



# Hepatitis A Outbreak in Los Angeles County

November 8<sup>th</sup>, 2017




## Disclosures

There is no commercial support for today's activity

Neither the speakers nor planners for today's meeting have disclosed any financial interests related to the content of the meeting

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## Hepatitis A Webinar Objectives

At the conclusion of the webinar, participants will be able to:

- Discuss the clinical presentation and natural history of hepatitis A.
- Interpret serological test results for hepatitis A.
- List what populations require immediate reporting to the Health Department if hepatitis A is suspected.
- List hepatitis A outbreak vaccine priority groups.




## Hepatitis A Outbreak in Los Angeles County

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## What's Hepatitis A?



- Highly contagious
  - spreads person-to-person
  - liver disease
- Caused by the hepatitis A virus—RNA picornavirus
- Symptoms can last for a few weeks to several months
- Can lead to severe outcomes including liver damage and death
- Acute infection
- Lifelong immunity after infection

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- **Incubation period**
  - 15-50 days
- **Infectious Period**
  - Two weeks before onset
  - One week after jaundice (or symptom onset in the absence of jaundice)

**Epidemiology**

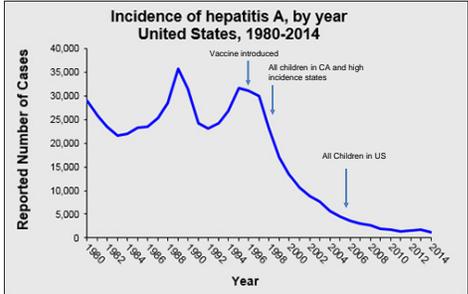
- Reservoir is humans
- Primary mode of transmission is fecal-oral
  - Person-to-person, consumption of contaminated food or water
  - Bloodborne transmission can occur although rare
- Average incubation period is 28 days (15–50 days)
- Infectious period is 2 weeks prior to 1 week after onset of symptoms
  - Post-exposure prophylaxis (PEP) with vaccine or immune globulin is effective if given  $\leq 2$  weeks after exposure

**How Can You Prevent Hepatitis A?**

- Two doses of hepatitis A vaccine
  - Has been recommended for all children in Los Angeles County since 1999
  - Many adults are not protected and are vulnerable to infection
- Improved sanitation
- Handwashing
  - Before eating or preparing food
  - After changing diapers
  - After using the bathroom



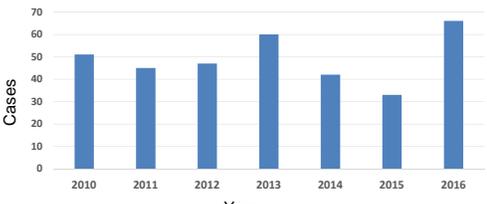
**Incidence of Hepatitis A**



Graph from CDC. Accessed 11/1/17

<https://www.cdc.gov/hepatitis/statistics/index.htm>

**Hepatitis A in LA County**



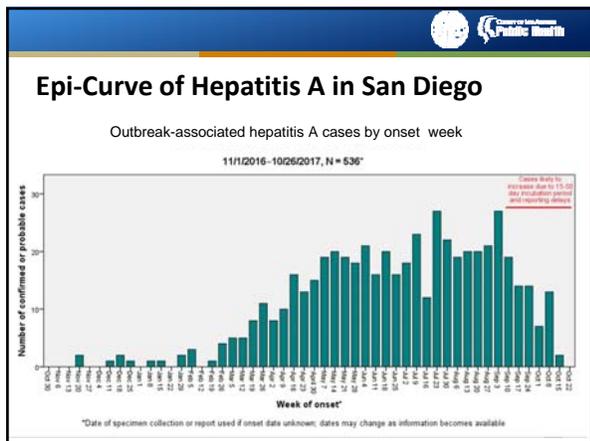
- In LA County there are approximately 40-60 cases each year
- Highest rates in people 35-44 years old
- No cases among homeless population in recent years

**San Diego Hepatitis A Outbreak**

- First case had onset on November 24, 2016
- Spread has been very rapid due to poor sanitary conditions
- As of October 31, 2017
  - 536 cases
  - 369 (68.8%) hospitalizations
  - 20 (3.7%) deaths
- 80% of outbreak patients are homeless and/or used illicit drugs.
- High fatality rate most likely reflects prior illness in the affected population.

**San Diego Hepatitis A Outbreak**

- Cases have taken place in people who:
  - Resided in facilities with shared restrooms
    - Jails
    - Residential drug treatment facilities
    - Single room occupancy hotels
    - Assisted living facilities
- There have been cases among volunteers at homeless shelters, sanitation workers, healthcare workers, and a parole officer
- Has already spread to Santa Cruz with 72 confirmed cases



- ### Symptoms of Hepatitis
- Fever/Chills/Headache
  - Malaise/Fatigue
  - Anorexia
  - Nausea/Vomiting/Diarrhea
  - Abdominal Pain
  - Nothing at all! (20-30% of adults)
  - Liver involvement
    - Jaundice
    - Dark urine
    - Light colored stools

- ### Symptoms of Hepatitis A continued
- In children < 6, 70% of infections will be asymptomatic and if symptomatic will have no jaundice
  - In adults 70% of infections will be symptomatic (though 30% still asymptomatic)
  - Patients can be infections for 2 weeks before jaundice and 1 week after jaundice
  - Symptoms generally <20 months though 10-15% may have prolonged or relapsing illness
  - 20% hospitalized
  - < 1 % fatality rate
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- ### San Diego Outbreak
- High hospitalization rate: 70%
  - High case fatality rate 4%
  - Most likely due to underlying illness of population at risk
  - Patients at risk for severe disease include:
    - Elderly
    - Those with underlying liver disease especially
      - Chronic hepatitis C or B
      - Alcoholic liver disease
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- ### Men who have Sex with Men (MSM)
- Included in ACIP Guidelines
    - Always at higher risk
  - Outbreaks are occurring Internationally and nationally
    - Europe
    - Chile
    - Australia
    - New York City
    - Colorado
    - San Francisco
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- ### Current Outbreak in LA County
- 14 outbreak associated cases – includes those associated with the homeless or IDU
    - 1 from San Diego to a board and care
    - 1 from San Diego to a mental health facility (3 secondary cases)
    - 5 homeless persons came to LA from San Diego and Santa Cruz and lived on street prior to admissions
    - 2 cases among homeless or IDU are LA County residents without clear links to San Diego or Santa Cruz
    - 2 cases were IDU only
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**Hepatitis A among MSM**

- Not surprisingly increase beginning among MSM
- 12 cases to date this year, 9 in all of last year
- Estimated 400,000 MSM in LA County
- Persons with HIV
  - May have longer course of illness
  - May see an increase in HIV viral load
  - May have to stop HIV medications that are hepatotoxic

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**Case Definition of Acute Hepatitis A**

Clinical criteria

- An acute illness with discrete onset of symptoms (fever, headache, malaise, anorexia, nausea, vomiting, diarrhea and abdominal pain)

Evidence of liver injury

- Jaundice or elevated serum aminotransferase (ALT or AST) levels

**AND**

Positive IgM antibody to hepatitis A (IgM anti-HAV)

or

Epidemiologic link with person who has laboratory confirmed illness

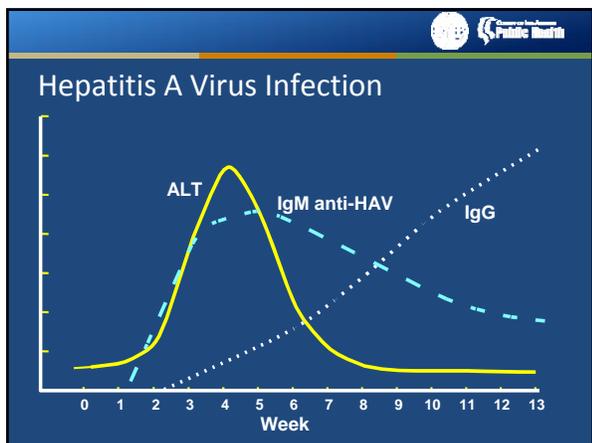
**Hepatitis A IgM**

- Indicates acute disease
- Reportable
- Can last ~6 months after acute disease
- Can occur after vaccination
- Non-specific
  - Many false + cases
- Should **NOT** be used for routine screening
- Order when
  - Patient is symptomatic or
  - Has elevated LFTs

**Hepatitis A Total Antibody Test**

- Anti-HAV total reflects the presence of both IgM and IgG
- Useful to show prior disease or immunity
- Must order IgM to determine if patient has acute disease
- Not Reportable

	Early Acute 0-14 days	Acute 3-6 months	Recovery years
IgM anti-HAV	Positive	Positive	
Total anti-HAV	Positive	Positive	Positive



**Sensitive Occupation Situation**

- Worked during infectious period?
  - 14 days prior -7 days after onset
- **Call LAC DPH ASAP**
  - Date of onset
  - Symptoms
    - Diarrhea
  - Where did case work-address, phone #
  - When did case work? which days and shifts?
  - What were the job duties? cook, dishwasher, hostess etc.



## Was patient homeless or IDU?

- **Call LAC DPH ASAP – preferably while patient in facility**
  - Date of onset
  - Symptoms
    - Diarrhea
- Where did patient sleep/ hangout/eat
- Was patient in San Diego or Santa Cruz?
  - When and how did s/he arrive
  - Where has s/he been living
- Get as much information about contacts as possible

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## Reporting

- Suspect cases of HAV should be reported **immediately**
  - by phone,
  - while the patient is still at the clinical facility, in order to facilitate an on-site interview by a public health investigator and prophylaxis of contacts;



Phone 888-397-3993.  
After hours call: 213-974-1234

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## Post Exposure Prophylaxis (PEP)

- **PEP** for contacts of cases
  - Provide PEP within 2 weeks of exposure
  - Vaccination recommended in all persons >1 year old
  - For persons at risk of severe infection add immune globulin
    - For older people and especially for those with serious immune compromise (HIV with low CD4, Chemotherapy, high dose steroids) can consider Gamma globulin
    - Also for person with serious underlying liver disease
    - **Note: increased dose for IM IG to 0.1 mL/kg**

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## Current ACIP Vaccine Recommendations

- All Children 12-23 months of age
- Persons traveling to countries with high or intermediate endemicity of Hepatitis A
- MSM
- Use of Injection and non-injection drugs
- Persons who have occupational risk factors such as working with HAV positive primates or work with the virus in a research laboratory workers
- Persons with clotting factor disorders
- Persons with chronic liver disease
- As recommended during outbreaks

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## Vaccine Recommendations in Outbreak

- Homeless persons
- Recreational drug users
- Food Handlers who serve homeless persons
- Those who work with homeless and have close physical contact with them
- Sanitation or janitorial workers who clean homeless encampments or bathrooms
- Standard precautions and hand hygiene should protect HCW

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## Vaccine Supply

- At-risk adults
  - homeless individuals
  - persons with direct contact with these individuals
  - those who meet other ACIP-identified risk factors
    - chronic liver disease
    - men who have sex with men
    - travel to an endemic country
- Due to limited vaccine supply, persons who desire immunity but do not fall within one of these priority groups should **not** be vaccinated at this time, but can be considered for vaccination when supplies increase.

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### Vaccine Supply

- Hepatitis A/B vaccine (Twinrix)
  - Patients who are eligible for Hepatitis A and B vaccine should receive Twinrix
  - Twinrix is a 3 dose vaccine providing protection against both viruses.
  - Supplies are not known to be currently constrained.

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### Prevention

- **Pre-exposure prophylaxis in LA County right now**
  - Vaccine recommendation is 2 doses 6 months apart
  - Even a single dose offers excellent protections
  - Vaccinate persons who are homeless or use drugs
    - First dose highly immunogenic (98% for single Ag vaccine)
    - Free vaccine available from Public Health for the uninsured (see website for time/location of clinics); also covered by Medi-Cal and ADAP
  - Consider vaccination for HCWs and persons who have ongoing close contact with the homeless and drug users
    - Especially those who prepare and serve food to the homeless



### Prevention: Pre-exposure Prophylaxis

**In LA County right now**

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### Prevention: Sanitation

- Emphasize handwashing with soap and water
  - Depending on alcohol concentration & exposure times, hand sanitizer may be less effective
- Environmental cleaning
  - Disinfect bathrooms and surfaces with bleach (1:10 dilution), formulation of quaternary ammonium and HCl (toilet bowl cleaner), or 2% glutaraldehyde
- Reduce risky behaviors
  - Don't share food, drink, eating utensils, smokes, towels, or toothbrushes with other peoples
  - Don't have sex with someone who has hepatitis A





### What is DPH Doing to Respond to the San Diego Outbreak?

- Investigating all hepatitis A cases
- Providing vaccinations for all case contacts, homeless people, new jail inmates, active drug-users, and some service providers
- Educating clinicians and homeless service providers



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### Steps to Prevent Increased Numbers of Hepatitis A Cases

- Promoting awareness and vaccination through media and social media
- Conducting health education and promoting vaccination
- Inspecting homeless encampments and other facilities to improve sanitation



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**Outbreak Response Plan**

- Initial response will focus on aggressive vaccination and education in areas with early cases to prevent a larger outbreak.



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**Outbreak Response Plan**

- Surveillance, Epidemiology, and Healthcare Support**
  - Rapid response to cases
    - Investigate
    - Vaccinate contacts
  - Housing for infectious patients
- Public Information and Warning**
  - Via press, social media, and other efforts
  - Outreach to the medical community

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**Outbreak Response Plan**

- Medical Countermeasures and Community Outreach**
  - Aggressive efforts at vaccination
    - Led by DPH and community partners including LAHSA and Housing for Health
- Environmental Services**
  - Coordination with municipal services and other stakeholders on environmental intervention
  - Training at detention centers and shelters

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**Where Can People at Risk Get Vaccinated?**



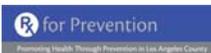
- Personal providers
- DPH Outreach events
- Pharmacies
- DHS and DPH Clinics

**Dial 211 to locate a clinic.**

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**Resources**

- Website** - [publichealth.lacounty.gov/acd/Diseases/HepA.htm](http://publichealth.lacounty.gov/acd/Diseases/HepA.htm)
- Consultations - Acute Communicable Disease Control Program**
  - 213-240-7941, after hours: 213- 974-1234
- Health alerts - Los Angeles Health Alert Network (LAHAN)**
  - [publichealth.lacounty.gov/lahan](http://publichealth.lacounty.gov/lahan)
- Hepatitis A article with CME - Rx for Prevention**
  - [rx.ph.lacounty.gov](http://rx.ph.lacounty.gov)

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