

# Should changing epidemiology change HAV vaccination policy?

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## Hepatitis A in the news:



### Employee at White Castle in Louisville diagnosed with hepatitis A virus

June 15, 2018 112 Views



Health » Food | Fitness | Wellness | Parenting | Vital Signs

### Australian woman's death linked to hepatitis from pomegranate seeds

By Mark Lieber, CNN  
Updated 12:10 PM ET, Wed June 6, 2018



West Virginia News

### Another food worker contracts hepatitis A in West Virginia

Posted: Jun 13, 2018 06:20 AM EDT  
Updated: Jun 13, 2018 06:20 AM EDT



HEALTH 06/13/2018 17:10 EDT

### Remember Last Year's Hepatitis A Outbreak? This Year It's So Much Worse.

Cases of the potentially deadly liver disease have nearly doubled as outbreaks spread nationwide.



## Case of Hepatitis A confirmed at Union Station food kiosk

BY NEWS STAFF

POSTED JUN 12, 2018 4:04 PM EDT LAST UPDATED JUN 13, 2018 AT 5:39 AM EDT

LOCAL

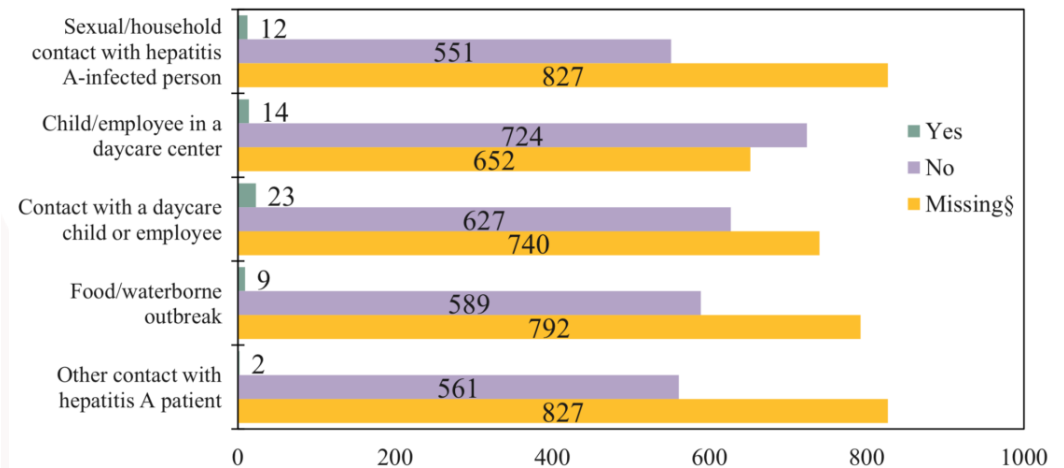
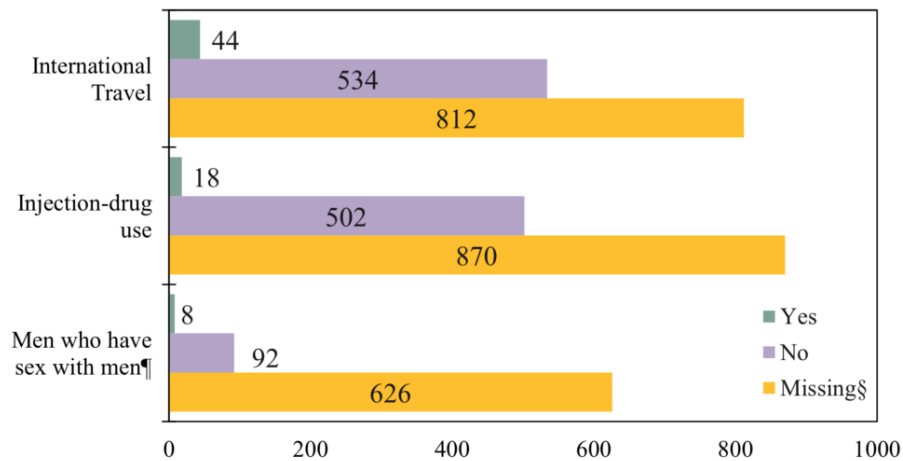




## Most common routes of transmission

- Person-to-person transmission through the fecal-oral route
- Exposure to contaminated food or water
- Sex among men who have sex with men
- Behaviors associated with injection drug use

Hepatitis A reports\*, by risk exposure/behavior† — United States, 2015



Source: CDC, National Notifiable Diseases Surveillance System.



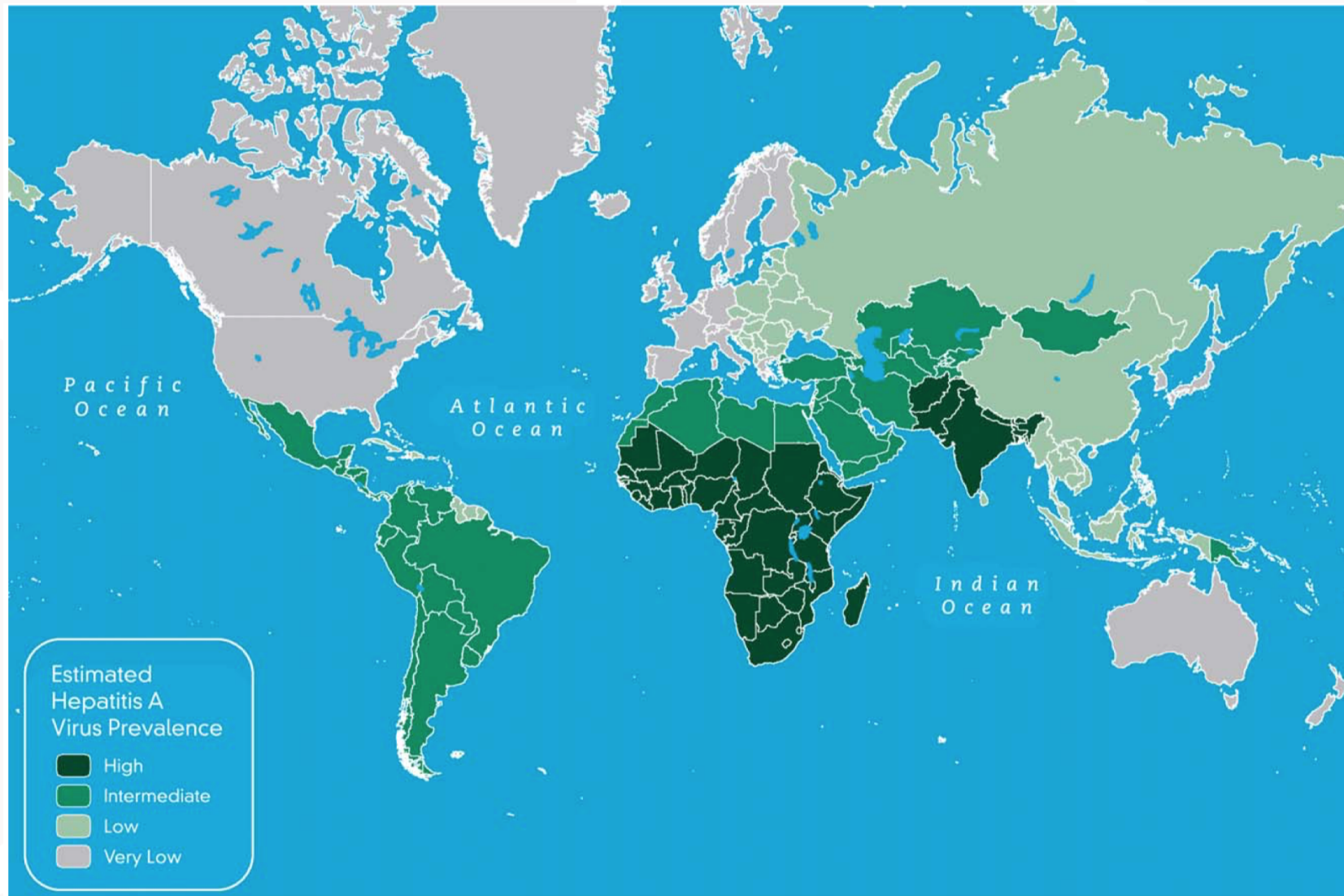
## Global estimates for Hepatitis A

- Incidence
  - » Globally, there are an estimated 1.4 million cases of hepatitis A every year (WHO 2015)
- Prevalence

Year	HAV Infections	HAV-related Deaths	Death Rate
1990	117 million	30,283	0.026%
2005	126 million	35,245	0.028%

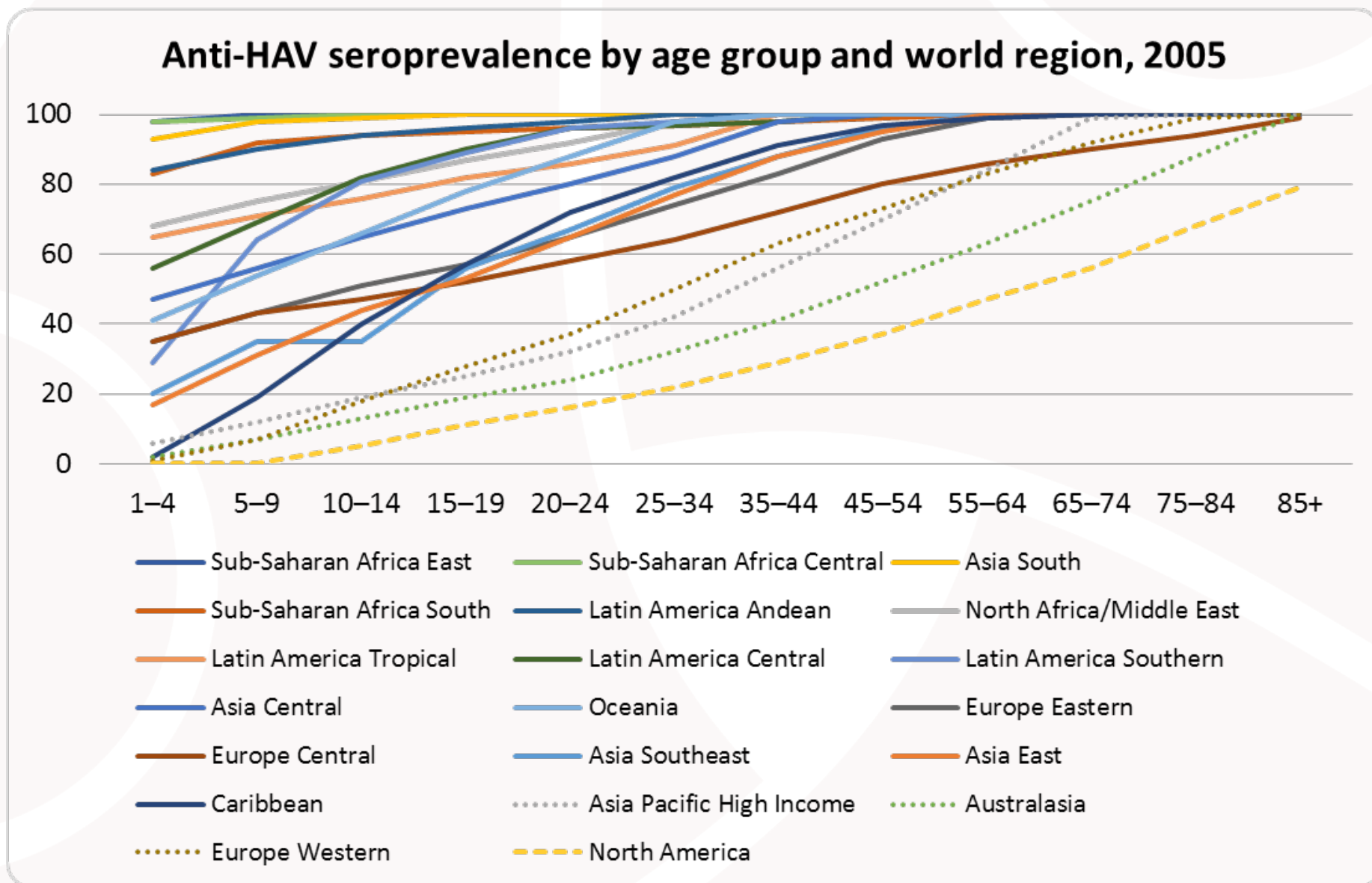


## Prevalence of HAV, 2015





## The prevalence of HAV is low in high-income countries







## Current vaccination recommendations

### WHO Recommendations

- High endemicity countries – vaccination is not recommended
- Intermediate endemicity countries – universal childhood vaccination
- Low endemicity countries – targeted vaccination in high risk groups

### US Recommendations

- All children between the ages of 12 and 23 months
- Children between the ages of 2 and 18 years in existing programs (catch-up vaccination can be considered in areas without existing programs)
- International travelers
- Persons who anticipate close contact with an international adoptee
- Men who have sex with men
- Illicit drug users
- Persons with chronic liver disease
- Persons receiving clotting factor concentrates
- Persons who work with HAV-infected primates or with HAV in research settings
- Anyone who wants to obtain immunity

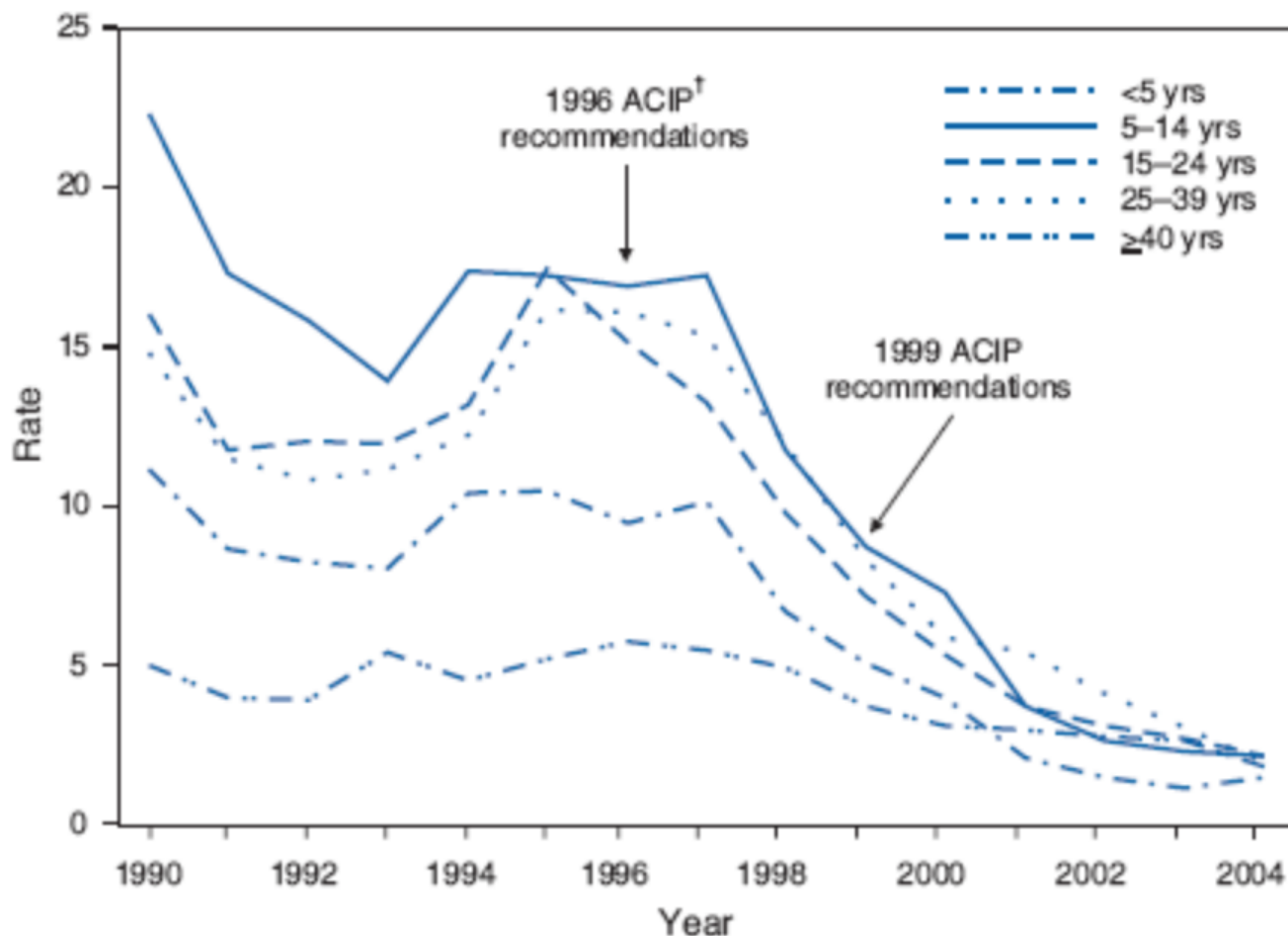
World Health Organization. Hepatitis A vaccines. *Wkly Epidemiol Rec* 2000;75:38–44. PMID:10693358.

Fiore AE, Wasley A, Bell B, Prevention of Hepatitis A Through Active or Passive Immunization, Recommendations of the Advisory Committee on Immunization Practices (ACIP), *MMWR* May 19, 2019, 55(R07), 1-23

# Hepatitis A vaccination is effective in preventing new infections



**FIGURE 1. Rate\* of reported hepatitis A, by age group and year — United States, 1990–2004**

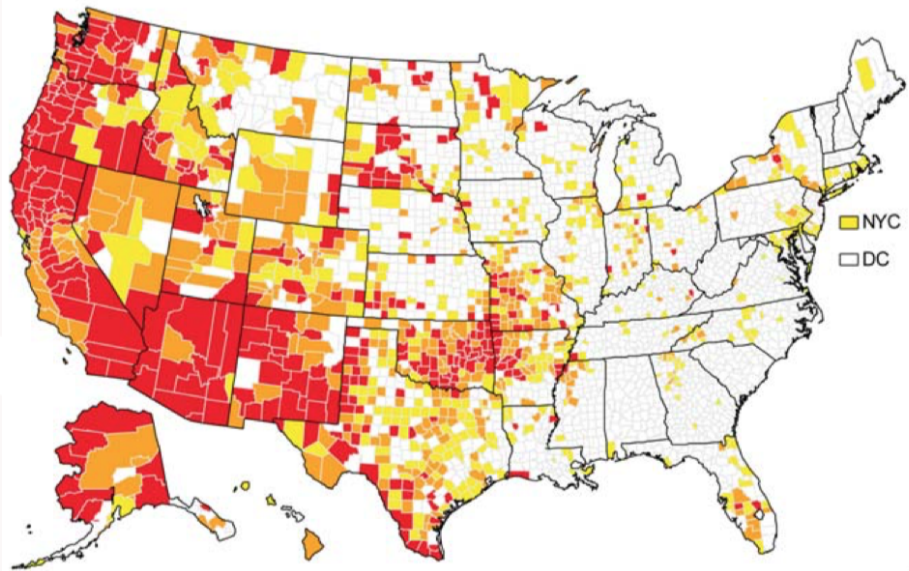




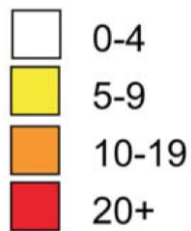
# Incidence of hepatitis A (cases per 100,000 population) by county in the United States



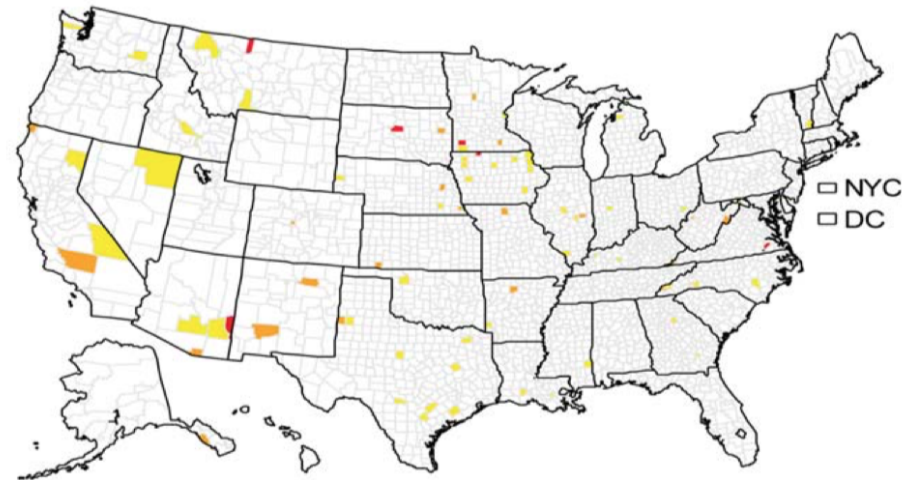
1987-1997



rate per 100,000 0-4 5-9 10-19



2007



rate per 100,000 0-4 5-9 10-19 >=20

Source: NNDSS

Fiore AE, Wasley A, Bell B, Prevention of Hepatitis A Through Active or Passive Immunization, Recommendations of the Advisory Committee on Immunization Practices (ACIP), MMWR May 19, 2019, 55(R07), 1-23



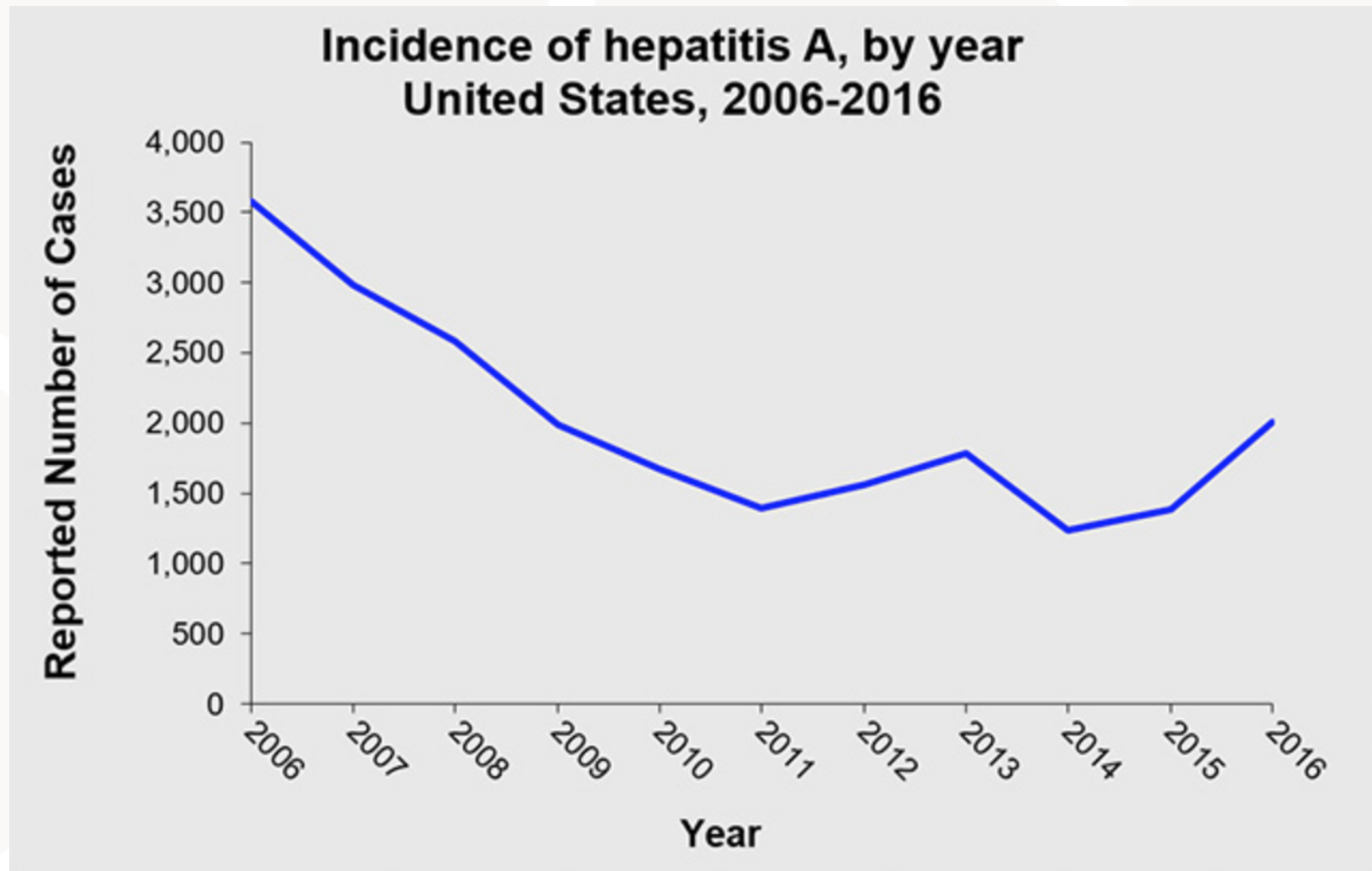
## Global Immunizations

As of May 2018, 37 countries used a hepatitis A vaccine in routine national immunizations (WHO 2018):

Region	Countries
Americas	Argentina, Brazil, Chile, Colombia, Honduras, Mexico, Panama, Paraguay, United States of America, Uruguay
Eastern Mediterranean	Bahrain, Iraq, Kuwait, Qatar, Saudi Arabia, United Arab Emirates
Europe	Armenia, Cyprus, Finland, France, Greece, Israel, Italy, Kazakhstan, Romania, Russia, San Marino, Serbia, Slovenia, Spain, Switzerland, Turkey
Western Pacific	Australia, China, Mongolia, New Zealand, Republic of Korea



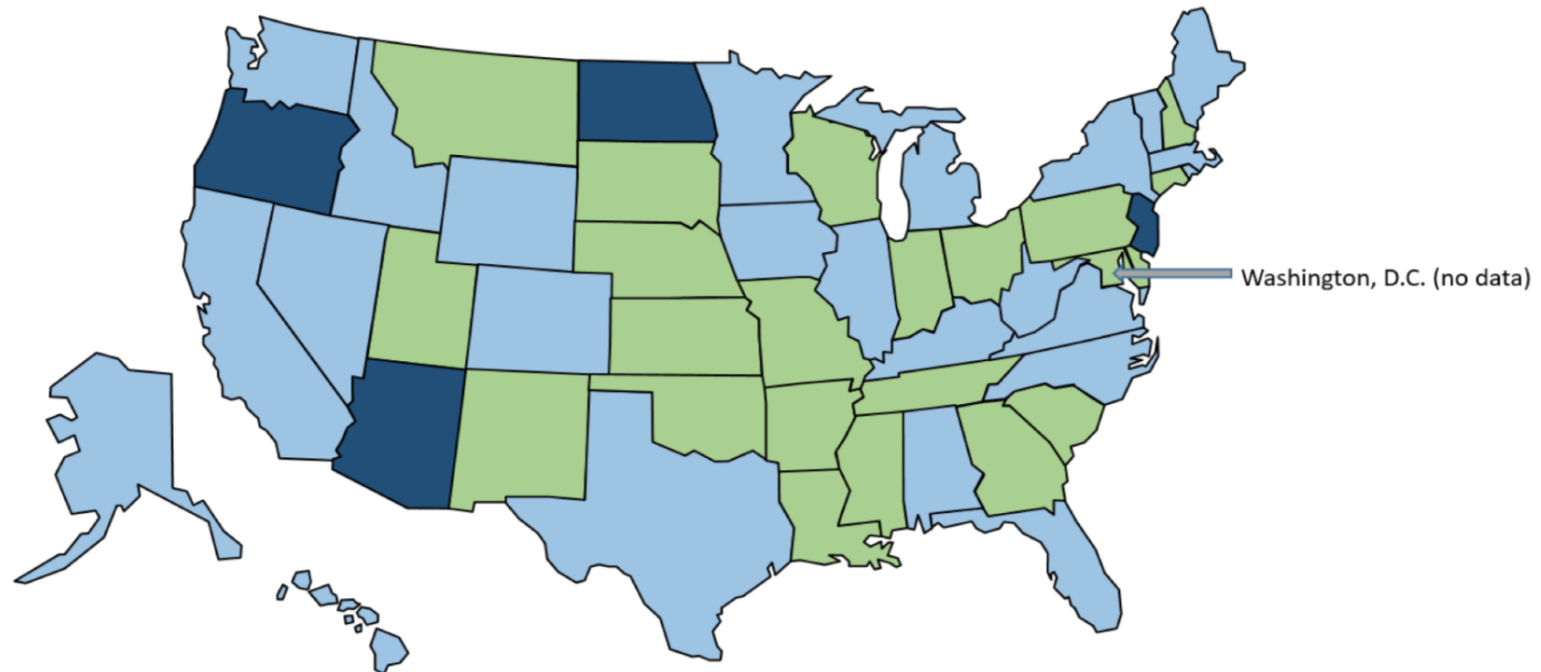
## The incidence of hepatitis A has increased in the US



# 2015 State Hepatitis A Incidence Compared to Healthy People 2020 National Goal



- At or below national goal
- Above national goal
- More than twice national goal
- Data unavailable



Source: CDC, National Notifiable Diseases Surveillance System (NNDSS)

*\*National goal: 0.3 cases/100,000 population*

## Changing demographics may require an update to the current vaccination guidelines



- Uneven distribution of wealth
- Large scale immigration
- Globalization of food
- Urbanization/ population density







## Conclusions/ recommendations:

- **High endemic countries:** no need change the recommendations – no vaccination
- **Intermediate endemic countries:** continue current recommendations – universal childhood vaccination
- **Low endemic countries:** revisit recommendations as the profile of the risk groups may have changed



# Appendix



# Incidence of hepatitis A, by age & gender — United States, 2000–2015

