Issue 2
2019

WISCONSIN EPI EXPRESS

IN THIS ISSUE

PROGRAM UPDATES

STAFF UPDATES:

The Bureau of Communicable Diseases (BCD) welcomes the following staff to their new positions:

Ezra Menon, HIV Surveillance Coordinator, ezra.menon@dhs.wisconsin.gov

Mariana Pasturczak, Immunization Program Office Associate, mariana.pasturczak@dhs.wisconsin.gov

Vipul Shukla, HIV Partner Services Coordinator, vipul.shukla@dhs.wisconsin.gov

Retirements:

Jim Vergeront, HIV Program Director, retired on April 26, 2019. Please call the BCD main line, 608-267-9003, for any questions.

NEW AND REVISED WEBPAGES:

BCD is revamping communicable disease webpages so that they are easier to navigate and utilize plain language.

New webpages on the topics of adenovirus, fungal illnesses, healthy swimming, and waterborne illnesses have been created. Please see the revised webpages on the following topics: acanthamoeba keratitis, free-living amebas, hantavirus, healthcare associated infections (HAIs), hepatitis A, legionellosis, Lyme disease, mosquito bite prevention, tickborne diseases, tick bite prevention, tularemia, typhus fever, and West Nile virus.

ONGOING OUTBREAK INVESTIGATIONS:

See the Department of Health Services' Outbreaks and Investigations webpage for up-to-date information on outbreaks and investigations with wide impact in Wisconsin.

NEW EDUCATIONAL MATERIALS:

Check out our new animated video on staying healthy around animals while at a fair or petting zoo and the CDC video on backyard poultry. A new educational fact sheet is available on the topics of hepatitis A.

Extended Influenza Season in Wisconsin, 2018-2019

By: Tom Haupt, Influenza Surveillance Coordinator

WHEN DID PEAK SEASON OCCUR?

Influenza activity in Wisconsin officially peaked during the week ending March 23, 2019 (week 2019–12). This has been one of the longest influenza seasons and the latest date of peak activity in the last 15 years. Historically, in Wisconsin, influenza activity peaks around the first week of February.

WHY WAS THIS SEASON UNIQUE?

The 2018-2019 influenza season was unusual, with two waves of influenza activity that were associated with two distinct subtypes of influenza A viruses. The predominant influenza virus for the initial wave of the season, A/H1N1, affected younger adults.

The second wave of influenza activity was associated with the A/H3N2 virus, a virus that causes increased morbidity and mortality among the older population. In most seasons, influenza A activity is followed by a second wave of influenza B.

2018-2019 SEASON SUMMARY

As of June 10, 2019, 3,464 people have been hospitalized due to influenza and 128 people have died. Most of the hospitalizations and deaths occurred during the period when the A/H3N2 influenza virus was predominant in Wisconsin. For additional data on the 2018-2019 influenza season, please see the Wisconsin Weekly Respiratory Report.

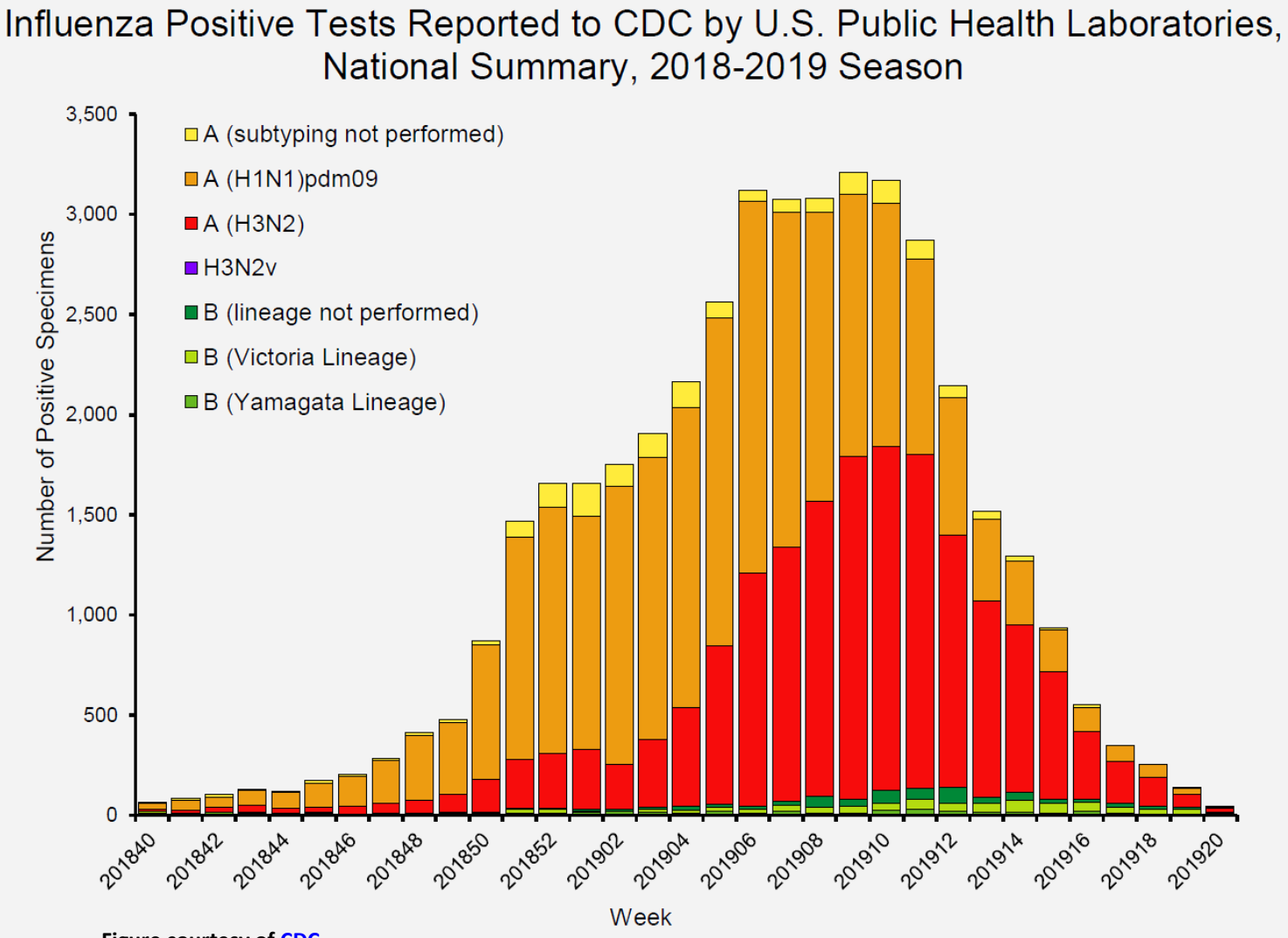


Figure courtesy of CDC

Ongoing Measles Surveillance in Wisconsin

By: Stacey Moyer, Field Unit Supervisor; and Sarah Born, Epidemiologist

MEASLES OVERVIEW

Measles is an acute viral respiratory infection characterized by a febrile prodrome and accompanied by cough, coryza, and conjunctivitis. Koplic spots develop one to two days before the rash. The fever often peaks at 104–105°F at the time of rash onset. The rash typically begins at the hairline and spreads downward and outward. Other infectious and noninfectious etiologies that may cause fever and generalized rash include Kawasaki disease, rubella, Coxsackievirus, Zika virus, or drug reactions.

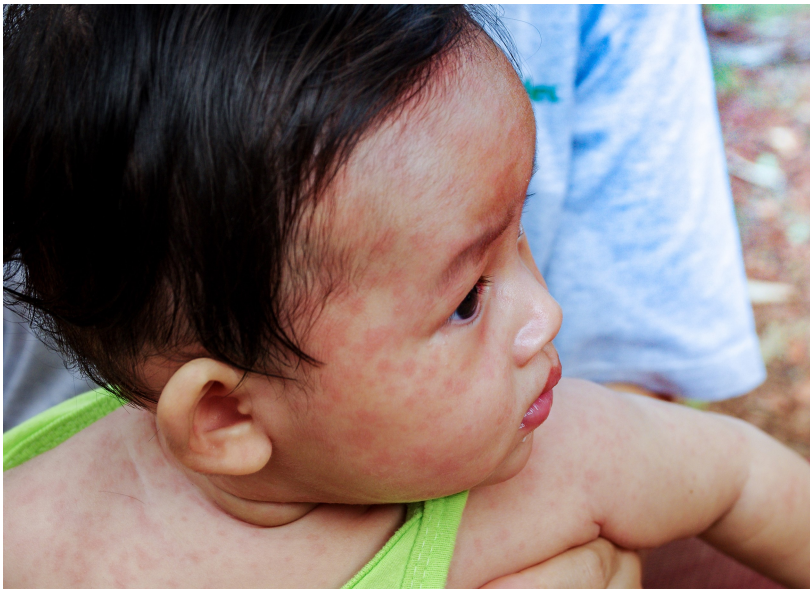
An atypical infection can occur in individuals who have partial immunity from immunization with inactivated measles vaccine (used between 1963 and 1967), individuals who have received post-exposure immune globulin (IG), or young infants with some residual maternal immunity.

MEASLES CASES IN 2019

From January 1 to June 13, 2019, approximately 1,044 individual cases of measles have been confirmed in 28 states. This is the greatest number of cases reported in the U.S. since 1992 and since measles was declared eliminated in 2000. These numbers are expected to rise and are updated weekly by CDC.

There have been 239 individuals suspected of having measles reported to public health so far this year.

Though there have not been any cases of measles in Wisconsin since 2014, the index of suspicion has been high among medical providers. There have been 239 individuals suspected of having measles reported to public health so far this year, which represents more than a 108% increase in reporting and testing from the same time period last year.



COMMUNICABLILITY

Persons with measles are usually considered infectious from four days before to four days after rash onset. The day of rash onset should be counted as day zero.

Measles spreads through the air when an infected person coughs or sneezes. It is so contagious that if one person has it, 9 out of 10 people around him or her will also become infected if they are not protected. Because the virus remains infectious in the environment for up to two hours after an infected person has left the location, transmission can occur in public places without any known person-to-person contact with an infected individual. See Figure 1 (on page 4) for additional details about the timeline of measles.

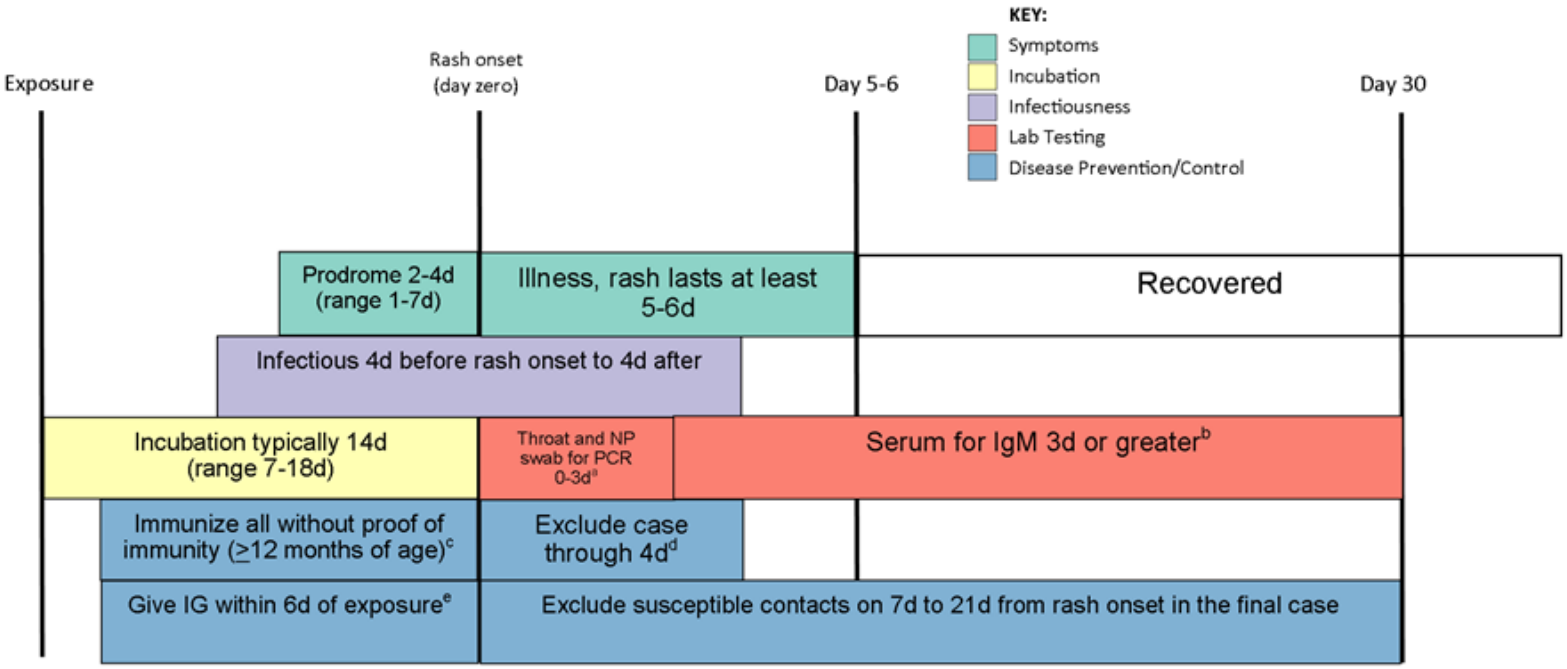
PREVENTION

Vaccination is highly protective; one dose of measles vaccine is about 93% effective and two doses is 97% effective.

Ongoing Surveillance for Measles in Wisconsin

By: Stacey Moyer and Sarah Born

FIGURE 1. MEASLES TIMELINE



Footnotes:

a. Preferred timing for collecting throat and np swab is 0-3 days after rash onset but no later than 10 days. Urine can also be collected for PCR.
b. IgM collected prior to day 3 may result in a false negative. Serum for IgG can be obtained ASAP after onset but is not helpful if a convalescent is not obtained 10-30 days after the initial.
c. Proof of immunity: DOB prior to 1/1/1957 (not for healthcare worker), serologic proof, 1-2 doses of MMR vaccine. Available data suggest that measles vaccine, if given within 72 hours of exposure to susceptible individuals, will provide protection or disease modification in some cases.
d. Count the day of rash onset as day zero. May return to normal activities on day 5.
e. Give IG only if the person is immunocompromised, pregnant without evidence of immunity, or MMR is contraindicated.

Figure adapted from Michigan Department of Health and Human Services

Follow-Up for Reportable Enteric Pathogens Found in Less Common Specimen Types

By: Lynn Roberts, Enterics Epidemiologist

One of the most frequently asked questions of the Enteric Diseases Program by LHD staff is, "How do I follow up with a client diagnosed with a reportable enteric illness with a specimen source that was not stool?" While most patients with a reportable bacterial enteric illness are diagnosed via stool testing, it is not uncommon for enteric pathogens to be detected in other clinical specimens, such as blood, urine, or abscess fluids.

HELPFUL TIPS TO KEEP IN MIND

- **Reportable bacterial enteric pathogens should not be thought of as incidental findings.** For example, finding *Salmonella* in urine means the client was likely shedding *Salmonella* in their stool and that led to a urinary tract infection. As another example, the isolation of *Campylobacter* spp. from blood is unlikely to have been caused by contamination during venipuncture or sample handling.
- **It doesn't matter if the specimen was urine, blood, abscess fluid, or anything else: if a reportable pathogen was discovered, the case requires investigation.** Remember, these bacteria are not incidental findings. Often the patient had a diarrheal illness in the days or weeks prior to their diagnosis. Asymptomatic shedding of these organisms is also possible.

- **The goal of a routine enteric interview is not to figure out the source of the client's infection.** Unless the client's illness is part of an outbreak, the cause of the client's illness is usually not identified. The goal of enteric disease interviews is to get the most accurate exposure information possible in order to strengthen the data used in public health detection, prevention, and response efforts.

FOLLOW-UP

Follow-up with these cases still involves using the routine enteric follow-up worksheet (completing sections appropriate for the pathogen), but an onset date may be difficult to determine. The onset date depends on whether the client reports having diarrhea prior to their diagnosis.

If the patient does report diarrheal symptoms:

- The onset date is the date they first had gastrointestinal symptoms
- Once the onset date is known, complete the interview as you normally would, using the pathogen's standard exposure period as your timeline for exposures.

If the patient does NOT report diarrheal symptoms:

- The onset date will be the first date that the client experienced symptoms related to their presenting complaint. If the patient had an abscess, onset might be when they first noticed a swelling or a growth. If the patient had a urinary tract infection, onset might be when they first experienced pain while urinating.
- The exposure section will be completed differently than usual. Rather than asking about exposures during the normal four-day or seven-day exposure period, ask if the client would have likely consumed certain foods or had other exposures in the prior 30 days. For example, "I'm going to ask about a list of food items. Please tell me if you likely would have eaten that food item in the 30 days before your UTI, abscess, etc."

***If you have any questions, contact the Enteric Epi of the Day: 608-267-7143 or email dhsdphenterics@dhs.wisconsin.gov.**

Communicable Disease Case Counts

This report contains a selection of reportable conditions with inclusion based on public health significance and frequency of occurrence. The case counts reflect confirmed and probable cases, for all process statuses. These numbers are not final and are subject to change as confirmatory testing and case follow-up are completed.

***Quarterly case counts should not be considered final and are subject to change.**

Disease	2018 Case Counts	2019 Case Counts				
	Total	Q1	Q2	Q3	Q4	2019 YTD
Enteric/Gastrointestinal (also includes suspect cases)						
Campylobacteriosis	1,705	301				301
Cryptosporidiosis	862	111				111
Cyclosporiasis	319	3				3
E. coli, Shiga toxin-producing (STEC)	565	79				79
Giardiasis	675	89				89
Hemolytic uremic syndrome	8	0				0
Listeriosis	20	3				3
Salmonellosis	1,039	138				138
Shigellosis	129	32				32
Typhoid fever	5	1				1
Vibriosis (non-cholera)	31	8				8
Yersiniosis	84	17				17
Invasive Bacteria						
Group A Streptococcal disease	265	64				64
Group B Streptococcal disease	624	124				124
Mycotic						
Blastomycosis	119	6				6
Coccidioidomycosis	15	2				2
Histoplasmosis	22	4				4
Respiratory						
Please refer to the weekly respiratory virus surveillance report: https://www.dhs.wisconsin.gov/library/p-02346-2018-19.htm						
Influenza-associated hospitalizations	6,243	2,521				2,521
Influenza, novel	0	0				0
Legionellosis	331	34				34
Tuberculosis	49	15				15
Sexually Transmitted						
Chlamydia trachomatis	28,225	7,176				7,176
Gonorrhea	7,925	1,910				1,910
HIV	215	50				50
Syphilis (all stages)	510	152				152
Vaccine Preventable						
Diphtheria	0	0				0
Haemophilus influenza, invasive disease	117	30				30
Hepatitis B, acute (confirmed cases only)	14	4				4
Hepatitis B, perinatal	0	0				0

Communicable Disease Case Counts (cont.)

Disease	2018 Case Counts	2019 Case Counts				
	Total	Q1	Q2	Q3	Q4	2019 YTD
Vaccine Preventable (continued)						
Measles (rubeola)	0	0				0
Meningococcal disease	10	1				1
Mumps	28	7				7
Pertussis (whooping cough)	697	106				106
Poliomyelitis	0	0				0
Rubella	0	0				0
Streptococcus pneumoniae, invasive disease	518	128				128
Tetanus	2	0				0
Varicella (chickenpox)	300	70				70
Vectorborne						
Babesiosis	64	3				3
Ehrlichiosis/Anaplasmosis	517	9				9
Jamestown Canyon virus infection	22	0				0
La Crosse virus infection	0	0				0
Lyme disease	1,883	64				64
Malaria[1]	16	3				3
Powassan virus infection	3	0				0
Rocky Mountain spotted fever	29	1				1
West Nile virus infection	33	0				0
Yellow fever[1]	0	0				0
Zika virus infection[1, 2]	0	0				0
Zoonotic						
Brucellosis	3	0				0
Hantavirus infection	0	0				0
Leptospirosis	8	1				1
Psittacosis	0	1				1
Q Fever (acute)	6	0				0
Rabies (human)	0	0				0
Toxoplasmosis	7	6				6
Tularemia	1	0				0
Other						
CP-CRE	—	8				8
Hepatitis A	15	4				4
Hepatitis C, acute	142	29				29
Hepatitis E, acute	0	0				0
Kawasaki disease	23	3				3
Lymphocytic choriomeningitis virus infection	0	0				0
Transmissible spongiform encephalopathy (human)	2	1				1

[1] Denotes diseases where all cases in Wisconsin residents are travel-associated. No local transmission occurs.

[2] Due to enhanced surveillance, asymptomatic confirmed cases are included.