

Update on Current Health Alerts for Clinicians in Los Angeles County



August 16, 2017





Objectives

- Summarize clinical guidance from recent Los Angeles County Health Alerts
- Ensure clinicians providing services to the LGBTQ / HIV / drug-using and homeless populations receive key messages
- Provide an interactive forum for clinicians to ask questions/clarify issues regarding current health alerts



Agenda

- 8-10 minute summary on each topic
 - Hepatitis A
 - Mumps
 - Invasive Meningococcal Disease (IMD)
 - Multi-drug resistant *Shigella*
- Q&A



Hepatitis A Update

Benjamin Schwartz, MD

Acute Communicable Disease Control Program

Los Angeles County Department of Public Health

bschwartz@ph.lacounty.gov





San Diego Hepatitis A Outbreak

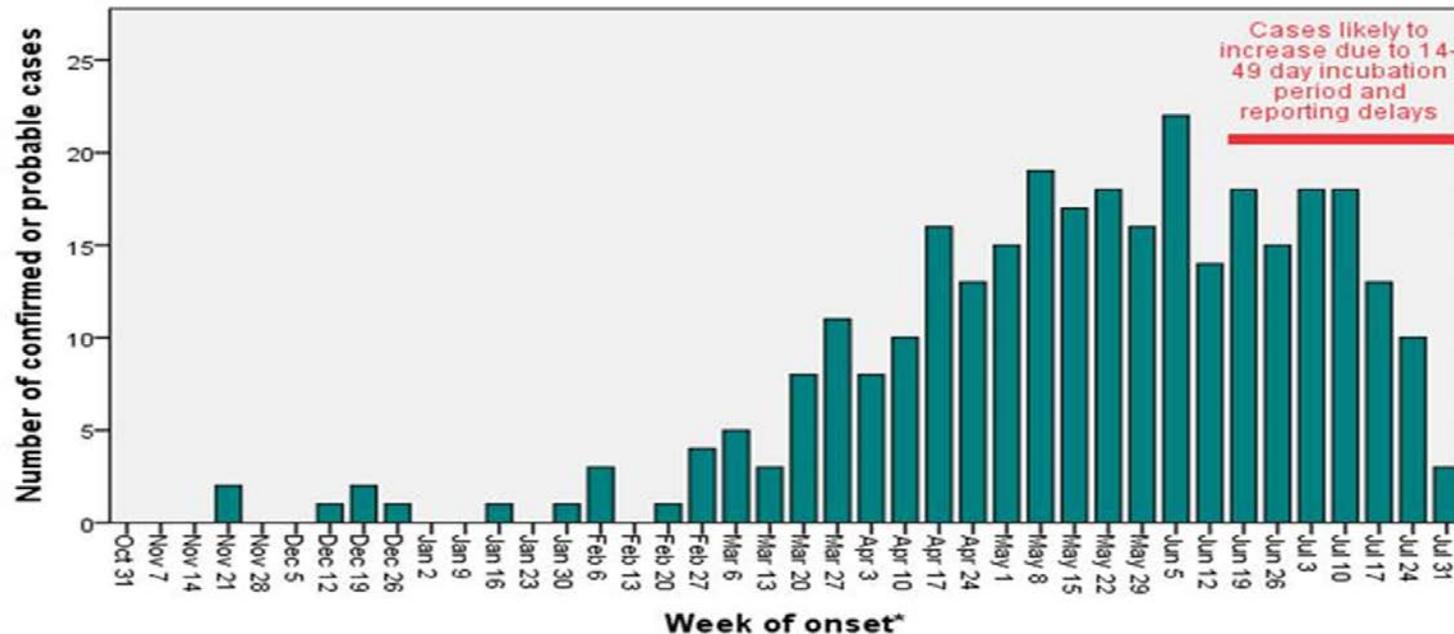
- Between Nov. 24, 2016 and Aug. 8, 2017:
 - 312 cases; 215 (69%) hospitalizations; and 10 (3.2%) deaths
 - Most deaths associated with hepatitis C co-infection
- Of those with known status, 78% of cases in homeless and/or illicit drug users (injecting and non-injecting)
- Clusters have occurred among people who used the same service providers or resided in facilities with shared restrooms (SRO hotels, jails, residential drug treatment)
- Cases also have occurred among service providers to the homeless (shelter volunteers, sanitation workers, HCWs)



Epi-Curve of Hepatitis A in San Diego

Outbreak-associated Hepatitis A cases by onset week

11/1/2016–8/3/2017, N = 306*



*Date of specimen collection or report used if onset date unknown; dates may change as information becomes available

Modeling suggests that the outbreak will continue for about 18 more months



Hepatitis A and the Homeless, LA County, July-Aug 2017

- Two LA County (LAC) cases with exposure in San Diego
 - Board and care facility
 - State hospital
 - Cluster includes 3 secondary cases
- Previous LAC experience
 - No cases among homeless in LAC in past 2 years
 - Outbreak among homeless in 2005-6; 48 cases
- Santa Cruz County outbreak: 52 cases since April 2017 in homeless and drug users

Hepatitis A Illness

- Acute infection; ~70% of older children & adults symptomatic
- Symptoms/signs
 - Fever, fatigue, anorexia, abdominal pain, nausea/vomiting
 - Later, dark urine, clay colored stools, jaundice
- Clinical course

Infection



Incubation

Illness



~4 weeks (range 15-50 days)

Weeks to months

Virus in feces



Virus in blood





Diagnosis & Reporting

- Suspect cases based on clinical presentation & epidemiology
- Obtain hepatitis panel
 - IgM test for hepatitis A
 - Hepatitis B (core Ab and surface Ag) & hepatitis C (Ab)
- Report to Public Health
 - Report confirmed and suspect cases
 - Obtain a Confidential Morbidity Report at <http://publichealth.lacounty.gov/acd/reports/CMR-H-794.pdf> and fax to 888-397-3778
 - Don't rely on laboratories to report!
 - CMR reports included additional data

COUNTY OF LOS ANGELES • DEPARTMENT OF PUBLIC HEALTH
MORBIDITY UNIT
CONFIDENTIAL MORBIDITY REPORT

NOTE: This form is not intended for reporting STDs, HIV, AIDS or TB. See comments below.

DISEASE BEING REPORTED:		DISTRICT CODE (Internal use only):	
Patient's Last Name:	Social Security Number:	Ethnicity (check one): <input type="checkbox"/> Hispanic <input type="checkbox"/> Non-Hispanic / Non-Latino	
First Name and Middle Name (or initial):	Birthdate (MM/DD/YYYY):	Race (check one): <input type="checkbox"/> White <input type="checkbox"/> African American / Black <input type="checkbox"/> Native American / Alaskan Native <input type="checkbox"/> Other	
Address (Street and number):		<input type="checkbox"/> Asian / Pacific Islander	
City/Town:	State: CA Zip code:	<input type="checkbox"/> Asian-Indian <input type="checkbox"/> Japanese <input type="checkbox"/> Cambodian <input type="checkbox"/> Korean <input type="checkbox"/> Chinese <input type="checkbox"/> Laotian <input type="checkbox"/> Filipino <input type="checkbox"/> Samoan <input type="checkbox"/> Hawaiian <input type="checkbox"/> Other	
Home Telephone Number:	Gender: <input type="checkbox"/> Male <input type="checkbox"/> Female Pregnant? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Risk Factors / Suspected Exposure Type: (check all that apply)	
Work Telephone Number:	Estimated Delivery Date:	<input type="checkbox"/> Blood transfusion <input type="checkbox"/> Needle or blood exposure <input type="checkbox"/> Child care <input type="checkbox"/> Food / drink <input type="checkbox"/> Foreign travel <input type="checkbox"/> Recreational water exposure <input type="checkbox"/> Household exposure <input type="checkbox"/> Sexual activity <input type="checkbox"/> Other	
Patient's Occupation or Setting: <input type="checkbox"/> Day Care <input type="checkbox"/> Correctional Facility <input type="checkbox"/> Food Service (Explain): <input type="checkbox"/> Health Care <input type="checkbox"/> School <input type="checkbox"/> Other (Explain):		Type of diagnostic specimen: (check all that apply)	
Date of Onset (MM/DD/YYYY):	Health Care Provider:	<input type="checkbox"/> Blood <input type="checkbox"/> CSF <input type="checkbox"/> Stool <input type="checkbox"/> Urine <input type="checkbox"/> Clinical <input type="checkbox"/> No test <input type="checkbox"/> Other	
Date of Diagnosis (MM/DD/YYYY):	Health Care Facility:		
Date of Hospitalization (MM/DD/YYYY):	Address:		
Date of Death (MM/DD/YYYY):	City:		
	Telephone:	FAX:	
	Submitted by:	Date CMR submitted (MM/DD/YYYY):	
Hepatitis Diagnostic: <input type="checkbox"/> Hep A, acute <input type="checkbox"/> Hep B, acute <input type="checkbox"/> Hep B, chronic <input type="checkbox"/> Hep C, acute <input type="checkbox"/> Hep C, chronic <input type="checkbox"/> Hep D <input type="checkbox"/> Other Hepatitis		Type of Hepatitis Testing (check all that apply): Pos. Neg. Pred. Not Done anti-HAV IgM HBeAg anti-HBc (total) anti-HBc IgM anti-HBs anti-HCV - anti-HCV signal to cut off ratio - HCV-PCR anti-Delta Other test specify	
Elevated LFTs? <input type="checkbox"/> No <input type="checkbox"/> Yes ALT AST		DO NOT use this form to report HIV/AIDS, chancroid, chlamydia infections, gonorrhea, non-gonococcal urethritis, pelvic inflammatory disease, syphilis, or tuberculosis. For HIV and AIDS report to the HIV Epidemiology Program. Reporting information and forms are available by phone 213-351-8316 or at www.publichealth.lacounty.gov/hiv/index.htm For Pediatric AIDS: report to the Pediatric HIV/AIDS Reporting Program. Reporting information is available by calling 213-351-7319 For Tuberculous report cases and suspected cases to the TB Control Program within 24 hours of identification. Reporting information is available by phone 213-744-6180, or at www.publichealth.lacounty.gov/tb/index.htm Fax reports to: 213-744-9306. For STDs: The STDs that are reportable to the STD Program include: chlamydial infections, syphilis, gonorrhea, chancroid, non-gonococcal urethritis (NGU), and pelvic inflammatory disease. Reporting information is www.publichealth.lacounty.gov/std/index.htm	
JUDICED? <input type="checkbox"/> No <input type="checkbox"/> Yes			
REMARKS:			
FAX THIS REPORT TO: 888-397-3778 For assistance, please call the Morbidity Unit at 888-397-3963, or mail to Morbidity Unit, 213 N. Figueroa St., #117, Los Angeles, CA 90012. H-794 (Rev. 01/01)			

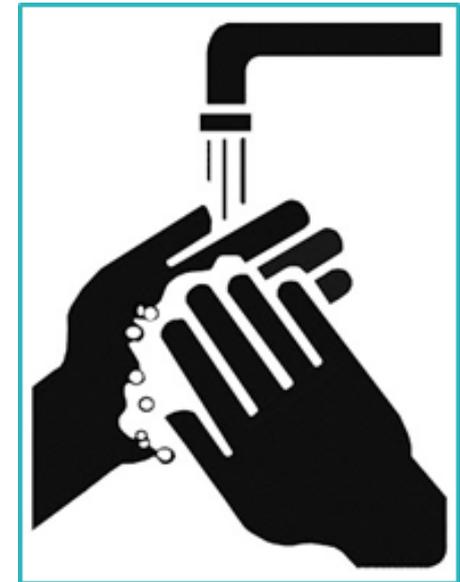


Prevention

- **Post-exposure prophylaxis (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
 - **Note: increased dose for IM IG to 0.1 mL/kg**
- **Pre-exposure**
 - Vaccinate persons who are homeless or use drugs
 - First dose highly immunogenic (98% for single Ag vaccine)
 - Free vaccine available from Public Health (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

Prevention: Sanitation & Behavior Change

- 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



Educational Materials

FAQs
English/Spanish

Hepatitis A

La infección de hepatitis A es causada por un virus (germen) que puede propagarse fácilmente de persona a persona. Puede causar enfermedad hepática (del hígado) que puede ser grave y durar meses.

Hepatitis A

Hepatitis A infection is caused by a virus (germ) that can easily spread from person-to-person. It can cause liver disease that can be severe and last several months. In some cases, people can die because of hepatitis A.

How does Hepatitis A spread?

- Touching objects or eating food that has hepatitis A on them
- Having sex with someone who has hepatitis A
- Sharing needles, pipes or other items that have hepatitis A on them

How can you prevent Hepatitis A?

- Get two shots of Hepatitis A vaccine
- Don't have sex with someone who has hepatitis A
- Use your own towels, toothbrush & utensils
- Don't share food, drinks, or smokes with other people
- Wash hands with soap and water after using the bathroom, and before preparing, serving or eating food

What are the symptoms of Hepatitis A?

Fiebre
 Cansancio
 Náusea
 Pérdida de apetito
 Ictericidad (amarillamiento de la piel y los ojos)
 Dolor abdominal
 Vómito
 Orina oscura, heces blancas y diarrea

Call 2-1-1 for more information or to find medical and social services

Adapted from the County of San Diego Health and Human Services Agency 7/01/17

Frequently Asked Questions (FAQ) Hepatitis A

1. What is hepatitis A?

Hepatitis A is a highly contagious (spreads person-to-person) liver disease caused by the hepatitis A virus (germ). Mild cases can last a few weeks while severe cases can last several months.

2. How is hepatitis A spread?

Hepatitis A spreads by putting something in your mouth (object, food, or drink) that has been in contact with the feces (poop) of an infected person. Hepatitis A can be spread by:

- Forgoing to wash your hands after using the bathroom, changing diapers
- Having sexual contact with infected partner(s)
- Consuming food or drink that are contaminated by

3. Who is at risk for hepatitis A?

Anyone can get hepatitis A, but you are at higher risk if you:

- Travel or live in countries where hepatitis A is common
- Live with someone who has hepatitis A
- Use recreational drugs
- Are men who have sex with men
- Have sexual contact with someone who has hepatitis A

4. What are the symptoms of hepatitis A?

Not everyone shows symptoms. If symptoms develop, they appear 2 to 6 weeks after infection. Symptoms can include:

- Fever
- Loss of appetite
- Nausea
- Vomiting
- Stomach pain
- Dark urine
- Grey stools
- Joint pain
- Yellowing of the skin and eyes

5. How is hepatitis A treated?

Treatment includes rest, good nutrition, fluids, and medical monitoring. Some people may need to be hospitalized. No drug or medicine can cure hepatitis A. It's important to see a doctor if you have hepatitis A.

6. How can hepatitis A be prevented?

The best way to prevent hepatitis A is by getting vaccinated. A vaccine is given as 2 shots, 6 months apart. The local clinic or doctor. You can also prevent the spread of hepatitis A by:

- Washing hands with soap and warm water
- Before eating or preparing food
- After using the bathroom or changing diapers

Los Angeles County Department of Public Health
www.publichealth.lacounty.gov

Preguntas frecuentes (FAQ) Hepatitis A

1. ¿Qué es la hepatitis A?

La hepatitis A es una enfermedad del hígado muy contagiosa (se transmite de persona a persona) causada por el virus (germen) de la hepatitis A. Los casos leves pueden durar unas cuantas semanas, mientras que los casos más serios pueden durar varios meses.

2. ¿Cómo se propaga la hepatitis A?

La hepatitis A se propaga cuando una persona pone algo en su boca (objeto, comida o bebida) que ha estado en contacto con las heces (excremento) de una persona infectada. La hepatitis A se puede propagar al:

- olvidar lavarse las manos después de ir al baño o de cambiar pañales
- consumir comida o bebidas que están contaminadas con el virus

3. ¿Quiénes están en riesgo de contraer hepatitis A?

Cualquier persona puede contraer hepatitis A, aunque su riesgo es mayor si:

- viaja o vive en países donde la hepatitis A es frecuente
- tiene una enfermedad por transmisión de sangre
- utiliza drogas recreativas
- es un hombre que tiene relaciones sexuales con hombres

4. ¿Cuáles son los síntomas de la hepatitis A?

No todos los casos presentan síntomas. En caso de que se presenten síntomas, normalmente aparecen entre 2 y 6 semanas después de la infección. Algunos síntomas pueden ser:

- fiebre
- cansancio
- pérdida del apetito
- náusea
- vómito
- dolor estomacal
- orina (pipí) oscura
- heces de color gris
- dolor en las articulaciones
- piel y ojos amarillos

5. ¿Cómo se trata la hepatitis A?

El tratamiento incluye reposo, buena alimentación, líquidos y supervisión médica. Algunas personas pueden requerir hospitalización. No todos los casos presentan síntomas. En caso de que se presenten síntomas, normalmente aparecen entre 2 y 6 semanas después de la infección. Algunos síntomas pueden ser:

6. ¿Cómo se puede prevenir la hepatitis A?

La mejor manera de prevenir la hepatitis A es vacunándose. La vacuna contra la hepatitis A consiste en 2 aplicaciones con 6 meses de separación. La vacuna es segura y efectiva. Visite al consultorio de su médico o llame al 2-1-1 para localizar un médico o clínica local. También puede prevenir la transmisión de la hepatitis A lavándose las manos con jabón y agua caliente:

- antes de comer o preparar alimentos
- Después de ir al baño o cambiar pañales

Departamento de Salud Pública del Condado de Los Angeles
www.publichealth.lacounty.gov

¿Quién debe vacunarse?

- todas las niñas de 1 año de edad
- personas que viajan a países donde la hepatitis A es frecuente
- familias o cuidadores de niños susceptibles de contraer hepatitis A en el hogar
- personas que tienen drogas recreativas
- personas con infecciones hepáticas crónicas o con hepatitis B o C
- personas con problemas en las heces de coagulación

Para obtener más información:

Departamento de Salud Pública del Condado de Los Angeles
<http://www.publichealth.lacounty.gov/acd/Diseases/HepA.htm>

Departamento de Salud Pública de California
<http://www.cdph.ca.gov/Programs/CID/DCDC/Pages/ImzVaccination/Pages/HepatitisA.aspx>

Centros para el Control y la Prevención de Enfermedades (CDC, por sus siglas en inglés)
<http://www.cdc.gov/hepatitis/hcp/faq.htm>

CDPH-ACDC-3079-02-08/10/17

Informational Third-Sheets
English/Spanish



Mumps Update

Franklin D Pratt, MD, MPHTM, FACEP

Immunization Program

Los Angeles County Department of Public Health

fpratt@ph.lacounty.gov



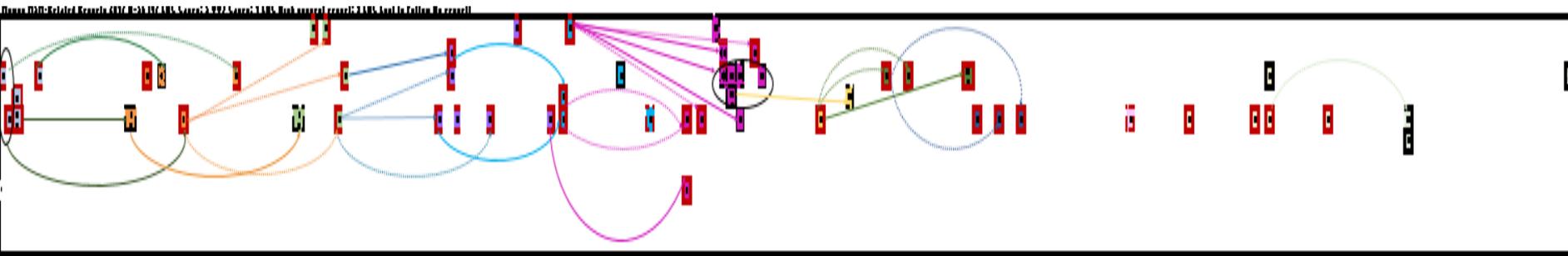


MSM-related Mumps Reports

- From **01/10/17 - 08/11/17**
- **52** mumps cases
 - 47 LAC mumps cases (40 MSM; 7 non-MSM)
 - 4 Orange County mumps cases (2 MSM, 2 non-MSM)
 - 1 Long Beach mumps case (1 non-MSM)
- **13** LAC False
- 3 Lost to follow up



Bubble Plot of Outbreak



SYMPTOM ONSET DATE

Primary Cases	Confirmed Exposure	Exposure location
Secondary Cases	Suspected exposure	F - Friend
Tertiary Cases	Secondary exposure	Hi - Family
Quaternary Cases	Tertiary exposure	Hc - Health care facility contact
Quinary Cases	Quaternary exposure	W - Workplace colleague
Senary Cases	Senary exposure	U - unknown
Septenary Cases	Septenary exposure	OO - out of jurisdiction
Octinary Cases	Octinary exposure	
Nonary Cases	Nonary exposure	
Decary Cases	Decary exposure	
11th Generation Cases	11th Generation exposure	
12th Generation Cases	12th Generation exposure	
13th Generation Cases	13th Generation exposure	
High Suspected Report	High-MGM	Red box: frequent patron of DTLA, World Cal Hollywood clubs, bars, spas and/or
Low Suspected Report	Low-MGM	
Lead to Follow Up		





A Few Facts

- Majority of cases among MSM population: HIV – and HIV +
- Some are women and heterosexual men with social connections to MSM cases.
- Most transmissions associated with large venues such as athletic clubs, bars, theaters and nightclubs.
- The majority of cases with no documentation of complete vaccination; however, some cases were fully vaccinated.



Diagnosis

- Diagnosis can be difficult. Many of our cases initially misdiagnosed, most commonly as salivary duct stones and lymphadenopathy
- Some misdiagnoses occurred because of reliance on false negative IgM results
- Waning immunity leads to atypical presentations that are harder to recognize



Clinical Presentation

- Pt. usually presents with acute orchitis, parotitis, or other salivary gland swelling
- Mumps typically begins with a few days of fever, headache, myalgia, fatigue, anorexia, maybe non-specific respiratory symptoms followed by development of salivary gland swelling, pain, and tenderness.
- Inquire about possible exposure to mumps
- Incubation period ranges from 12-25 days, but symptoms typically develop 16 to 18 days after exposure to mumps virus.



Laboratory Testing

- Buccal swab for PCR ideally within three days but no greater than nine days after symptom onset
- Blood for serology (IgM and IgG) four or more days after symptom onset.
- Remember: In vaccinated individuals the IgM may remain negative



Management

- No specific treatment
- Evaluate for need to have additional MMR vaccine
- Contact Department of Public Health before any test results back – ideally while patient in your presence to coordinate lab testing
- Advise suspect mumps patients:
 - should remain home and
 - away from public spaces such as school and work for five days after parotitis onset or, in its absence, until the resolution of constitutional symptoms.



Prevention

- Outreach to community and governmental organizations affiliated with target population
- Encourage overall immunization awareness for adults
- Educate – droplet precautions, adult presentation
- Don't be stoic!!



Contact Information

- *Los Angeles County DPH:*
 - Weekdays: 888-397-3993
 - After 5 pm or on weekends: 213-974-1234.
- *Long Beach Health and Human Services:*
 - Weekdays: 8:00 am to 5:00 pm: 562-570-4302.
 - After hours: 562-435-6711, ask for the Communicable Disease Officer.
- *Pasadena Health Department:*
 - Weekdays: 8:00 am to 5:00 pm: 626-744-6089.
 - After hours: 626-744-6043.



Additional Information

- Technical or clinical assistance-contact LAC DPH Immunization Program's Surveillance Unit:
 - Weekdays 8am-5pm call: 213-351-7800
 - After hours call: 213-974-1234
- Mumps for Community Members (LAC DPH):
<http://publichealth.lacounty.gov/ip/DiseaseSpecific/Mumps.htm>
- Mumps for Healthcare Providers (CDC):
<https://www.cdc.gov/mumps/hcp.html>
- Mumps Outbreak Updates (CDC):
<https://www.cdc.gov/mumps/outbreaks.html>
- Mumps Factsheet (CDPH):
<https://www.cdph.ca.gov/HealthInfo/discond/Pages/Mumps.aspx>



Invasive Meningococcal Disease (IMD) Update

Claire Jarashow PHD, MPH

Epidemic Intelligence Service Officer

Acute Communicable Disease Control

Los Angeles County Department of Public Health

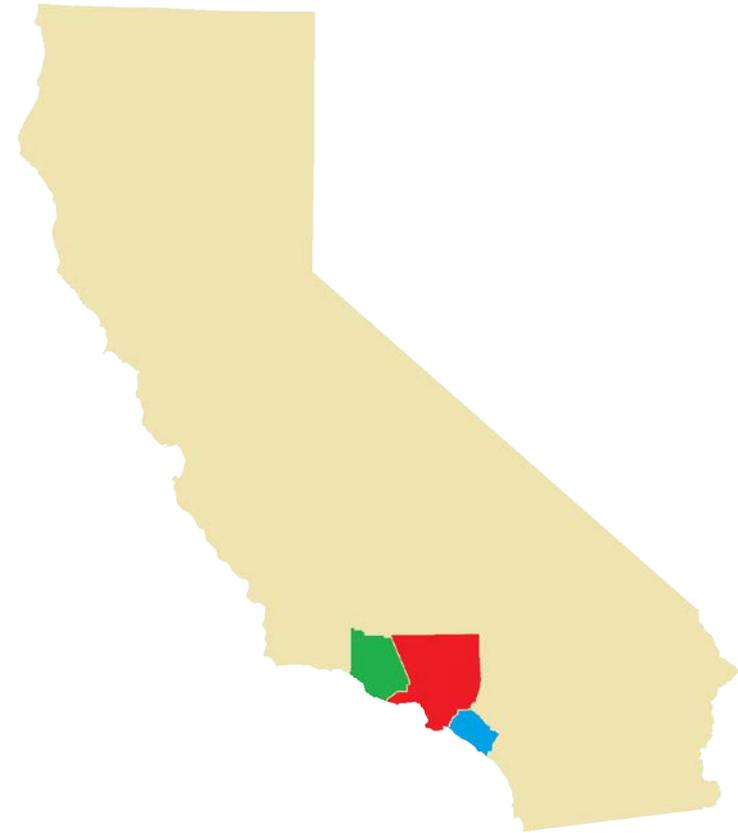
cjarashow@ph.lacounty.gov





2016-17 SoCal Outbreak

- Largest known IMD outbreak among MSM in US
- 31 outbreak-associated cases
- Multiple local health jurisdictions
 - City of Long Beach
 - Los Angeles County
 - Orange County
 - Ventura County



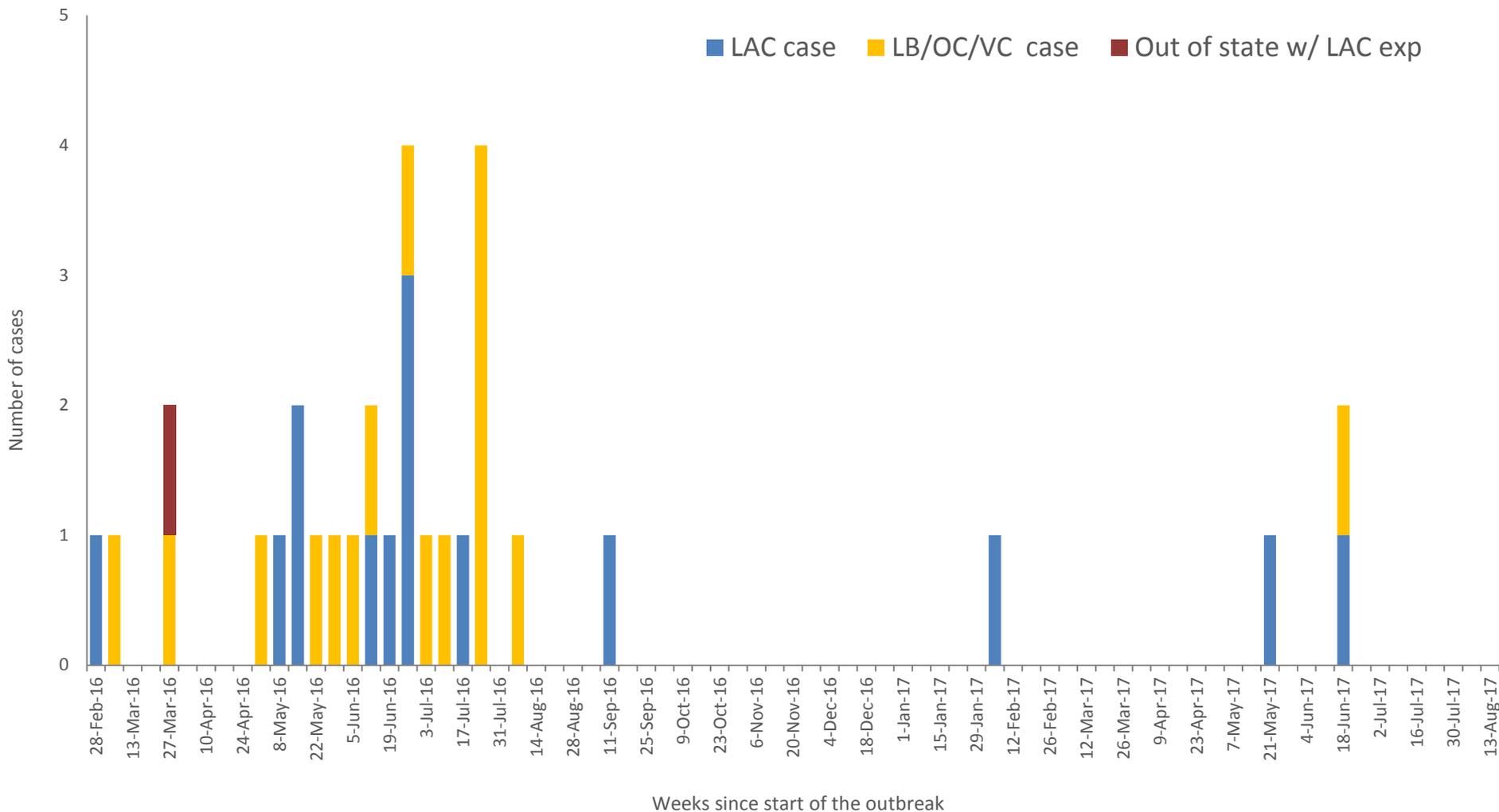


IMD Case Description (n=31)

Characteristic	Number (%)
Male	28 (90%)
MSM (% of males)	23 (82%)
Median age (range)	32 (17-76)
Hospitalized	30 (97%)
Known HIV infection	5/29 (17%)
Deaths	4 (13%)



Epidemic Curve





Symptoms and Hospital Stay of LAC cases (n= 14)

	2016-17 n (%)
Nausea or vomiting	10 (71)
Triad (fever, stiff neck, altered sensorium)	7 (50)
Length of hospital stay (days)	8 (6 – 95)



Clinical Presentation of Outbreak Cases

	Cases (n=27)
Meningococccemia	63%
Meningitis	37%



LAC Vaccine Recommendations

- **All HIV-infected persons** should receive:
 - 2 doses of the conjugate meningococcal (MenACWY) vaccine at least 8 weeks apart and a booster 5 years later* and every 5 years thereafter throughout life.
- **All MSM who are not HIV-infected** should receive:
 - single MenACWY vaccine dose (Menveo[®] or Menactra[®]) or a booster if the most recent dose was given ≥ 5 years ago.

*If the most recent dose was received before age 7 years, the first booster dose should be administered 3 years after the initial dose and then every 5 years thereafter throughout life.

Note: MenACWY vaccine is included on the AIDS Drug Assistance Program (ADAP) formulary.



Provider Guidance

- Implement evidence-based practices to ensure completion of the 2-dose vaccination schedule for all HIV-infected persons.
 - Examples include reminder-recall or co-scheduling
 - Track completion rates
- Ensure MSM clinic staff are completely vaccinated
- Refer MSM for free MenACWY vaccine if vaccination is not feasible at their primary care provider



Vaccination Information

Meningococcal Vaccine Dosing and Schedule- updated CDPH chart describing timing of doses for high-risk populations

<http://eziz.org/assets/docs/IMM-1218.pdf>

Free Meningococcal Vaccine for all uninsured/underinsured MSM in LAC.

Find a location here:

<http://www.publichealth.lacounty.gov/ip/Docs/meningitisclinics.pdf>

Meningococcal Vaccines—High-risk Populations Different vaccines protect against different serogroups.

Risk groups: Exp. Increased Exposure to meningococcal serogroups covered by vaccines (due to outbreaks¹, travel to affected areas [e.g. the Hajj], lab exposure)
 CD. Persistent Complement component Deficiencies (including persons taking eculizumab [SolirisTM])
 Asp. Functional or Anatomic Asplenia (including sickle cell disease)
 HIV. HIV Infection

Age at first dose	Exp.	CD	Asp.	HIV	1) MenACWY vaccines ²	Boosters for those who remain at increased risk
2–6 months	✓	✓	✓	✓	2 months: ACWY-CRM Menveo [®] 4 months: ACWY-CRM Menveo [®] 6 months: ACWY-CRM Menveo [®] 12–15 months: ACWY-CRM [®] Menveo [®]	
7–23 months	✓	✓	✓	✓	ACWY-CRM Menveo [®] → 3 months → ACWY-CRM [®] Menveo [®]	If primary dose(s) given when younger than 7 years: 3 years → ACWY-CRM or -D [®] Menveo [®] or Menactra [®] → Every 5 years → ACWY-CRM or -D [®] Menveo [®] or Menactra [®]
9–23 months	✓	✓			ACWY-D [®] → 3 months → ACWY-D [®] Menactra [®]	
2 years and older	✓	✓ ³	✓ ³	✓ ³	ACWY-CRM or -D [®] Menveo [®] or Menactra [®] → 2 months → ACWY-CRM or -D [®] Menveo [®] or Menactra [®] ACWY-CRM or -D [®] Menveo [®] or Menactra [®]	If primary dose(s) given at age 7 years or older: Every 5 years → ACWY-CRM or -D [®] Menveo [®] or Menactra [®]
2) Also give MenB vaccine—may be given at same time as MenACWY vaccine. Use the same brand for each dose in the series.						
10 years and older	✓	✓	✓	✓	1st dose: MenB-4C Bexsero [®] → 1 month → 2nd dose: MenB-4C Bexsero [®] OR 1st dose: MenB-FHbp Trumenb [®] → 1–2 months → 2nd dose: MenB-FHbp Trumenb [®] → 6 months between 1st and 3rd dose → 3rd dose: MenB-FHbp Trumenb [®]	



Eculizumab CDC Health Advisory

- Eculizumab (Soliris®) commonly prescribed for treatment of
 - atypical hemolytic uremic syndrome (aHUS)
 - paroxysmal nocturnal hemoglobinuria (PNH)
- Patients receiving Eculizumab have 1,000-2,000 fold greater risk of IMD compared to general population
- ACIP recommends meningococcal vaccination for all patients receiving eculizumab
- Meningococcal conjugate (MenACWY) vaccine targets serogroups A, C, W, and Y, but provides no protection against nongroupable *N. meningitidis*
- Consider antimicrobial prophylaxis for duration of eculizumab therapy



Reporting

- Report **suspect cases** (positive Gram stain, don't wait until culture is positive) **immediately** to ACDC by phone:
(213) 240-7941 8am-5pm
(213) 974-1234 after hours

- Forms to complete and fax after the call found here:

<http://publichealth.lacounty.gov/acd/Diseases/EpiForms/MeningococcalDisRep.pdf>

State of California Department of Public Health
Meningococcal Disease Case Report

MININGOCOCCAL DISEASE CASE REPORT

Patient Name-Last: _____ Sex: _____ Middle Initial: _____ Date of Birth: _____ Age: _____ Sex: _____
 Address-Number, Street: _____ City: _____ State: _____ County: _____ ZIP Code: _____
 Telephone Number: _____
 Home () _____ Work () _____
 Occupation: _____
 Name () _____
 Ethnicity (check one): _____
 Race (check one): Asian-American/Pacific White Native American Asian/Pacific Islander Other _____
 Ethnicity (check one): Hispanic/Latino Non-Hispanic/Latino
 Asian/Pacific Islander, please check one: Asian Indian Chinese Japanese Korean Filipino Guamanian Hawaiian Vietnamese Other _____

PRESENT ILLNESS
 Onset date: _____ Attending physician: _____ Telephone number: _____
 Hospitalization: Yes No Admit date: _____ Discharge date: _____ Hospital name: _____ Medical record number: _____ Telephone number: _____

SYMPTOMS/SIGNS

	Yes	No	Unk		Yes	No	Unk
Date history obtained:							
Fever > 38°C/100.4°F (highest recorded): _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Seizures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Headache	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Altered consciousness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stiff neck	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Maculopapular rash	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Respiratory symptoms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Petechial rash (distribution: _____)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nausea/vomiting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Purpuric rash (distribution: _____)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other relevant symptoms (list): _____				Clinical purpura fulminans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SYNDROME

	Yes	No	Unk	HOSPITAL COURSE	Yes	No	Unk
Pneumonia/MDD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ICU admission	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Encephalitis/meningitis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Intubated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Septic arthritis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Were antibiotics taken prior to collection of blood for microbial testing?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Septic shock/organ failure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Petechial rash prior to collection of CSF for microbial testing?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dissminated intravascular coagulation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Date antibiotics started: _____			
Prior medical history: _____				Antibiotics prescribed: _____			

LABORATORY TESTING FOR N meningitidis Pos _____ Not Done _____
 Blood culture (date collected): _____
 CSF gram stain for gram stain: _____
 CSF antigen test: _____
 CSF: _____

Meningococcal Case Supplemental Form
 To be filled out in conjunction with the Meningococcal Disease Case Report and Contact Roster

In the past 3 months, there has been an increase in severe meningitis cases. The public health department is investigating this increase in these severe infections. To assist Public Health Department in controlling the spread of these infections, I need to ask some questions about your health activities and recent places that you and your close friends and family have been.

Patient Name (Last, First) _____ Date of Birth _____ YCMR ID _____
 Will this information be collected by proxy? Yes No If Yes, Name and relationship to case: _____

POSSIBLE EPIDEMIOLOGIC RISK FACTORS

SOURCE CONTACT
 1) In the past month, have you been in contact with friends, relatives or any other groups of people that had similar symptoms as yours (i.e. headache, fever, problem in nursing, skin rash, nausea, vomiting)? Yes No
 If Yes, Name of contact or group: _____
 Location of contact: _____ Cell: () _____ Work: () _____
 Address: _____ State: _____ ZIP Code: _____
 Contact telephone: Home: () _____ City: _____ State: _____ ZIP Code: _____

RESIDENCE
 2) In the past 3 months, where have you slept at night? (Check all that apply.)
 Residence: Specify address: _____
 How long at this location? _____
 Shelter: Specify name of shelter: _____
 Shelter address: _____
 Time period of stay: _____
 Streets: Specify name of streets/cross streets: _____
 Jail: Specify name of jail: _____
 Describe location: _____
 Other: _____ Telephone number: () _____

3) In the past 3 months, do you have any friends or relatives that have:
 Been homeless: Specify shelter name: _____
 Stayed in a shelter: Specify name of streets/cross streets: _____
 Stayed on the streets: Specify name of streets/cross streets: _____
 City: _____ State: _____ ZIP Code: _____

FOOD AND BEVERAGE
 4) In the past 3 months, where have you eaten your meals? (List all locations)
 Residence: Specify address: _____ City: _____ State: _____ ZIP Code: _____
 Shelter: Specify name of shelter: _____ City: _____ State: _____ ZIP Code: _____
 Shelter address: _____
 Soup Kitchen: Specify address: _____ City: _____ State: _____ ZIP Code: _____



Multi-drug Resistant *Shigella* Update

Claire Jarashow PHD, MPH

Epidemic Intelligence Service Officer

Acute Communicable Disease Control

Los Angeles County Department of Public Health

cjarashow@ph.lacounty.gov



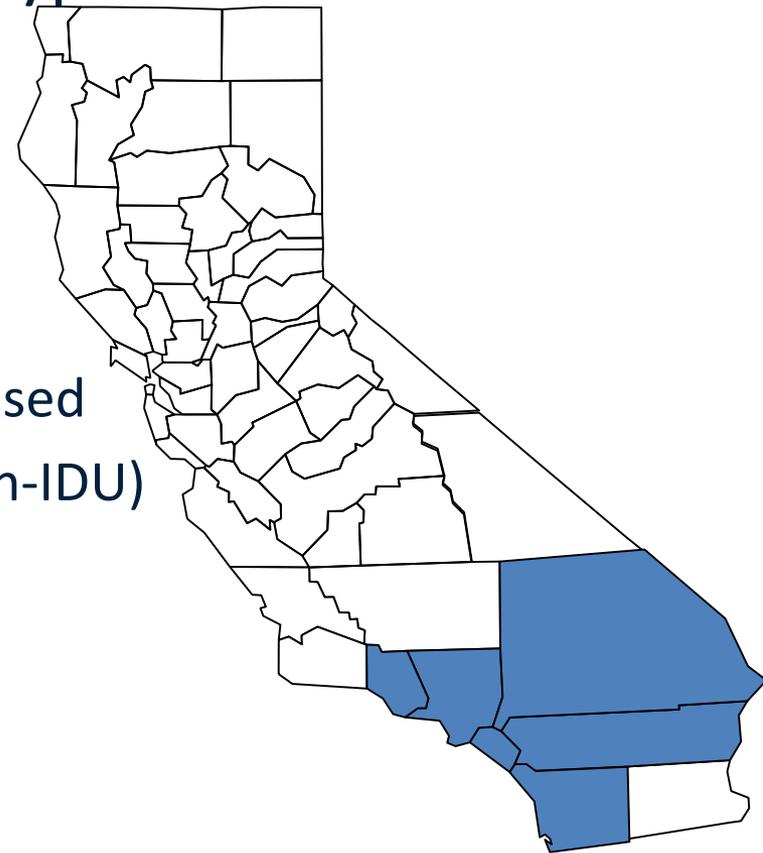


Shigella flexneri

- Fecal-oral transmission
- Highly infectious (≥ 10 organisms)
- Sheds days to weeks after illness
- HIV+ persons may have extended carriage & shedding

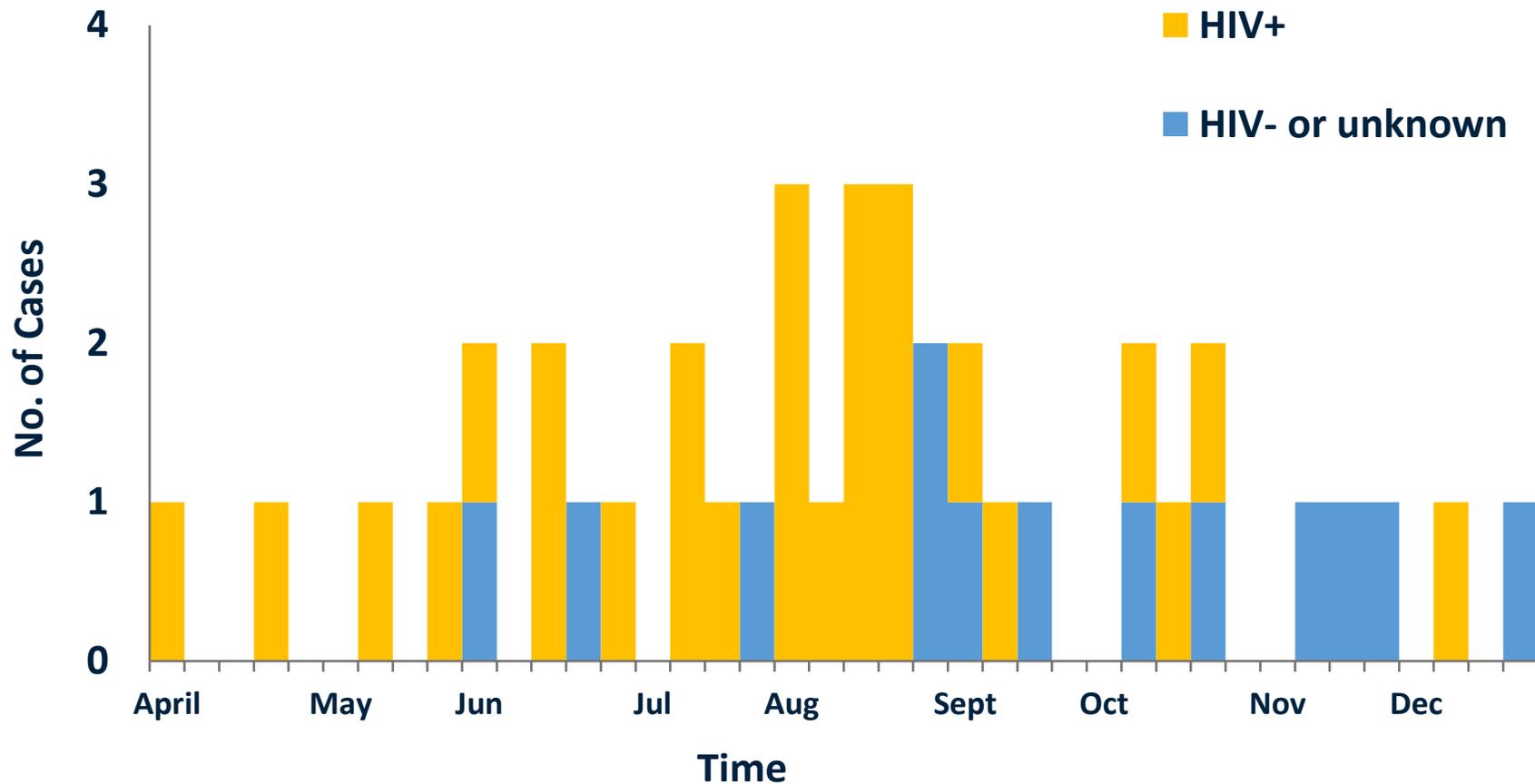
Southern California Outbreak, March–December 2016

- 40 cases of *Shigella flexneri* serotype 7
 - All male
 - 88% MSM
 - Age range 22–69 (median 36 years)
 - 81% (26/32) HIV positive
 - 38% (8/21) homeless or transiently housed
 - 83% (20/24) drug-using (IDU and/or non-IDU)
 - 1 death





Shigella flexneri serotype 7 cases by HIV status – Southern California, 2016





Clinical Presentation

	N (%)
Diarrhea	40 (100)
Fever	36 (90)
Bloody diarrhea	21 (53)
Abdominal cramps	31 (78)
Hospitalized	14 (41)
Days hospitalized (median)	3.5 (1-19)



Antimicrobial Susceptibility Testing (AST)

- **19 clinical AST results**
 - All resistant to ampicillin and trimethoprim/sulfamethoxazole
 - All susceptible to ciprofloxacin
 - No routine testing for azithromycin
- **Additional CDC testing**
 - 6/6 resistant to azithromycin
 - 5/6 resistant to amoxicillin/clavulanic acid



Fluoroquinolone Interpretive Criteria

- Current criteria for *Shigella*
 - Ciprofloxacin: S \leq 1, I: 2, R: \geq 4 ($\mu\text{g}/\text{mL}$)
 - Levofloxacin: S \leq 2, I: 4, R: \geq 8 ($\mu\text{g}/\text{mL}$)
- CDC working with CSLI to consider revision of FQ breakpoints based on clinical outcomes
- FQ MIC range of concern for *Shigella*
 - Ciprofloxacin: 0.12–1 $\mu\text{g}/\text{mL}$



April 2017: CDC Health Advisory

- FQ treatment of Shigella infection with a strain harboring quinolone resistance gene may:
 - be less effective and increase risk of a more severe clinical course
 - increased duration or severity of symptoms, increased need for hospitalization or admission to an intensive care unit, increased length of hospitalization, or increased risk of death
 - increase the risk of secondary cases if the treatment prolongs the duration or increases the quantity of organisms shed in the stool



Clinician Guidance

- Obtain a stool culture from MSM who present with fever and diarrhea, particularly if bloody, there is a suspected recent treatment failure, or if the patient is immunocompromised
- Order AST when ordering stool culture and request ciprofloxacin AST that includes dilutions of 0.12, 0.25 and 0.5 $\mu\text{g}/\text{mL}$
- Consider waiting for AST results before treating and check AST results
- If PCR is used, please remember that **PCR does not replace culture** as an isolate is needed for serotyping and AST **and is required per the 2016 updates to the CA Title 17 Reportable Disease Guidance**. Any positive PCR needs a reflex culture and should be shipped to the PHL
- Avoid prescribing FQs if the ciprofloxacin MIC is 0.12 $\mu\text{g}/\text{mL}$ or higher even if the laboratory report identifies the isolate as susceptible
- Obtain follow-up stool cultures and AST in patients who have continued or worsening symptoms despite antibiotic therapy.



January- mid June 2017

- 60 cases throughout CA (additional counties in NorCal)
- LAC: 33 cases (including Long Beach)
 - 97% male (32/33)
 - 38% known MSM (12/32)
 - 61% HIV + (17/28 with known HIV status)
 - 29% out of care (5/17)
 - 29% (8/28) Hospitalized
 - 67% (10/15) cases known to be unemployed/transiently housed or homeless

Prevention

- Tailor risk reduction and prevention messaging to risk-profile of patient.
- See MSM materials in Spanish and English on the LAC DPH shigellosis website.

<http://publichealth.lacounty.gov/acd/Diseases/Shigellosis.htm>

PLAY SAFE

Shigella can spread among men who have sex with men.

- *Shigella* spreads easily from any contact with feces (poop)
- High risk of getting it during oral or anal sex play (rimming, fisting, and using anal toys)
- *Shigella* causes bloody diarrhea, stomach cramps, and fever
- It can be a serious illness, especially if you have HIV

If you think you have *Shigella*, talk to your healthcare provider. If you don't have a provider, call 2-1-1 to find out how to get care.





Reporting

- For Clinically Suspect Cases:
 - Complete the Los Angeles County Department of Public Health Confidential Morbidity Report (CMR) <http://publichealth.lacounty.gov/acd/reports/cmr-h-794.pdf> and fax to the DPH Morbidity Unit at 888-397-3778 **OR**
 - Report cases by telephone during normal business hours from 8am-5pm by calling 888-397- 3993.



Do you receive the LAC Health Alerts?

- If you do NOT, please subscribe online:
<http://publichealth.lacounty.gov/lahan/>
- All previous HANs also posted with level of importance noted



Questions?