



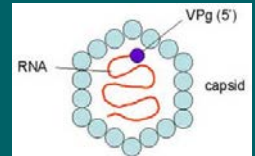
Hepatitis A Virus – United States, 1987–2017

122nd AFDO Annual Educational Conference, June 9-13, 2018,
Burlington, VT

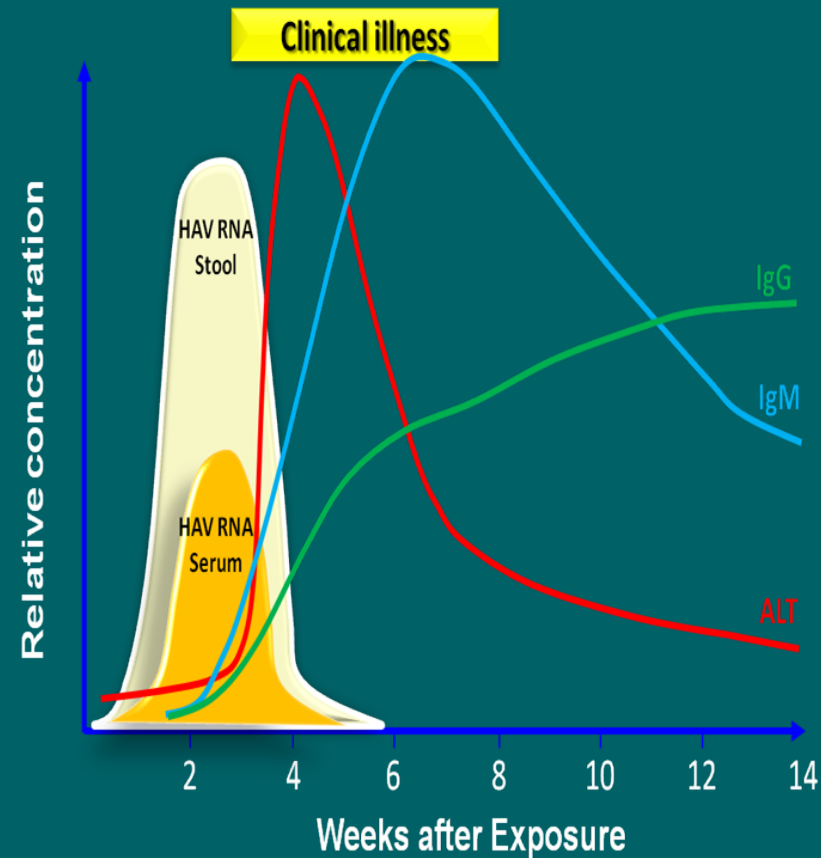
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Sanitarian

Centers for Disease Control and Prevention

Hepatitis A Virus



- Replicates in the liver, excreted in bile
- Short illness
- Average incubation period: 28 days
 - Peak infectious period 10-14 days prior to symptoms, 7-10 days after symptom onset
- Clinical manifestations: fever, jaundice, muscle pain, loss of appetite, malaise, diarrhea



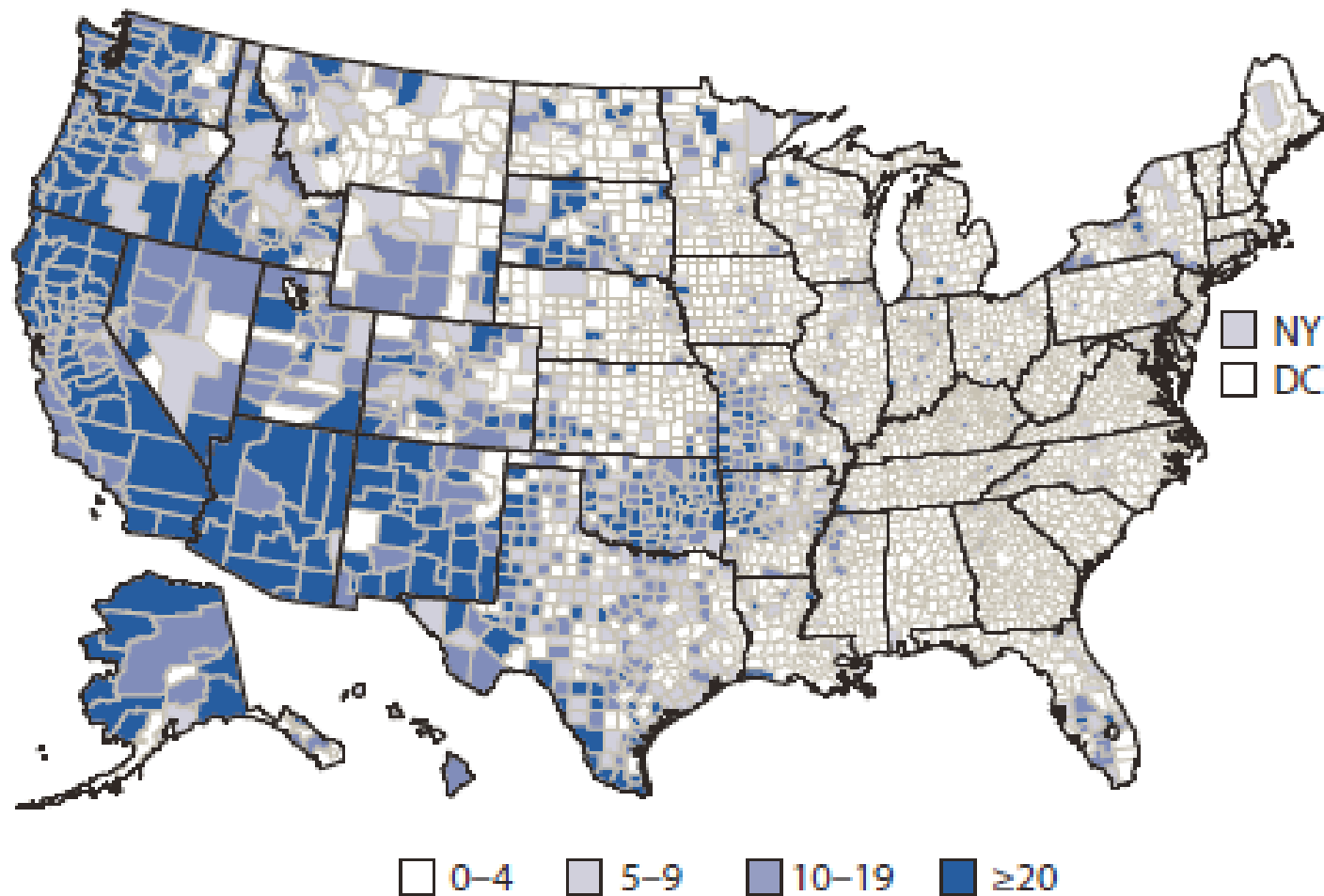
Global Patterns of Hepatitis A Virus Transmission

Endemicity	Age at Infection	Transmission Pattern
High	Early childhood	Person-to-Person, outbreaks uncommon
Intermediate	Late childhood/Young adults	Person-to-person, food and waterborne outbreaks
Low	Late Childhood/Young Adults	Person-to-person, food and waterborne outbreaks
Very Low	Adults	Travelers, outbreaks uncommon

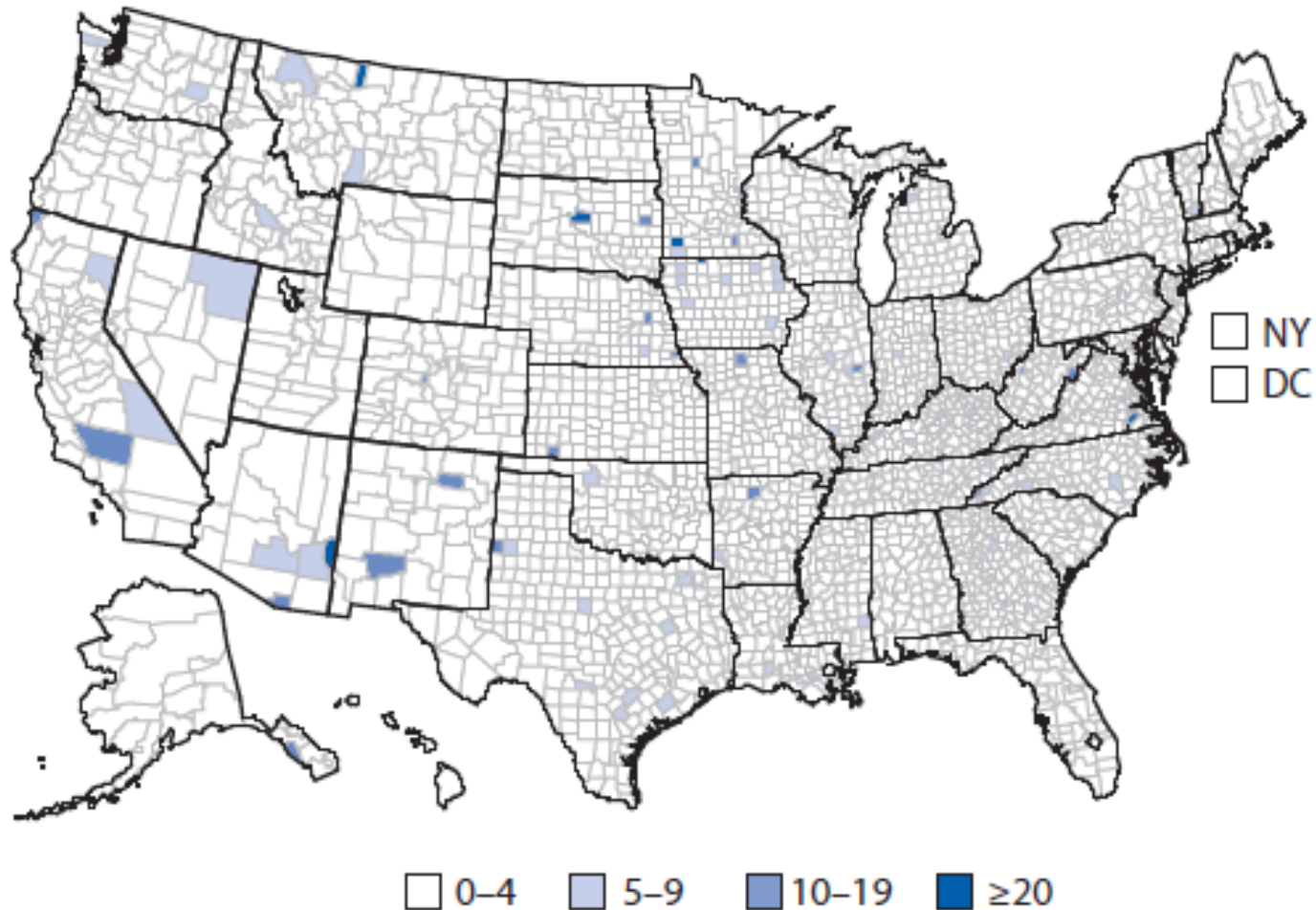
Hepatitis A Virus Endemicity in the US

- The United States is now considered a low endemic HAV country
- In the pre-vaccine era, cyclical increases occurred every 10-15 years
- The number of reported cases in the pre-vaccine era was $\geq 21,000$ annually

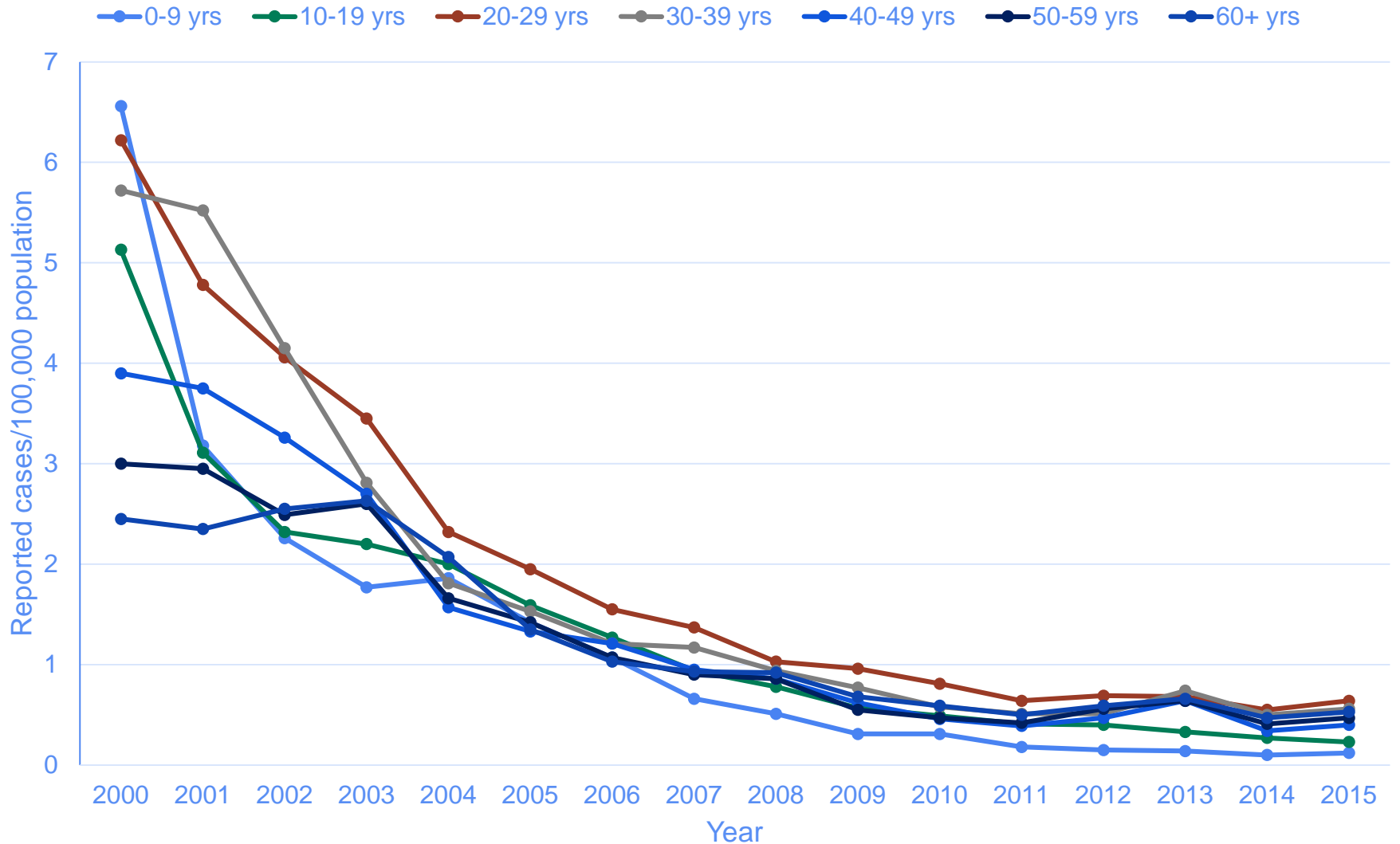
Incidence of reported hepatitis A cases, by county – National Notifiable Diseases Surveillance System (NNDSS), United States, 1987–1997



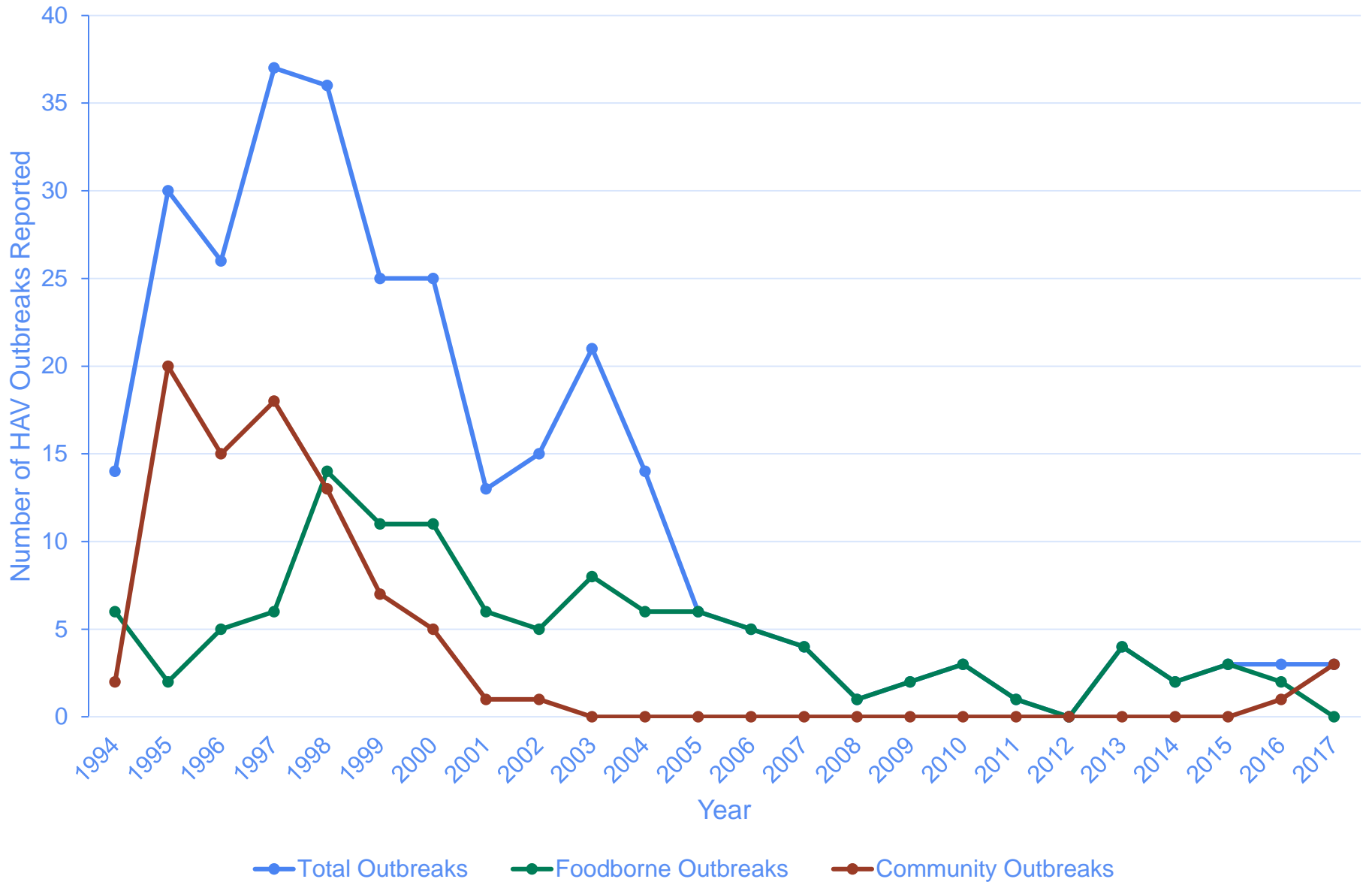
Incidence of reported hepatitis A cases, by county – NNDSS, United States, 2007



Incidence of hepatitis A virus by age group – United States, 2000 – 2015



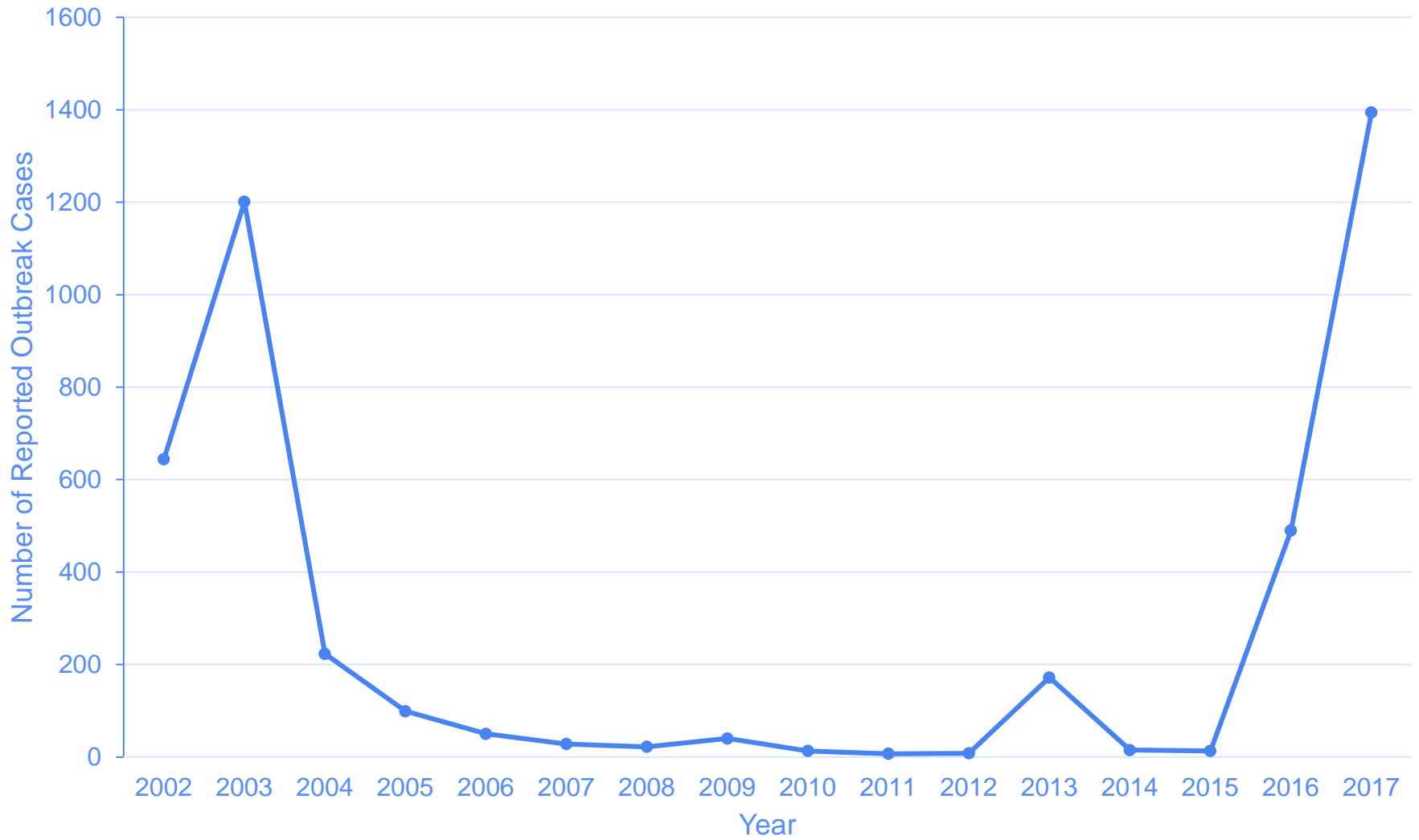
Hepatitis A Outbreaks Identified in the United States – 1994–2017



Craig AS, et al. *Am J Med Sci* 2007

CDC FoodTool

Reported Cases Associated with Hepatitis A Outbreaks – United States, 2007–2017



Shifting Hepatitis A Virus Epidemiology

- Past outbreaks were associated with asymptomatic children
- A large population of adults are not immune to hepatitis A virus
- Older individuals are more likely to experience severe disease and adverse outcomes
- Vaccination uptake among at-risk adults is low

Hepatitis A Virus Outbreaks – United States, 2016–2017

- CDC has assisted in multiple HAV outbreaks since July 1, 2016
 - Foodborne Transmission
 - Hawaii-Frozen Scallops
 - Multistate- Frozen Strawberries
 - Person-to-Person Transmission
 - Homeless individuals and injection/non-injection drug users
 - Men who have sex with men (MSM)

- ≥ 2,800 outbreak associated cases reported since July 1, 2016

Foodborne Outbreaks

- Susceptible adults exposed to contaminated food imported from HAV endemic countries
- Hepatitis A is vaccine preventable
- Foodborne transmission of HAV is underreported and misdiagnosed
- Contamination can occur at point of service, during growing, harvesting, processing or distribution

Hepatitis A among homeless populations

- Little is known about hepatitis A immunity among homeless populations in the US
- Homelessness is not considered an independent risk factor for HAV infection
- Older age, duration of homelessness, and injection drug use may indicate HAV immunity

Summary

- Vaccination recommendations and widespread use of the vaccine have decreased HAV incidence in the US
- Many adults have no immunity to the disease
- Increase in HAV outbreaks reported over the last two years
- Homelessness may need to be considered an independent risk factor for HAV infection

Acknowledgements

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Medical Epidemiologist, CDC**

Thank You!

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