

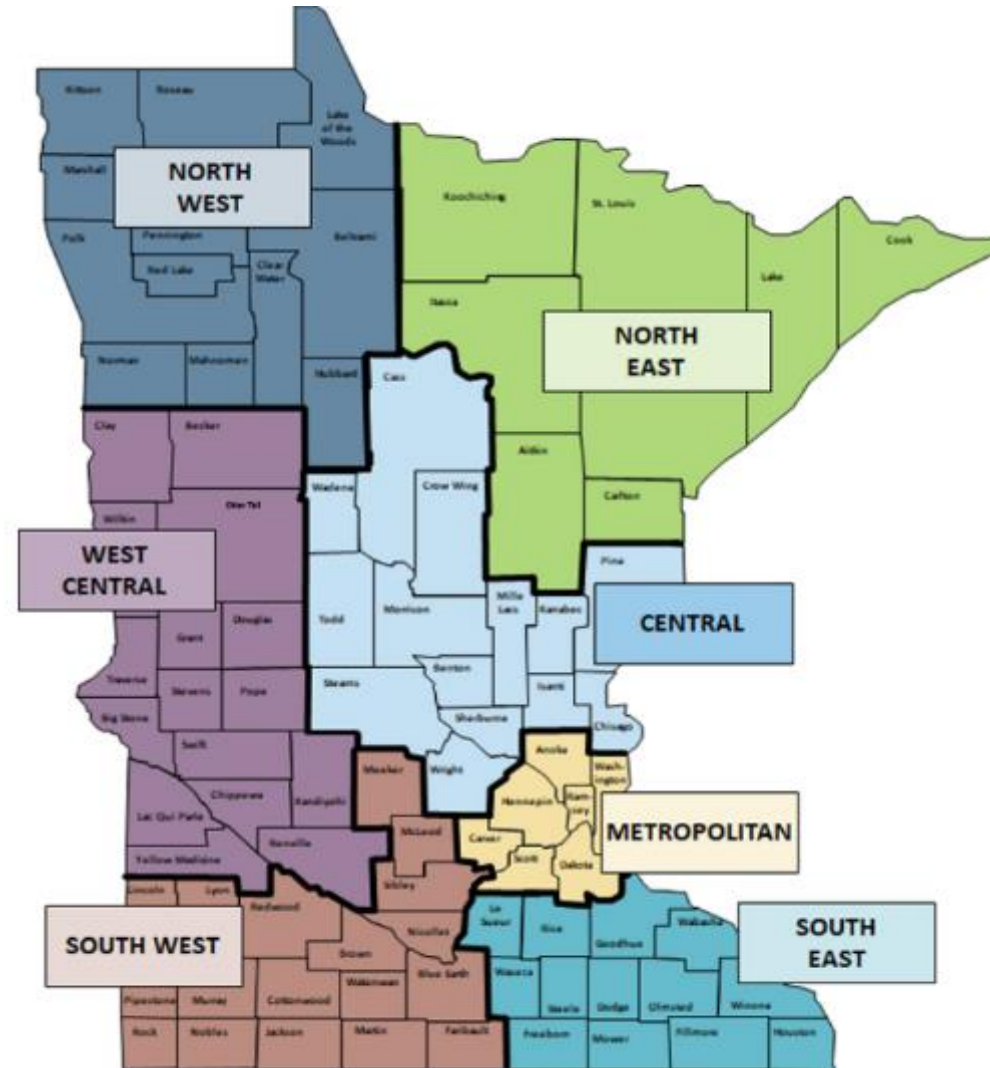


Review of Infectious Disease in Minnesota

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March 29th, 2019

Field Epidemiologists



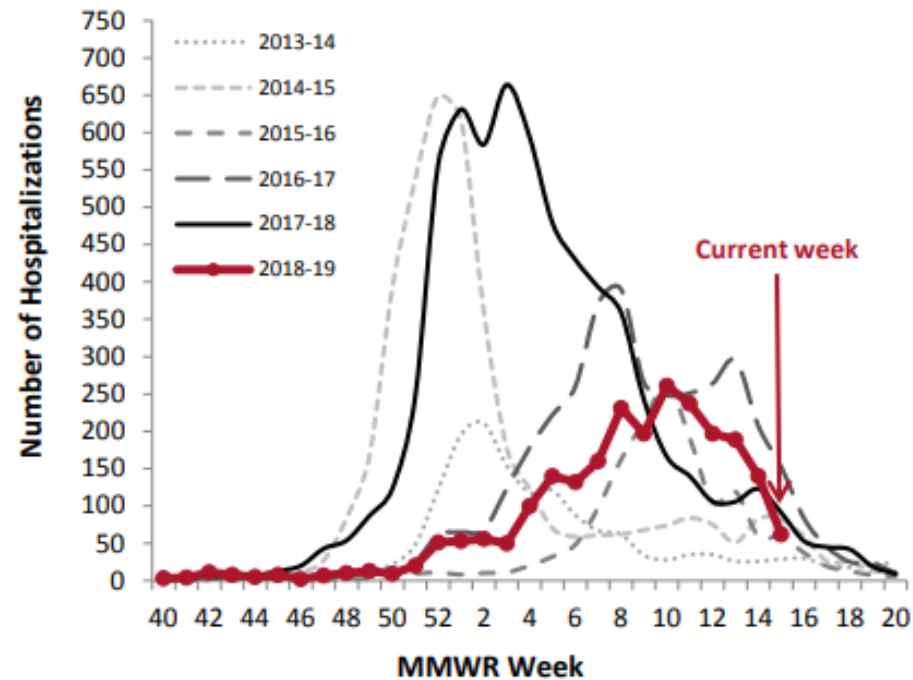
- Overview of Infectious Disease in MN
- Outbreaks and Investigations
- Emerging Threats
- Questions

An Overview of MN Infectious Disease

What's going on across the state?

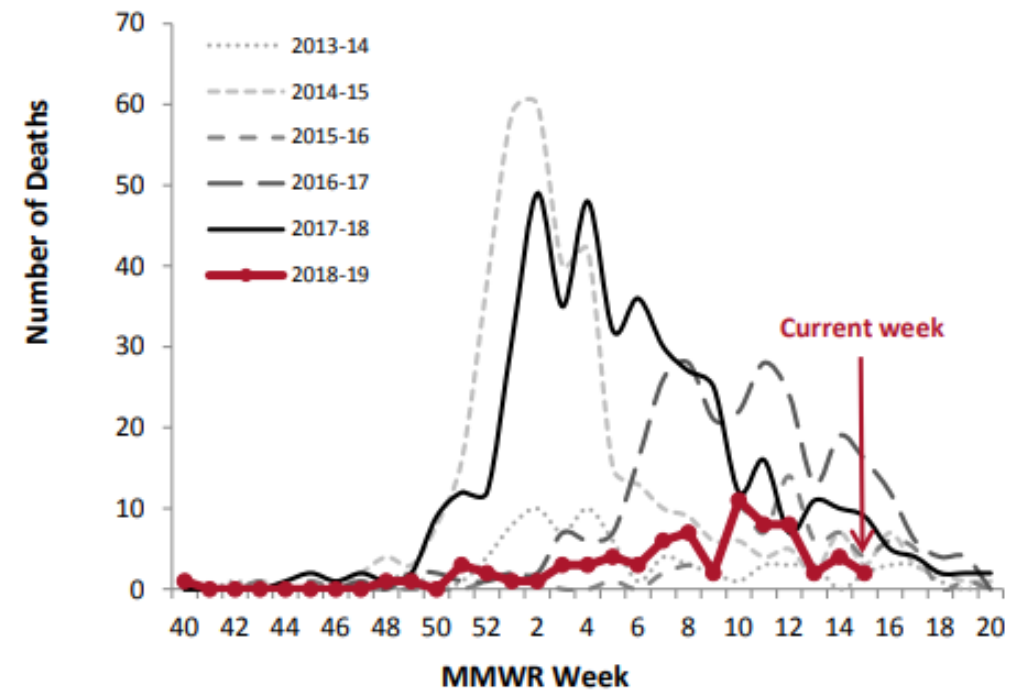
Influenza, 2018-2019

Hospitalized Influenza Cases by Season, Minnesota (FluSurv-NET*)



Season	Total hospitalizations (historic)
2013-2014	1,578
2014-2015	4,081
2015-2016	1,538
2016-2017	3,695
2017-2018	6,446
2018-2019	2,356 (to date)

Deaths Associated with Influenza by Season, Minnesota



Season	Total deaths (historic)	Total pediatric (<18 years) deaths (historic)
2013-2014	83	2
2014-2015	368	10
2015-2016	76	3
2016-2017	273	2
2017-2018	435	5
2018-2019	73 (to date)	1 (to date)

Measles cases in Minnesota, 2018

- 2 measles cases in MN residents
 - Metro region (Hennepin & Ramsey)
 - 1 with travel to Kenya
 - 1 with travel to Israel
- 1 case in non-MN resident
 - Lived outside U.S. and traveled to Kenya, and exposed individuals in MN (not included in official MN total)
- All 3 cases considered international imports
 - Exposed to measles outside the U.S. and not epi-linked to any other cases or outbreaks

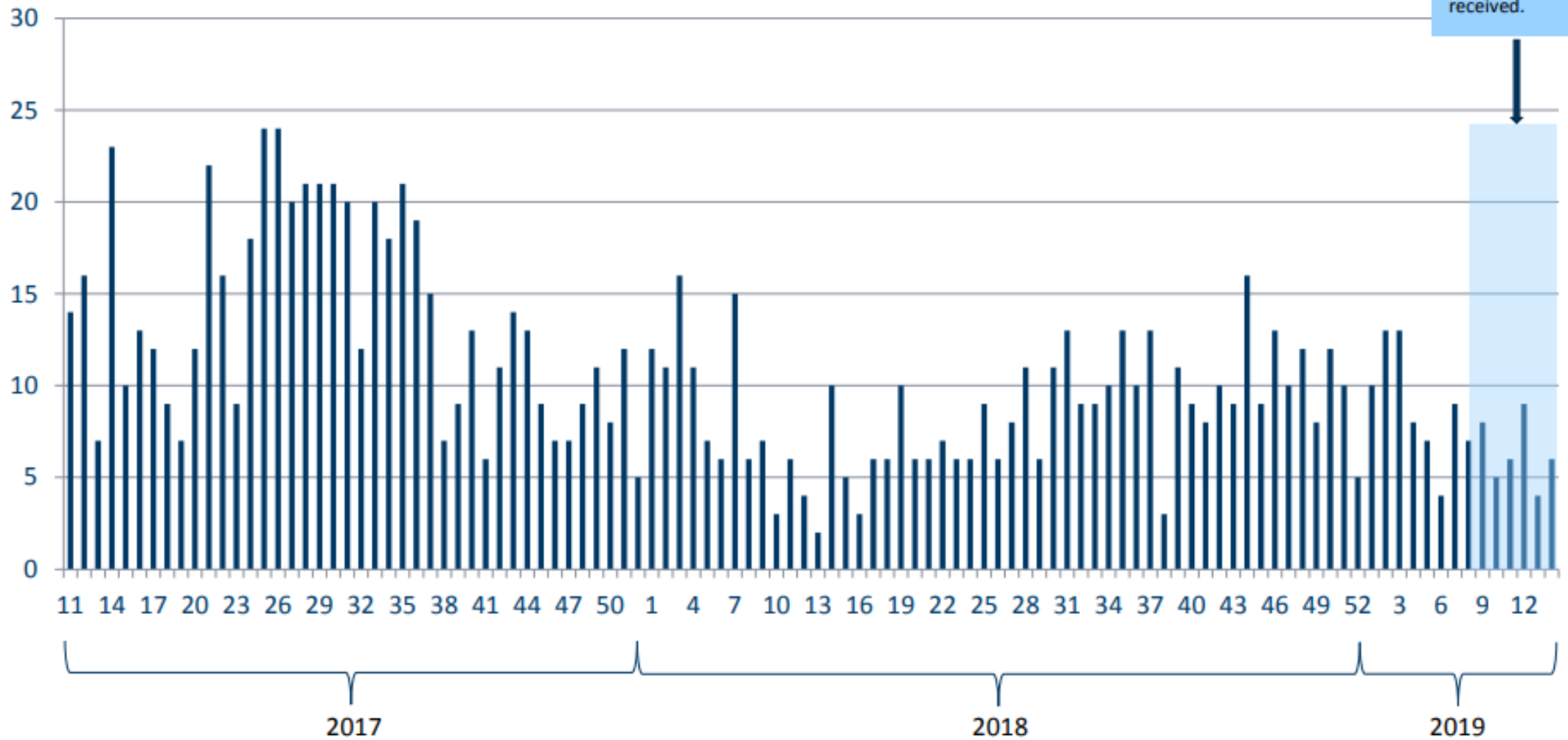
Mumps cases in Minnesota, 2018

- 13 mumps cases
 - 11 confirmed, 2 probable
 - 10 in metro region, 2 southeast, 1 central
 - 5 acquired from international travel
 - 8 acquired in MN (unlinked to outbreaks)
 - 6 vaccinated, 2 unvaccinated, 5 did not know status



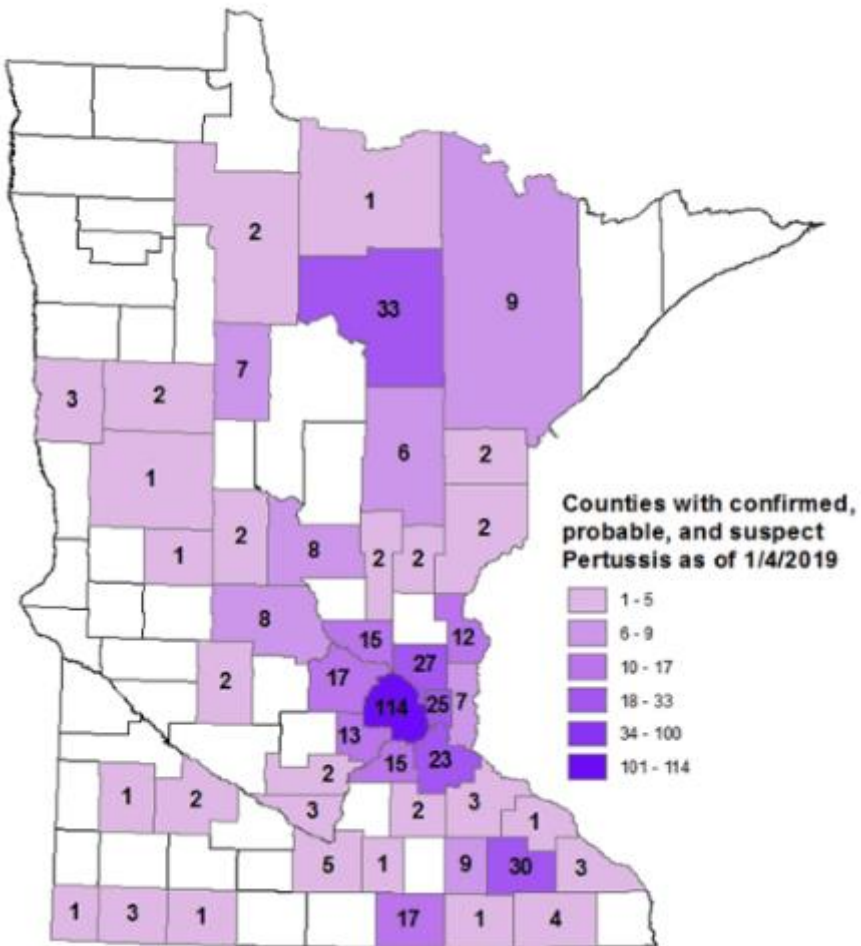
Number of Probable, Confirmed, and Suspect Pertussis Cases Reported by Notification Week - Minnesota 2017-2019 (updated through 4/12/2019)

Pertussis Case Counts

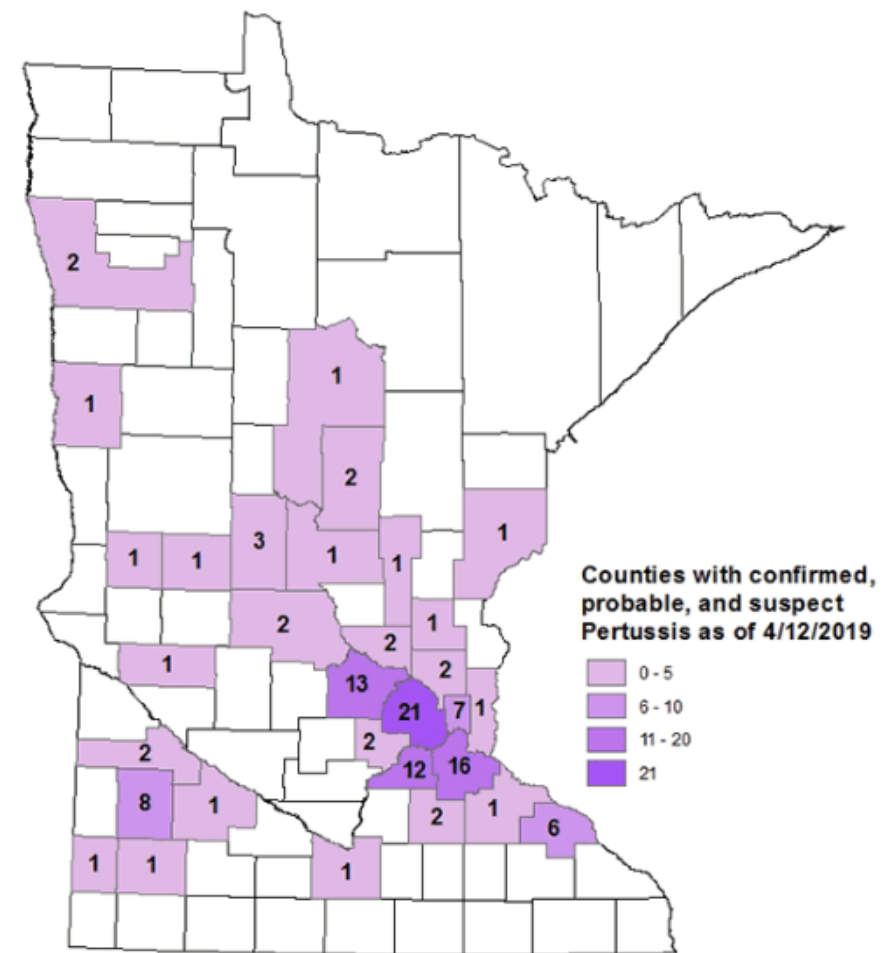


Pertussis, 2018 vs 2019 (so far)

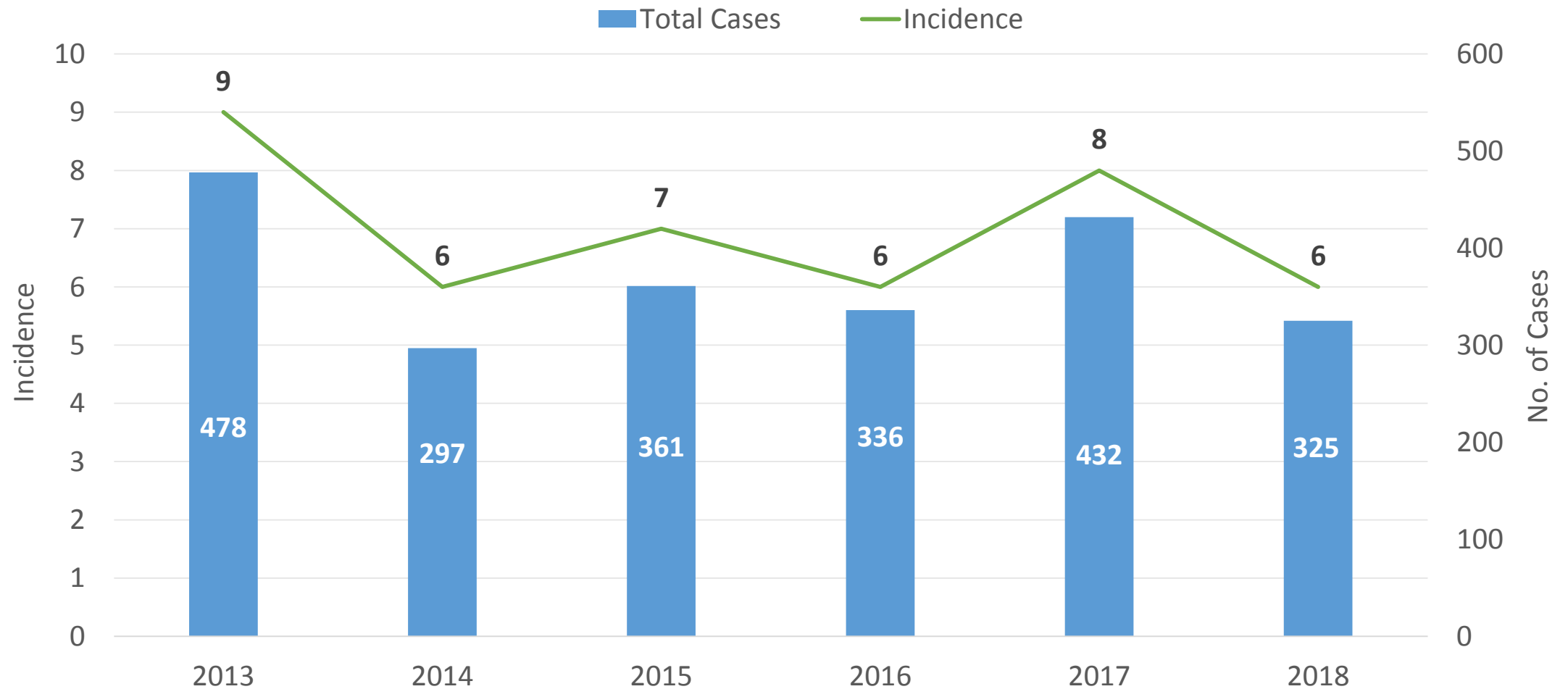
Confirmed, Probable, and Suspect Pertussis Case Counts by County as of Jan. 4, 2019



Confirmed, Probable, and Suspect Pertussis Case Counts by County as of April 12, 2019.

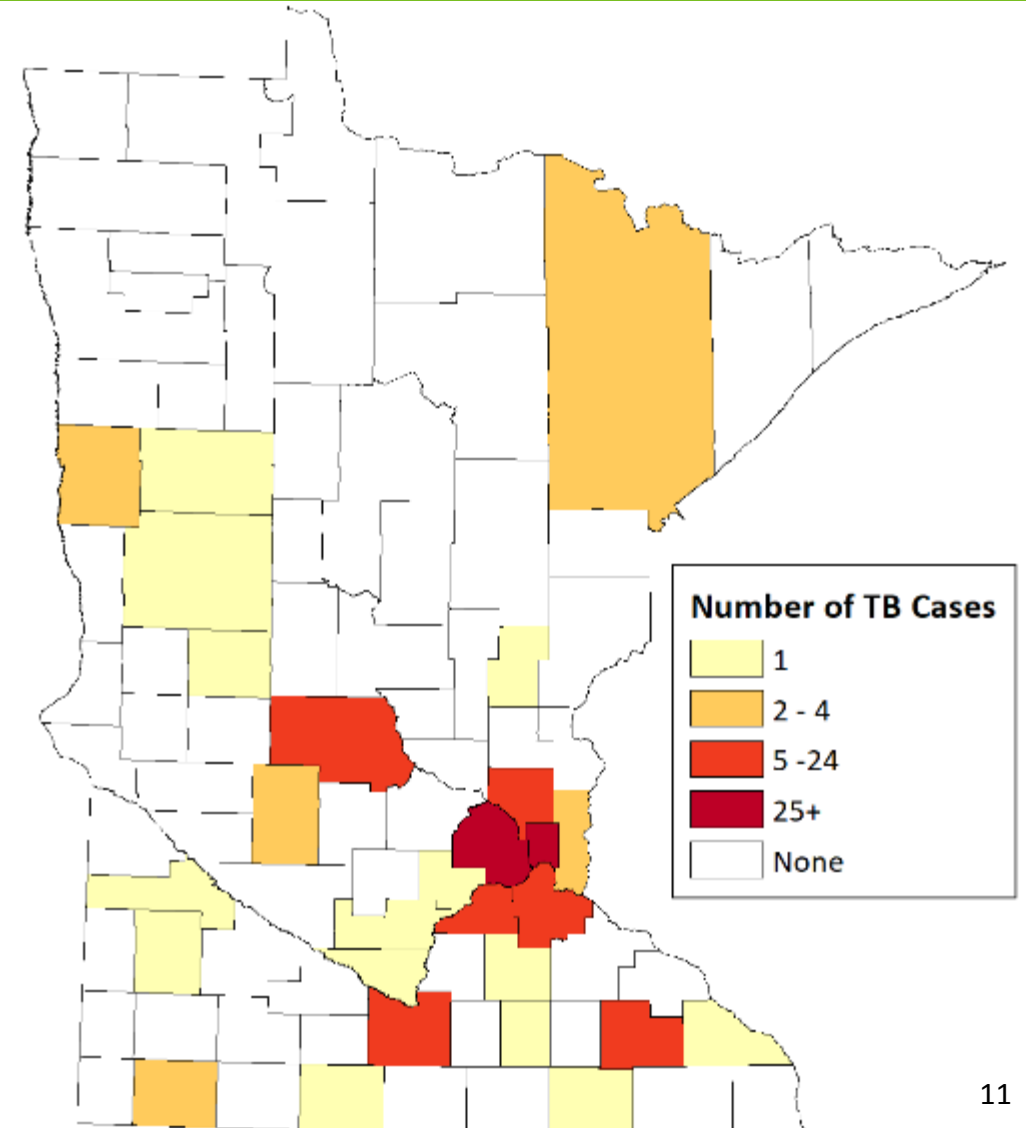


Varicella Annual Case Counts and Incidence, Minnesota 2013-2018



Tuberculosis

- TB in Minnesota
- Contact Investigations
- 2 ongoing outbreaks
 - MDR Ramsey Co
 - Blue Earth County College



Multi-Drug Resistant TB Outbreak

- Total of **13** cases in Hmong MDR TB outbreak:
 - **All** (100%) residents of Ramsey County
 - **77%** (10/13) common senior center exposure
 - Median age: **74** (range 33–96 years)
 - **92%** (12/13) born outside the U.S.: Laos (11); Thailand (1)
 - **42%** (5/12) were in the Wat refugee camp in Thailand
 - Years in the U.S. at TB diagnosis – median: **25.5**, range 10-37

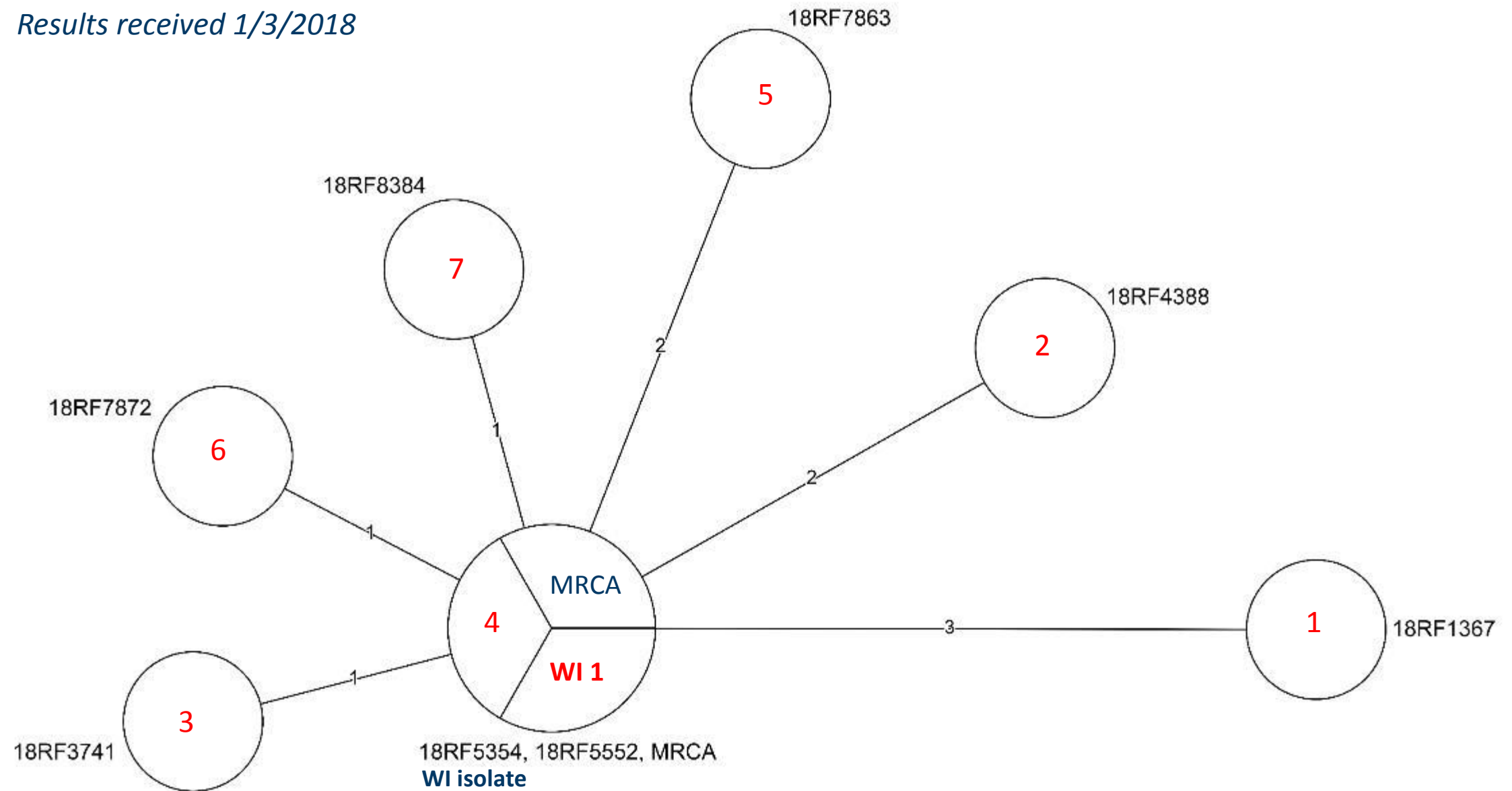
Blue Earth County TB Outbreak

- Background
- 7 cases in MN
- >700 contacts
- Challenges

Cases and Estimated Infectious Periods																														
	2016					2017										2018														
	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N		
1																	*													
2																				*	<u>extrapulmonary</u>									
3																					*									
4																					*									
5																		<u>extrapulmonary</u>								*				
6																										*				
7																											*			
W																									*					
	Estimated infectious period																													
*	TB reported to MDH (or WI DOH)																													

G00822 in Minnesota and Wisconsin

Results received 1/3/2018



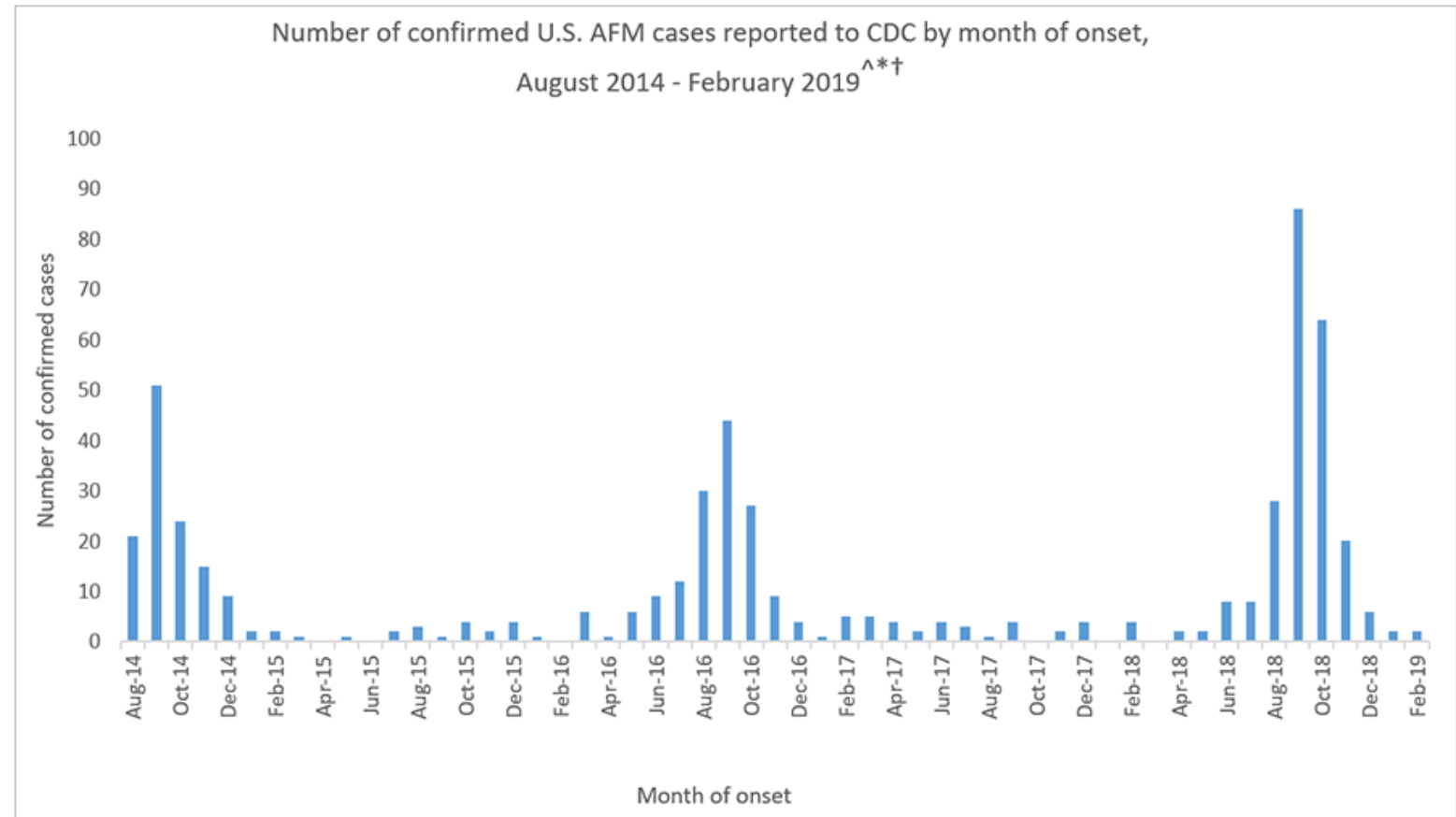


"The meeting was cancelled after an outbreak of contagious yawning."

Outbreaks and Investigations

Acute Flaccid Myelitis

- What is AFM?
 - Diagnosis and Treatment
 - Causes and symptoms
- 10 cases in MN
 - Pediatric
 - Enterovirus D68



- Q Fever background
 - Transmission
 - Epidemiology
- January investigation
 - Exotic animal exchange
 - Missing information



Rabid Puppy

- Rabies background
- New shop puppy
 - Was a big hit with customers
 - Neurological symptoms
 - Testing issues
- Results of investigation

5/20/2019



Protecting, maintaining and improving the health of all Minnesotans

Please Read! RABID PUPPY STAYED HERE!

On September 16th, Roscoe, the blue heeler/black lab puppy that stayed at this shop was euthanized and tested positive for rabies on September 21st.

If you had contact with this puppy anytime between September 2nd and September 14th and you have not yet been contacted by the Minnesota Department of Health (MDH) please contact your healthcare provider, and MDH at 651-201-5414.

Rabies is a fatal disease so it's very important to follow up with anyone who may have come into contact with the puppy.

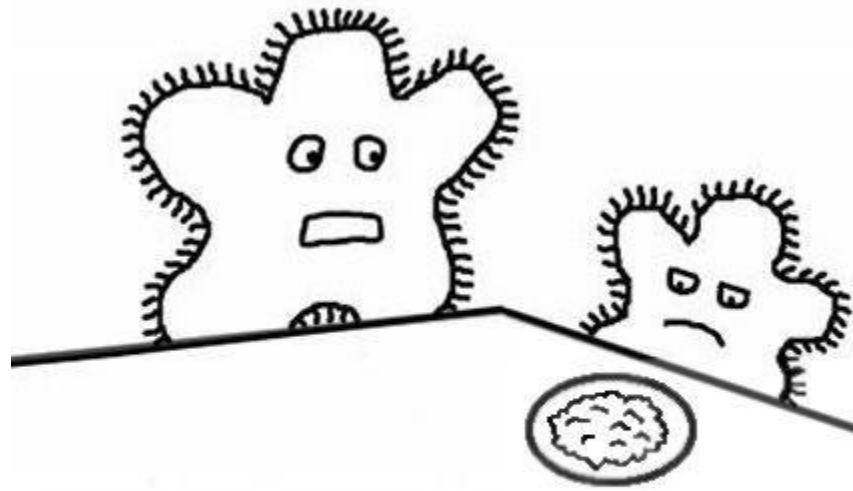
If you have any questions, please contact MDH at 651-201-5414.



Legionella

- Legionella background
- 2 individuals hospitalized
 - Husband and wife
 - Challenging interviews
- Culprit discovered
- 2 more cases identified





“But Timmy, you have to eat your antibiotics or you’ll never become a big strong bacteria.”

Emerging Threats

Tickborne Diseases

- Tick season incoming
 - Tick sampling and testing
- Surveillance
- Longhorn tick
 - New tick in the USA

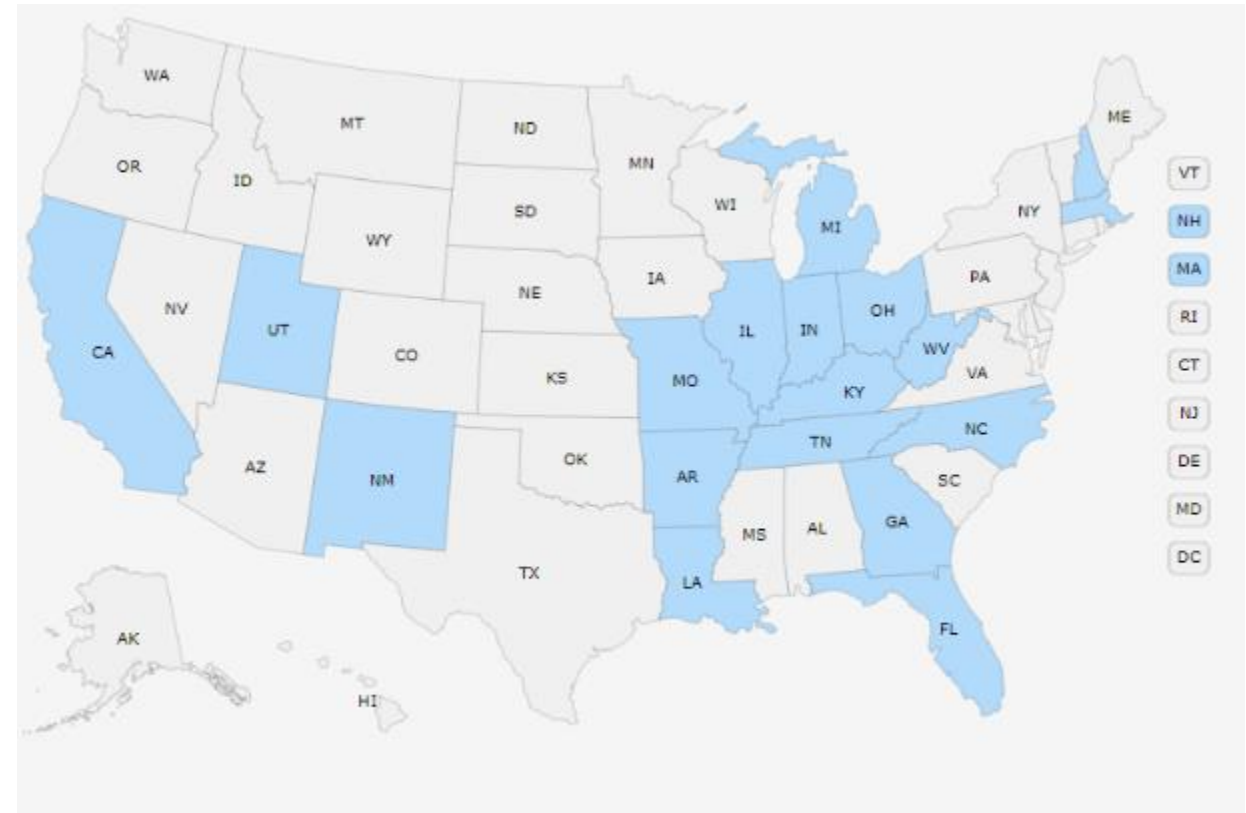


National Outbreaks of Hepatitis A

- 18 states involved in the national outbreaks

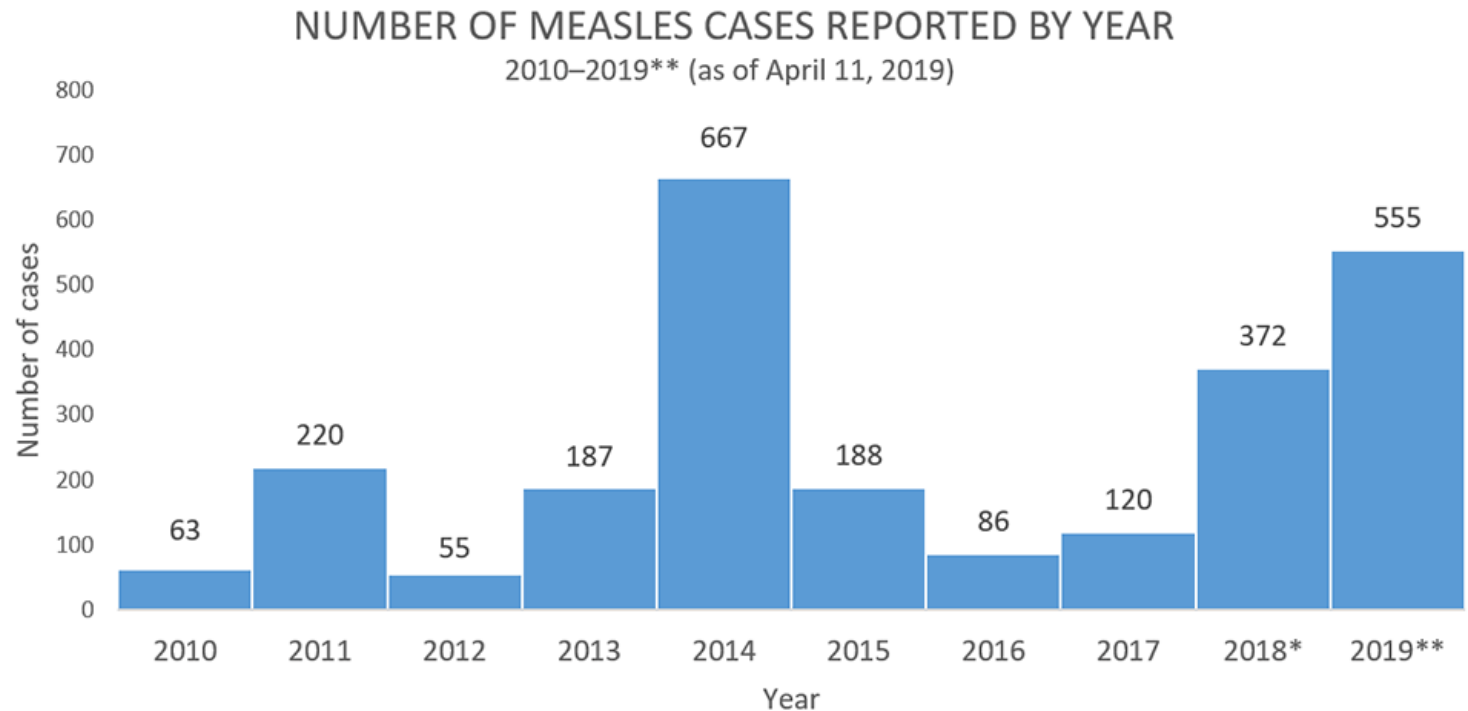
- Over 16,00 cases
- Nearly 9,000 hospitalizations
- 158 deaths
- Two states have declared outbreak over

- Risk factors similar between states
- Unusual risk groups for hepatitis A
- **Extremely** complicated to address



Measles Outbreaks

- NYS, Rockland County, n=186
 - 81% unvaccinated
- NYC, n=359
 - Introduction from Israel
- NJ, n=13
- Washington, n=74
 - Introduction from Ukraine
- California, n=13
- Michigan, n= 39



Ebola virus disease (EVD) in the DRC, 2018-19



- 1251 cases, 803 deaths (64%)
 - Healthcare workers: 87 cases, 31 deaths
- Massive response
 - >65,000 contacts identified
 - >93,000 people immunized (investigational vaccine)
 - >800 reports daily for illnesses concerning for EVD, (97% assessed in <24 hr)
- Risk assessment for disease spread
 - Regionally: **Very high**; Globally: **Low**
 - CDC guidance for travelers, including for aid workers & healthcare workers



Thank you!

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651-201-4035