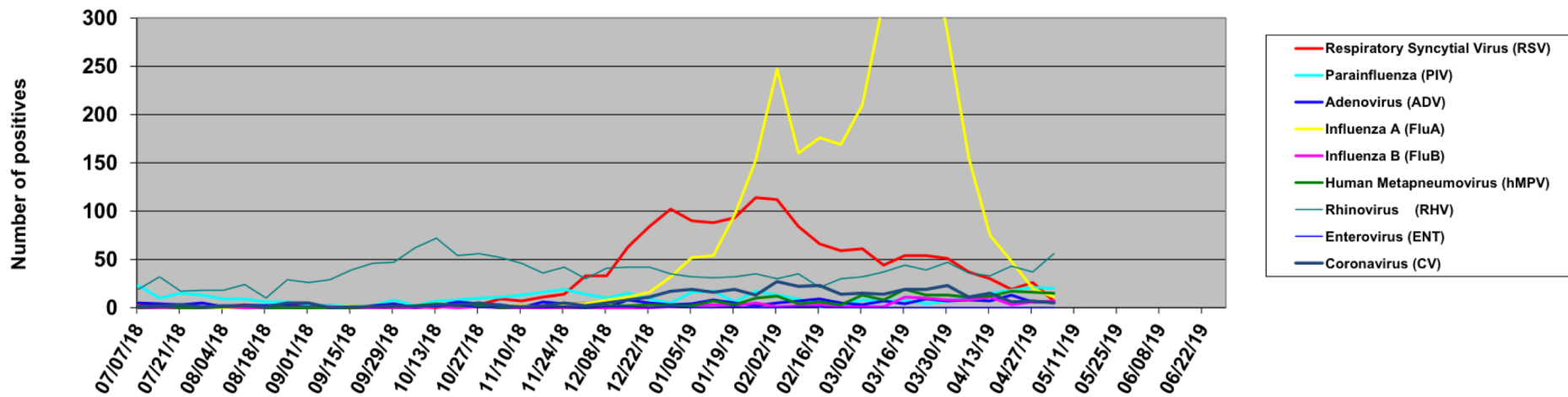
Influenza



Number of reported lab-confirmed deaths
2018-2019 season to date

218
2 children
216 adults

2018 - 2019 Respiratory & Enteric Viruses Seattle, Washington



Influenza (everyone ≥ 6 m)

- ~43% of adults are vaccinated against influenza each year
- During the 2017-2018 season (mostly H3N2), the flu vaccine prevented:
 - ~7.1 million illnesses
 - 3.7 million medical visits
 - 109,000 hospitalizations
 - 8,000 deaths
 - And reduced the severity of influenza-associated illness in millions of individuals



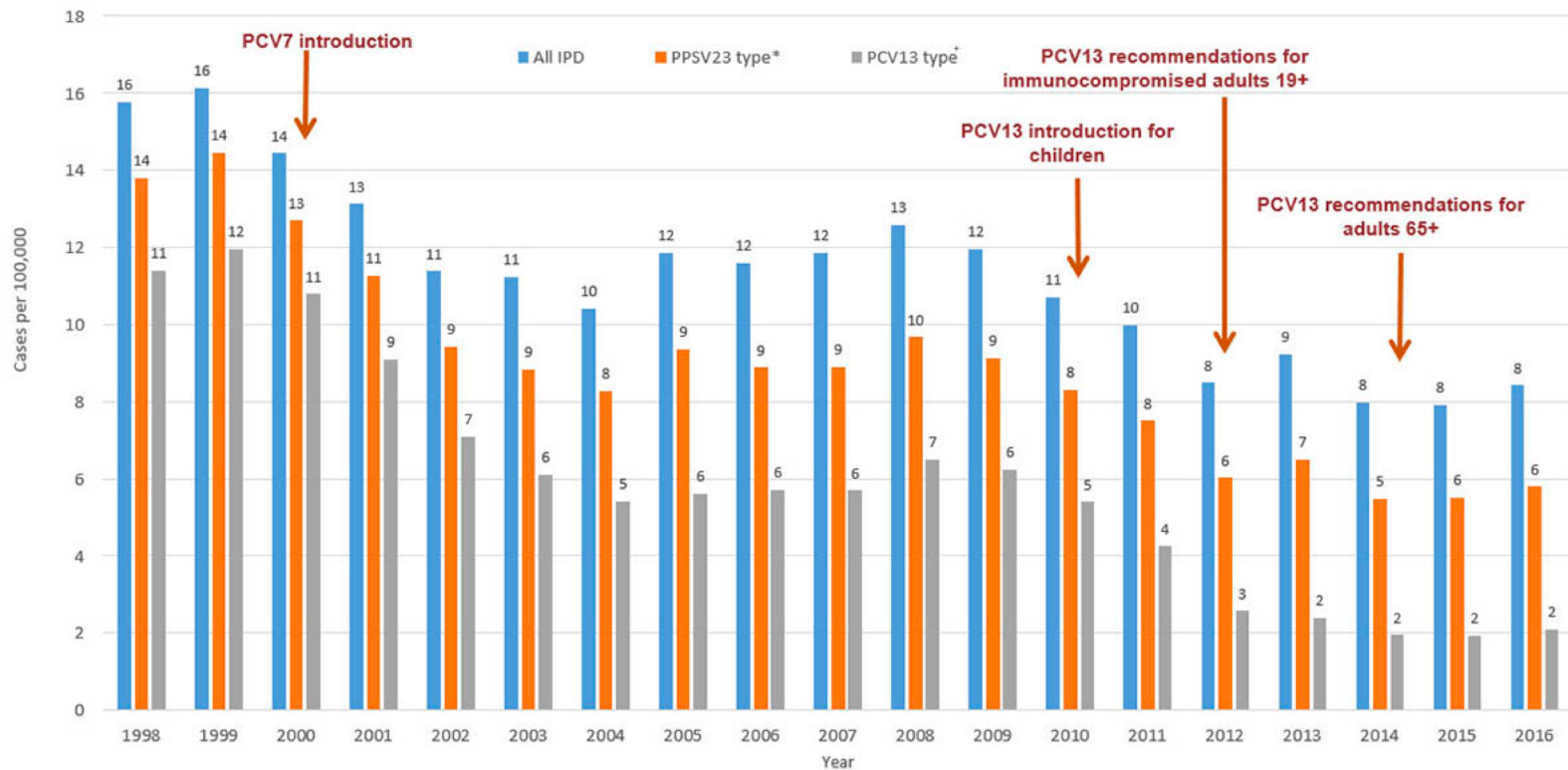
Pneumococcal Vaccines

- ≥ 65 years -> PCV13 followed by PPSV23 at least 1 year later
- Age 19 through 64 with chronic medical conditions: heart/lung/liver disease, diabetes, alcoholism, tobacco use -> 1 dose PPSV 23
- >19 years with immunocompromising conditions (HIV/AIDS, cancer, asplenia) -> PCV13 followed by PPSV23 at least 8 weeks later
- >19 years with cochlear implants or CSF leak



Pneumococcal Vaccines

Trends in invasive pneumococcal disease among adults aged 19-64 years old, 1998–2016



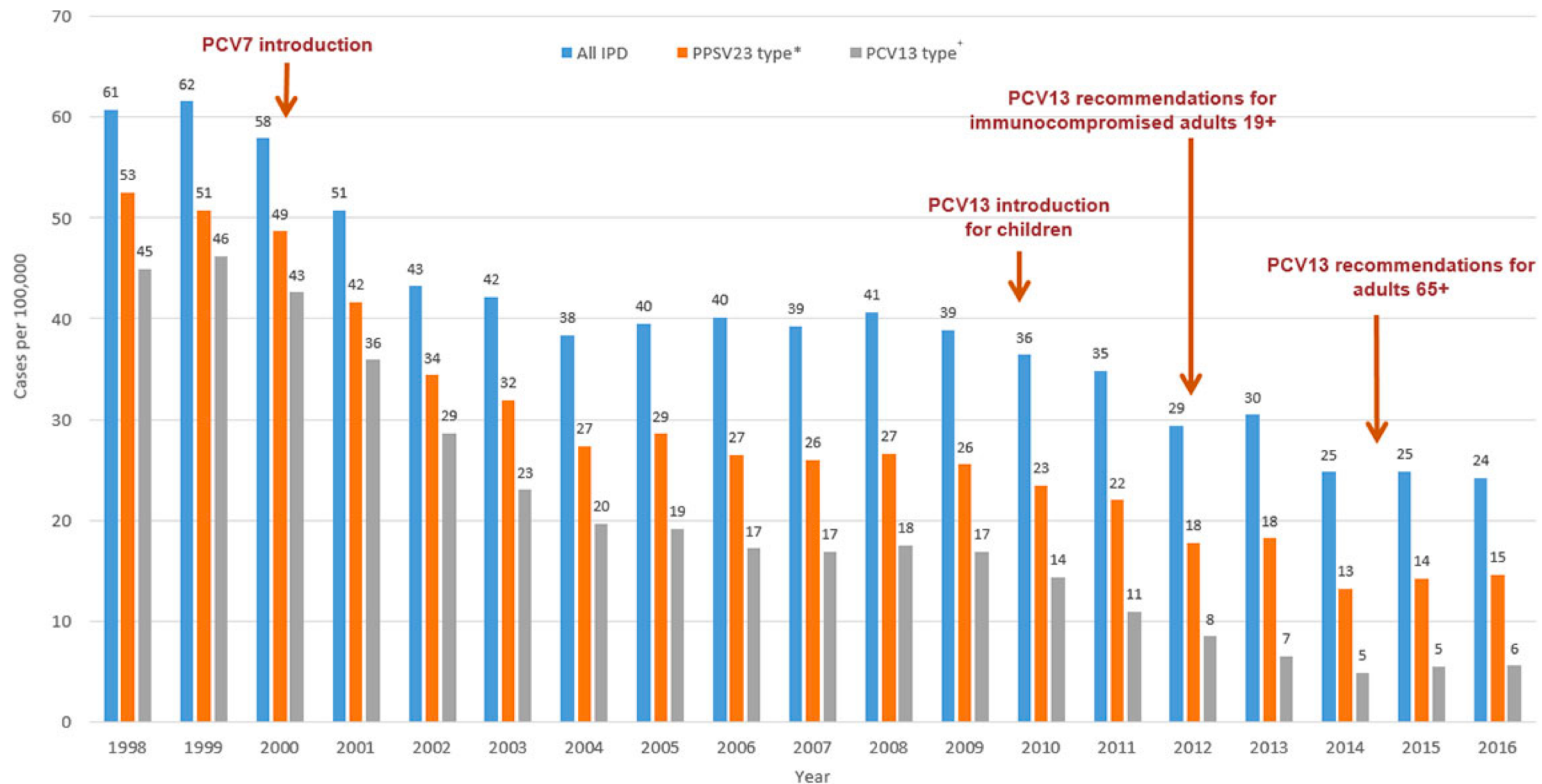
*PPSV23 serotypes: 1, 2, 3, 4, 5, 6B, 7F, 8, 9N, 9V, 10A, 11A, 12F, 14, 15B, 17F, 18C, 19A, 19F, 20, 22F, 23F, and 33F

†PCV13 serotype: 1, 3, 4, 5, 6A, 6B, 7F, 9V, 14, 18C, 19A, 19F, and 23F



Pneumococcal Vaccines

Trends in invasive pneumococcal disease among adults aged ≥ 65 years old, 1998–2016



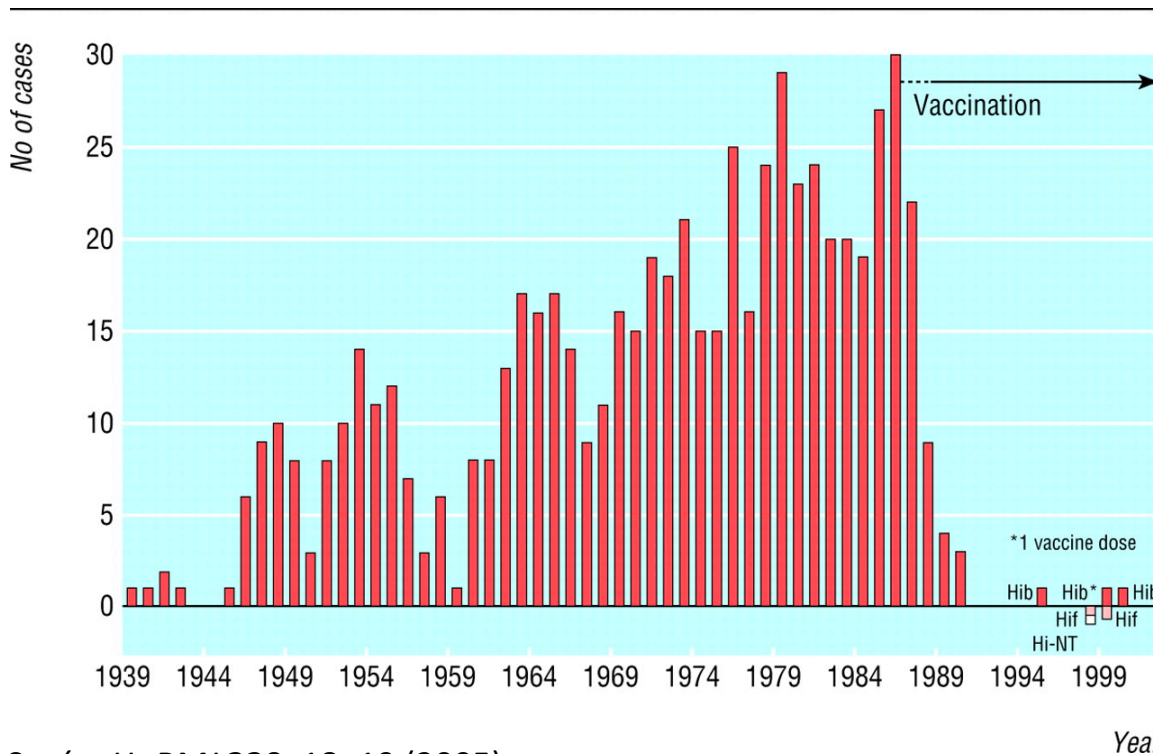
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†PCV13 serotype: 1, 3, 4, 5, 6A, 6B, 7F, 9V, 14, 18C, 19A, 19F, and 23F



HiB Vaccine

- Anatomical or functional asplenia -> 1 dose
- Stem cell transplant -> 3 dose series

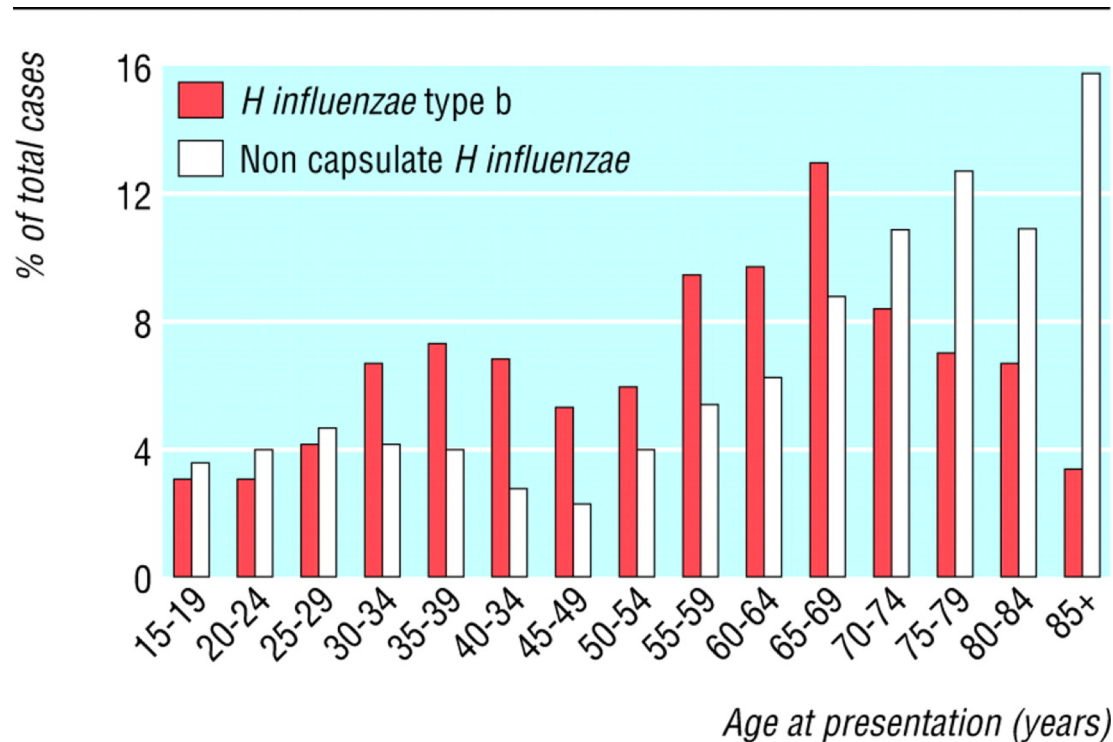


Peltola, H., Salo, E. & Saxén, H. *BMJ* **330**, 18–19 (2005).



HiB Vaccine

- Anatomical or functional asplenia -> 1 dose
- Stem cell transplant -> 3 dose series



MMR Vaccine

- Measles, mumps, rubella vaccine for almost everyone (not pregnant or immunocompromised)
 - Standard schedule is dose 1 at 12 months and dose 2 at 4-6 years
 - If born before 1957 or known h/o infection, check titers
 - If vaccinated between 1963 and 1967, offer either to check titers or vaccinate (1 dose for most adults, 2 doses for HCP)

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Public Health news and blog

New measles exposures in Pierce and King Counties

May 12, 2019

Hepatitis Vaccination

- Hepatitis B

- Healthcare workers
- Men who have sex with men or sexual exposure risk
- IV drug use
- Chronic liver disease, including hepatitis C
- Incarcerated
- Traveling to an area with high level of endemic infection

- Hepatitis A

- Chronic liver disease
- MSM
- IV drug use
- Travel to endemic area
- Homelessness
- Clotting factor d/o



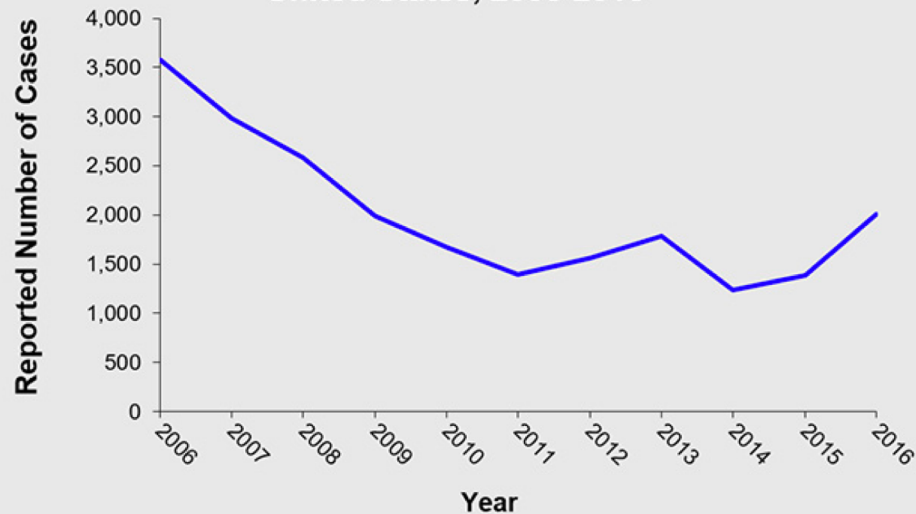
Hepatitis Vaccination

- Hepatitis A/B
 - 2 or 3 shot series
 - Excellent protection against both viruses after completing entire series
- Hepatitis A
 - 2 shot series
 - ~90% protection with a single vaccination

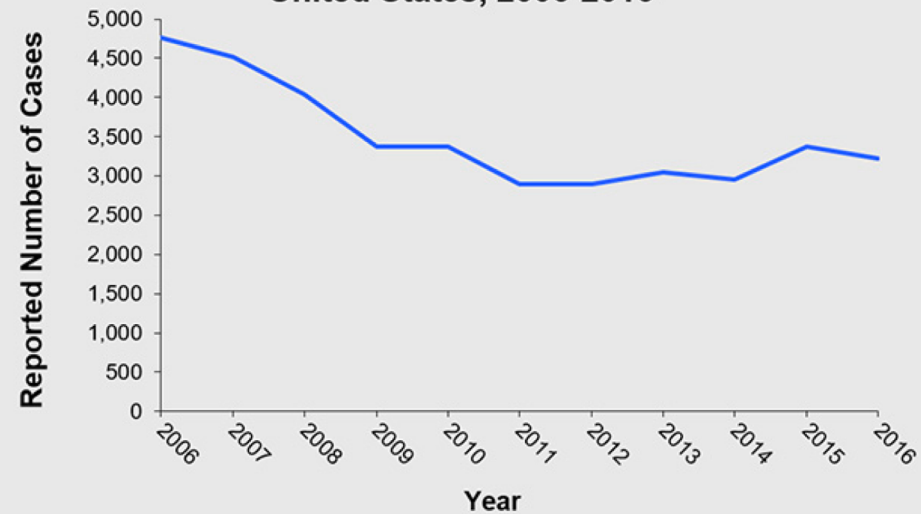


Hepatitis A and B

**Incidence of hepatitis A, by year
United States, 2006-2016**

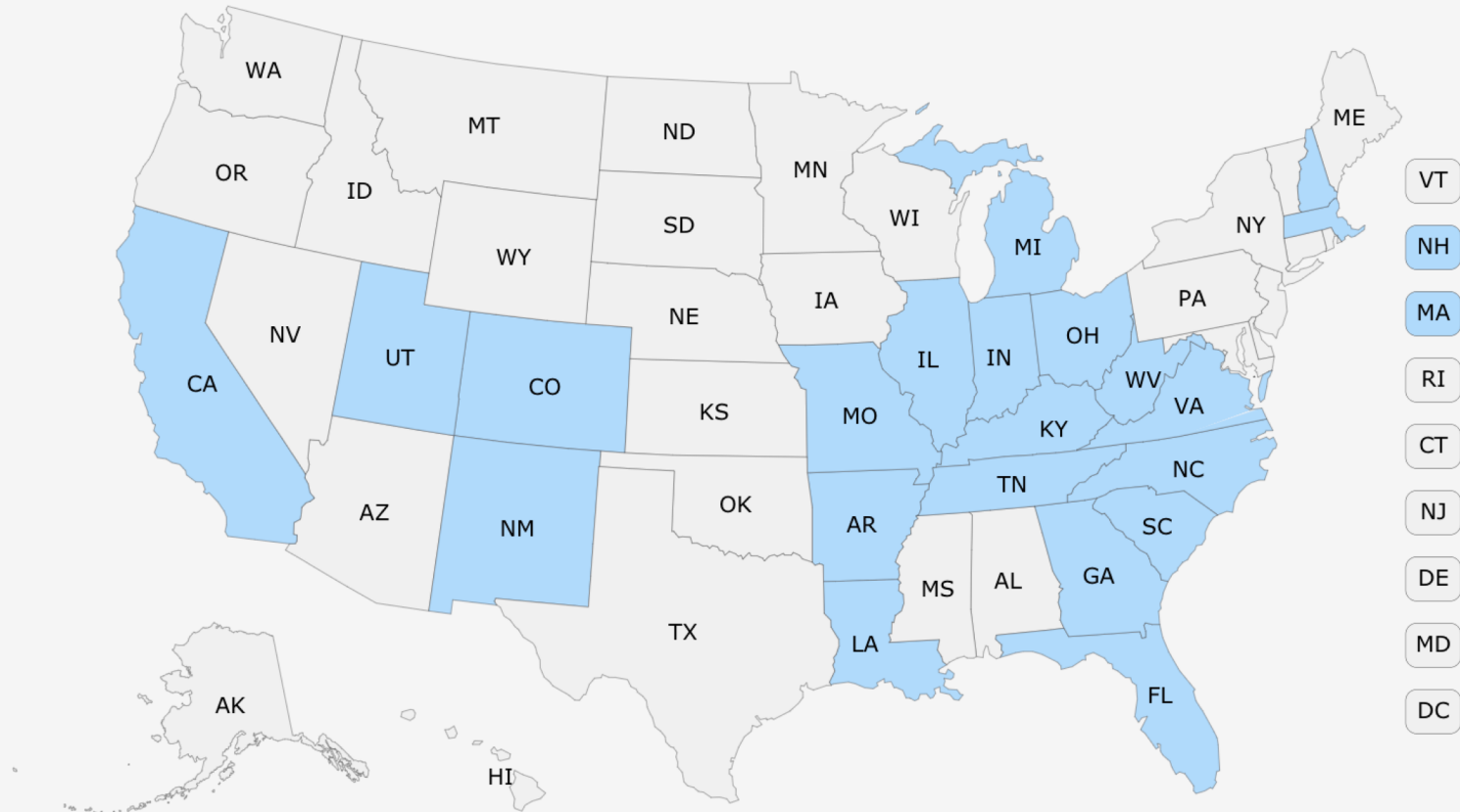


**Incidence of acute hepatitis B, by year
United States, 2006-2016**



Hepatitis A

State-Specific Hepatitis A Outbreak Information - click for state's website



Adult Vaccine Schedule

VACCINE ▼	AGE GROUP ►	19–26 years	27–49 years	50–59 years	60–64 years	≥65 years
Tetanus, diphtheria, pertussis (Td/Tdap) ^{1,*}		Substitute one-time dose of Tdap for Td booster; then boost with Td every 10 years				Td booster every 10 years
Human papillomavirus ^{2,*}		3 doses (females)				
Varicella ^{3,*}		2 doses				
Zoster ⁴					1 dose	
Measles, mumps, rubella ^{5,*}		1 or 2 doses		1 dose		
Influenza ^{6,*}			1 dose annually			
Pneumococcal (polysaccharide) ^{7,8}		1 or 2 doses				1 dose
Hepatitis A ^{9,*}		2 doses				
Hepatitis B ^{10,*}		3 doses				
Meningococcal ^{11,*}		1 or more doses				

* Covered by the Vaccine Injury Compensation Program.



For all persons in this category who meet the age requirements and who lack evidence of immunity (e.g., lack documentation of vaccination or have no evidence of prior infection)



Recommended if some other risk factor is present (e.g., based on medical, occupational, lifestyle, or other indications)



No recommendation



Discussion, questions, comments?

