



#### Unaware he had measles, a man traveled from N.Y. to Michigan, infecting 39 people

'Patient Zero' offers a cautionary tale about how speedily one of the most infectious pathogens on the planet can spread



- Ongoing international outbreaks
  - > Over 49,000 cases in Philippines; 558 deaths
  - Over 78,000 cases in Ukraine; 27 deaths
- Ongoing nationwide outbreaks
- Decrease in vaccinated population

 $\rightarrow$  = Bad.

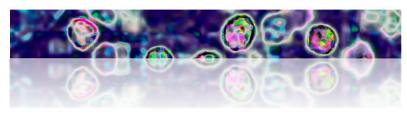


Officials announce new measures to fight New York measles outbreak

## 2019 is shaping up to be a very bad year for measles

It's not just the US outbreaks. Measles is making a global comeback. By Julia Belluz | @juliaoftoronto | julia.belluz@voxmedia.com | Apr 15, 2019, 2:20pm EDT

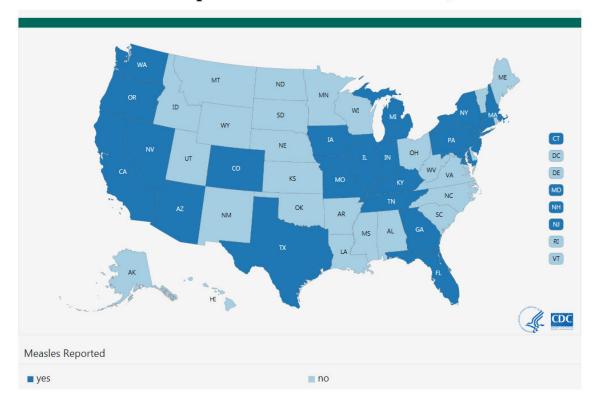






From January 1 to May 3, 2019, 764\*\* individual cases of measles have been confirmed in 23 states. This is an increase of 60 cases from the previous week. This is the greatest number of cases reported in the U.S. since 1994 and since measles was declared eliminated in 2000.

## States That Have Reported Measles Cases in 2019





## **MEASLES**

In 2019, four outbreaks linked to patients with international travel have been reported in California. As of May 8, 2019, 44 confirmed measles cases, including 30 outbreak-associated cases, have been reported.

CDPH will update case counts weekly on Thursdays if new cases are reported.

Table 1. Total Reported Measles Cases in California, 2019

County	Total Cases	Pediatric Cases (<18 Years)	Adult Cases (18 Years or Older)
Los Angeles*	10	1†	9
Orange	2	1	1
Placer	3	2	1
Sacramento	3	2	1
San Francisco	1	0	1
San Mateo	4	1	3
Santa Clara	4	1	3
Santa Cruz	1	0	1
Other (Butte, Calaveras, Shasta, Tehama)§	16	3	13
Total	44	11	33

<sup>\*</sup>Los Angeles County includes three health departments that report cases separately: Los Angeles County, Pasadena City, and Long Beach City.

\$To address potential confidentiality concerns with small numbers, data from counties with populations less than 250,000 are not individually displayed

<sup>†</sup>The rash onset for this patient occurred in late December of 2018. Due to reporting methods of the Centers for Disease Control and Prevention, the patient will be included in California's 2019 case counts.



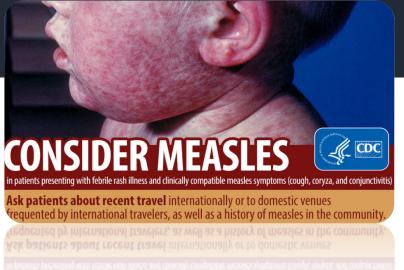
## **MEASLES: Transmission**

- One of the most contagious diseases on earth
- Transmitted by airborne droplets
  - Droplets can remain in the air for up to two hours after infectious person has left the room
- > 2 doses of MMR are 97% effective
  - > 1 dose is 93% effective
  - Mumps slightly less → 1 dose=78%, 2 doses=88%
  - Usually lifelong immunity



# **MEASLES:** Symptoms

- > 7 to 21(!) days after exposure:
- > Prodrome phase lasts 2-4 days
  - High fever
  - > Cough, coryza, conjunctivitis (The Three C's)
  - Koplik spots in mouth
- Rash
  - › Begins on face/hairline and descends
  - Maculopapular
  - Fever continues
  - > Lasts up to 6 days (can be less in vaccinated people)
  - > Fades in order of appearance







# **MEASLES:** Diagnosis

- > Throat or Urine PCR
- > Blood--antibodies
- > Long Beach Public Health Lab does PCR testing



# **MEASLES:** Risk factors

- > International travel
- Unvaccinated
- Contact with someone who may have had measles
- Recent flights
- Differential Dx:
  - Drug reaction (recent history of abx)
  - Chickenpox
  - > Enteroviruses (HFM)
  - Mono
  - Parvo
  - > Etc...





▼ Talk with your doctor if you are planning an international trip.

For more information go to www.cdc.gov/travel.



# **MEASLES: Infection Control**

- > If you suspect a patient may have measles, IDEALLY you will:
  - › Keep the patient outside
  - > If indoors, place surgical mask on the patient
  - ) (Don't use room for 2 hrs after pt leaves)
  - Call CDCP immediately!
    - > Daytime: 562.570.4302.
    - › After hrs: 562.500.5537





- Adult male
- Vaccinated, 2 MMR
- > UCI Student
- No international travel



Date	Location	Address	Time
4/28/2019	Pizzanista	1837 E 7th St, Long Beach 90813	5:30- 7:00 PM
4/28/2019	Total Wine	7400 Carson Blvd, Long Beach, 90808	6:00- 7:30 PM
4/30/2019	Susan European Dressmaker	3319 E 7th St, Long Beach, 90804	5:00-7:00 PM
5/1/2019	Art du Vin Wine Bar	2027 E 4th St, Long Beach, 90814	8:00-10:00 PM
5/1/2019	Ralph's	2930 E 4th St, Long Beach, 90814	2:00-5:00 PM
5/2/2019	Ralph's	6290 PCH, Long Beach, 90803	3:00- 6:30 PM
5/2/2019	AMC Marina Pacifica	6346 E PCH, Long Beach, 90803	6:00- 10:00 PM
5/3/2019	Broadway Carwash	4000 E Broadway, Long Beach, 90803	11:00-1:00 PM

- The Pickled Monk, Fullerton, 5/3/19 from 1:45 3:30 p.m.
- Brick Basement Antiques, Fullerton, 5/3/19 from 2:40 4 p.m.
- Buffalo Exchange, Fullerton, 5/3/19 from 3 4:15 p.m.
- 8Eightyeight Cigar, Fullerton on 5/3/10 from 3:15 5 p.m.
- UCI Humanities, Instructional Building 100, 4/29/19 from 10 a.m. 12 p.m.
- UCI Murray Krieger Hall, Classic Department, 4 th Floor, 4/29/19 from 11 a.m. 3 p.m.
- UCI Humanities Hall 112, 4/30/19 from 2 5 p.m.
- UCI Student Health Center, 5/2/19 from 1 − 3 p.m

4/27/2019 and 4/28/2019, Farmer's Daughter Hotel, 115 S Fairfax Ave, Los Angeles, CA 90036, All day on 4-27 through 10:00 AM on 4

4/27/2019, Peet's Coffee, (3rd & Fairfax) 175 S Fairfax Ave Unit D, Los Angeles, CA 90036, 9:00 AM - 12:00 PM

4/27/2019, Fratelli's Café, 7200 Melrose Ave, Los Angeles, CA 90046, 11:00 AM - 3:00 PM

4/27/2019, TART Restaurant, (located in Farmer's Daughter Hotel) 115 S Fairfax Ave, Los Angeles, CA 90036 ,5:00 PM -8:00 PM

4/27/2019, The Grove 189 The Grove Dr, Los Angeles, CA 90036 2:00 PM-5:30 PM

4/27/2019, J.Crew and Barnes and Noble (located at The Grove) 189 The Grove Dr, Los Angeles, CA 90036, 3:30 PM- 5:30 PM

4/27/2019, Los Angeles Farmer's Market, 6333 W 3rd St, Los Angeles, CA 90036, 3:30 PM- 5:30 PM

4/27/2019, Paper Source (3rd & Fairfax, Los Angeles) 175 S Fairfax Ave, Los Angeles, CA 90048, 4:00PM-6:00 PM

4/27/2019, Whole Food's (Fairfax) 6350 W 3rd St, Los Angeles, CA 90036, 8:00 PM-11:00 PM

4/27/2019, La Brea Tarpits, 5801 Wilshire Blvd, Los Angeles, CA 90036, 7:00 PM-9:30 PM



- Contact Tracing
  - Contact each employer
  - Go through Corporate (sometimes)
  - > Obtain list of employees there at that time
  - Send a letter to employer
  - Send OOJ employees OOJ
  - > Contact each employee to notify of exposure
  - > Identify any high risk employees, and conduct follow/up
  - Contact any personal contacts



- Contact Tracing
  - > 69 exposed contacts
  - > All 69 have had at least one attempt for interview.
  - > 49 have completed interview. (most within 24 hrs)
  - > Exposure letters will be mailed to all others



- > Public Notifications
  - Media!
  - > Website
  - Social Media
  - > Interviews
  - ) Posters, etc.



# **MEASLES:** Surge Team

- > Calling on LBEST and anyone else interested
- > Sign up with <a href="mailto:gabriela.Hurtado@longbeach.gov">gabriela.Hurtado@longbeach.gov</a>
- Every Thursday, respond to Nick's email regarding availability over the weekend



## **PERTUSSIS**

- 34 cases as of 5/6/2019
- Already surpassed 2018 Total (29 cases)
- Median age (range): 13 (0-40)
- 71% less than 18 year of age
- As of 4/14/2019
- CA 777
- LAC 36

