



EPI UPDATES

March
2018

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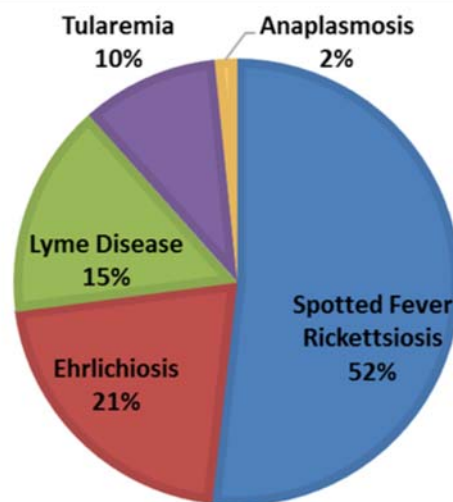
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Observations on Tick-borne Disease in Kansas

by Mary Ella Vajnar

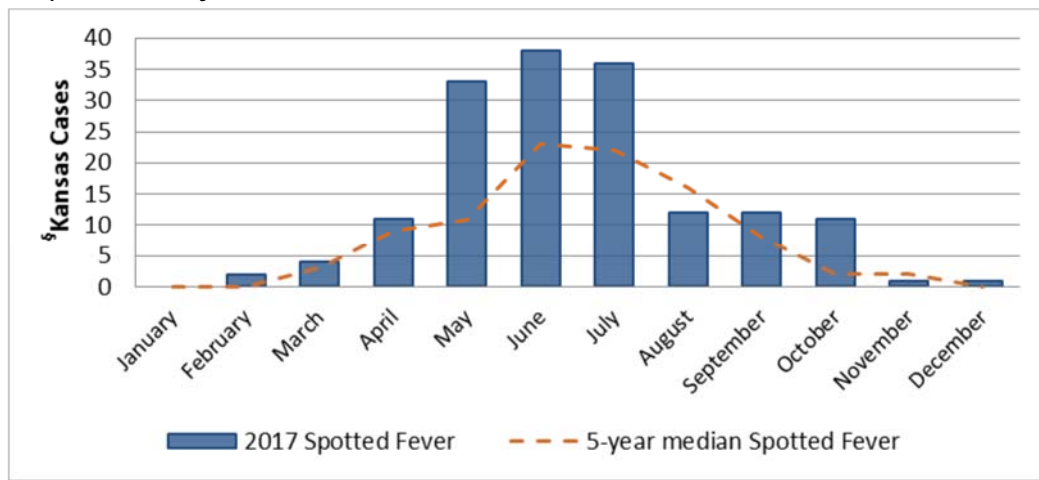
With the changing of the season, tick-borne diseases will be returning to the local disease investigator's EpiTrax Events page. In Kansas, the most frequently reported tick-borne disease is spotted fever rickettsiosis, but tick-associated ehrlichiosis, Lyme disease, anaplasmosis, and tularemia cases also require regular investigation during the warmer months. (Figure 1).

Figure 1: Confirmed and Probable Tickborne Diseases Reported in Kansas, 2016. (n=251 cases)



Prior to the 2017 tick season, the mild winter of 2015-16 was considered an opportunity for ticks to emerge early increasing the risk of acquiring tick-borne diseases. An examination of 2017 surveillance data indicates that Kansas did see an increase in spotted fever rickettsiosis cases as compared to the 5-year median between 2012 and 2016. (Figure 2). This trend may occur this year, as the winter was again mild.

Figure 2: Onset Month of Spotted Fever Rickettsiosis Cases with Reported Kansas Exposure, as Compared to the 5-year median, 2012-2017*



* 2017 data are provisional and subject to change until the data are reconciled and verified.

§ Cases with reported tick exposure outside of Kansas or unknown exposures were excluded.

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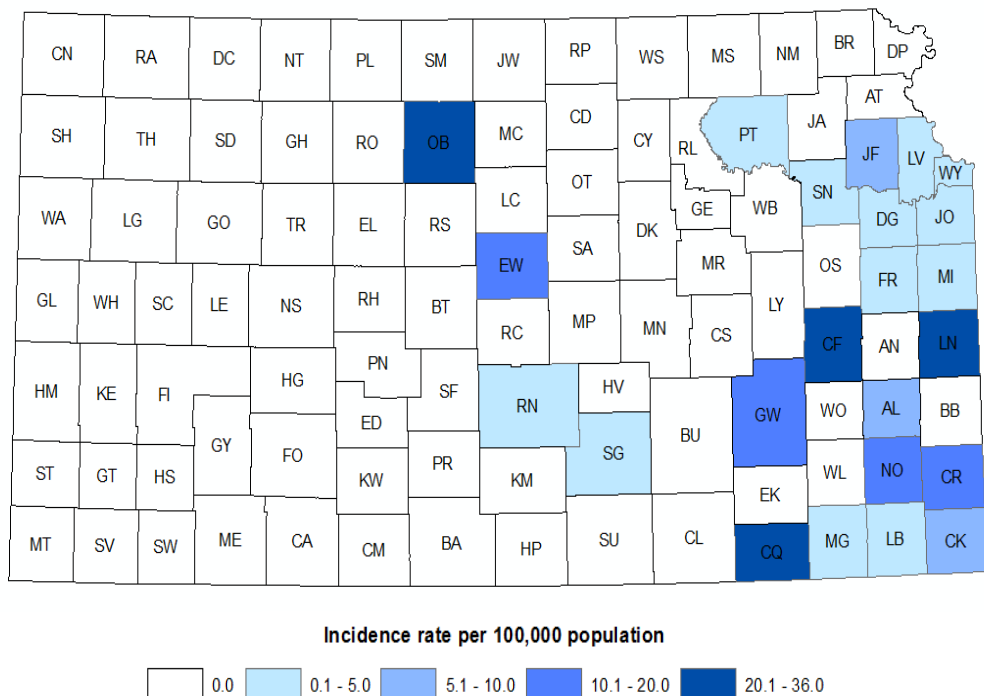
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The existence of a tick vector in a location frequented by county residents determines which diseases the local investigator is called to investigate. Historically, the lone star tick (*Amblyomma americanum*), a vector of ehrlichiosis and tularaemia, was found only in Eastern Kansas, but current modeling data and passive surveillance of tick samples submitted to the Kansas State Veterinary Diagnostic Laboratory suggests the lone star tick's geographic range extends further west. Our surveillance findings support this possibility with 2016 reports of ehrlichiosis attributed to tick exposure in Osborne County (OB). (Figure 3).

Figure 3: Incidence of ehrlichiosis per 100,000 population by county of reported tick exposure*, Kansas, 2016 (n=46)



* Cases with reported tick exposure outside of Kansas or unknown exposures were excluded.

The local investigators are putting forth an outstanding effort to collect exposures, travel histories, and disease onset dates on every tick-borne disease case reported in Kansas. While the availability and use of various diagnostic tests will always influence surveillance findings, the time and effort expended to collect diagnostic and clinical criteria is still critical to fully understand the incidence and burden of tick-borne diseases in our state.

Monthly Disease Counts

Please refer to the Cumulative Case Reports of Diseases (http://www.kdheks.gov/epi/case_reports_by_county.htm) for current case count information.

2018 Kansas Infectious Disease Conference

Plans are underway for the [2018 Kansas Infectious Disease Symposium](#) to be held May 10-11, 2018 at the Embassy Suites by Hilton Kansas City/Olathe Hotel & Conference Center in Olathe, Kan.

Nearly 300 public health leaders, first responders, law enforcement and health care providers from around the region are expected to attend and learn how infectious diseases are contained and managed in the state of Kansas and the Midwest. The Kansas Department of Health and Environment will offer pre-conference surveillance training on May 9.

If you're interested in exhibiting or being a sponsor at next year's conference, contact Tiffany Wallin at 913-826-1252 or send an email to Tiffany.Wallin@jocogov.org. Registration for this event has begun on Kansas TRAIN.

UPDATE EPITRAX DATA QUALITY INDICATORS

by Sheri Tubach, MPH MS

The Bureau of Epidemiology and Public Health Informatics has implemented a set of monthly quality indicators and performance measures to encourage data quality improvement in EpiTrax and timeliness of investigations. For 2018, there have been some notable changes. I have now included four additional surveillance indicators; food handler, group living, health care worker, and daycare attendee or worker. These four fields are on the Epidemiological Tab in EpiTrax.

Additionally, I am no longer utilizing the fields 'Date LHD investigation started' or 'Date LHD investigation completed' to calculate the performance measures of disease control measures implemented or case investigation completed. Instead, I am calculating percent of cases that have the first interview attempted by the disease target and the percent of cases that have the interview completed by the disease target. Disease targets can be found in the table below. I hope that these performance measures will be more helpful in prioritizing case investigations.

For questions, contact Sheri Tubach at sheri.tubach@ks.gov

February 2018	State's Total Number of Cases* = 163	
EpiTrax Indicators		
EpiTrax Field	Number of Cases with Field Completed	Percent Completed
Address City	161	99
Address County	163	100
Address Zip	160	98
Date of Birth	163	100
Daycare attendee or worker†	85	52
Died	157	96
Ethnicity†	152	93
Food handler†	61	37
Group living†	133	82
Healthcare worker†	99	61
Hospitalized	155	95
Occupation	125	77
Onset Date	145	89
Pregnancy††	80	96
Race †	159	98
Sex †	163	100
Persons Interviewed	110	67
Persons Lost to Follow-Up	5	3
Persons Refused Interview	2	1
Persons Not Interviewed	46	28
	Number of Cases	Percent of Cases
Interview was attempted within the target for each disease [^]	86	72
Case investigations were completed within the target for each disease [^]	71	60

*Calculations do not include Hepatitis B - chronic, Hepatitis C - Chronic or acute, or Animal Rabies

** Out-of-state, discarded, deleted or those deemed to be not a case are not included in this calculation.

† Unknown considered incomplete.

†† Pregnancy completeness calculated on females only

[^] See the table below for interview attempt and completed case interview targets

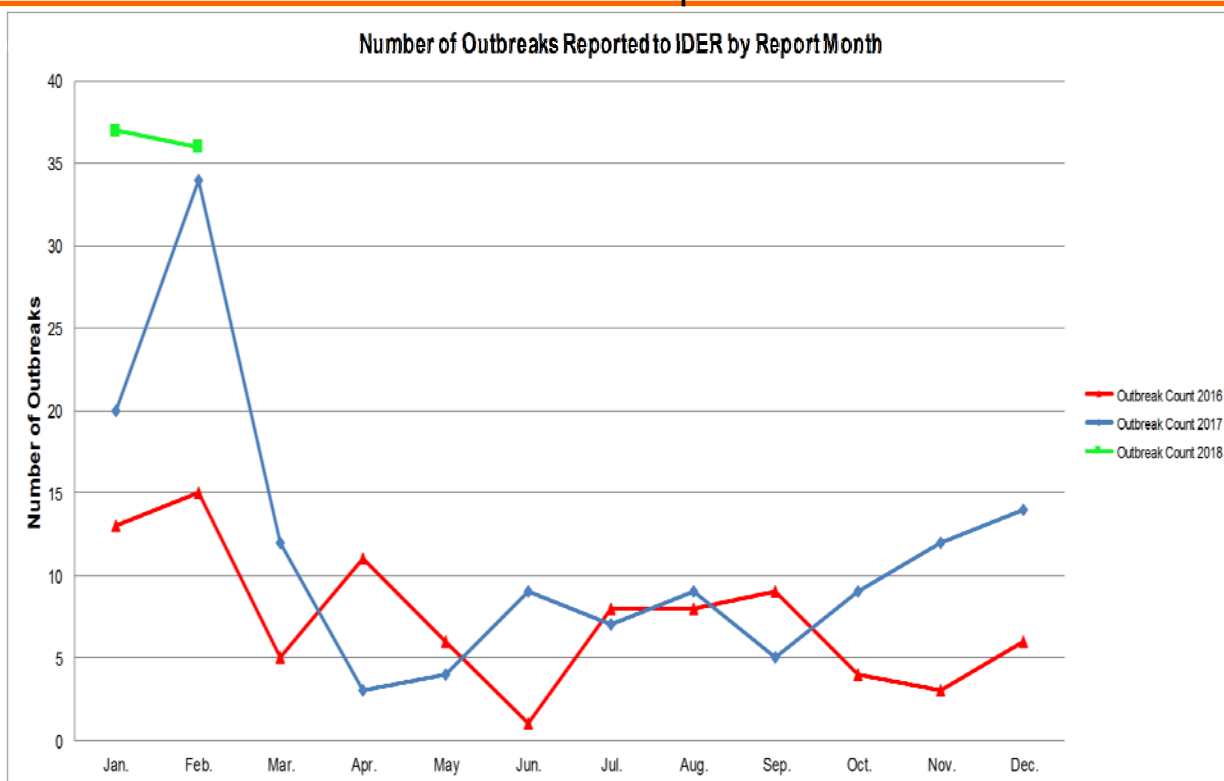
Disease Targets

Diseases	Disease Control (Days)*	Completed Case Investigation (Days)**
Anthrax; Botulism; Brucellosis; Cholera; Diphtheria; Hantavirus Pulmonary Syndrome; Hepatitis A; Influenza deaths in children <18 years of age; Measles; Meningitis, bacterial; Meningococccemia; Mumps; Plague; Poliomyelitis; Q Fever; Rabies, human; Rubella; Severe acute respiratory syndrome (SARS); Smallpox; Tetanus; Tularemia; Viral hemorrhagic fever; Yellow fever	1	3
Varicella	1	5
Pertussis	1	14
Campylobacter infections; Cryptosporidiosis; Cyclospora infection; Giardiasis; Hemolytic uremic syndrome, post diarrheal; Hepatitis B, acute; Legionellosis; Listeriosis; Salmonellosis, including typhoid fever; Shigellosis; Shiga-toxin <i>Escherichia coli</i> (STEC); Trichinosis; Vibriosis (not cholera)	3	5
Arboviral disease (including West Nile virus, Chikungunya, and Dengue); <i>Haemophilus influenzae</i> , invasive disease; <i>Streptococcus pneumoniae</i> , invasive	3	7
Ehrlichiosis / Anaplasmosis; Lyme disease; Malaria; Spotted Fever Rickettsiosis	3	14
Hepatitis B, chronic; Hepatitis C, chronic; Hepatitis C, acute; Leprosy (Hansen disease); Psittacosis; Streptococcal invasive, drug-resistant disease from Group A Streptococcus; Toxic shock syndrome, streptococcal and staphylococcal; Transmissible spongiform encephalopathy (TSE) or prion disease	N/A	N/A

***Disease Control:** Calculated by using EpiTrax Fields: (Date LHD Investigation Started) OR (Call Attempt 1 date for Salmonellosis and STEC) - (Date Reported to Public Health) OR (Date Reported to KDHE)

****Completed Case Investigation:** Calculated by using EpiTrax fields: (Date LHD Investigation Completed) - (Date Reported to Public Health) OR (Date Reported to KDHE)

Outbreaks Report



Outbreaks Report

Date Reported	Facility Type	Transmission/Exposure	Disease/Condition	County
2/2/2018	Adult care facility	Person-to-person	Influenza	Shawnee
2/2/2018	Community	Person-to-person	Shigellosis	Shawnee
2/3/2018	Adult care facility	Person-to-person	Influenza	Barton
2/5/2018	Adult care facility	Person-to-person	Influenza	Douglas
2/6/2018	School or college	Person-to-person	Influenza	Johnson
2/6/2018	Adult care facility	Person-to-person	Influenza	Johnson
2/6/2018	School or college	Person-to-person	Influenza	Marion
2/6/2018	School or college	Person-to-person	Influenza	Marion
2/6/2018	Adult care facility	Person-to-person	Influenza	Sedgwick
2/8/2018	Child care facility	Person-to-person	Influenza	Douglas
2/8/2018	Adult care facility	Person-to-person	Influenza	Sedgwick
2/8/2018	Adult care facility	Person-to-person	Influenza	Sedgwick
2/9/2018	Restaurant	Food	Unknown Etiology	Thomas
2/9/2018	Adult care facility	Person-to-person	Influenza	Montgomery
2/9/2018	School or college	Person-to-person	Influenza	Wyandotte
2/12/2018	School or college	Person-to-person	Non-Reportable Condition	Stafford
2/13/2018	School or college	Person-to-person	Influenza	Johnson
2/13/2018	Adult care facility	Person-to-person	Influenza	Pratt
2/13/2018	Other	Food	Salmonellosis	Multiple
2/13/2018	School or college	Person-to-person	Influenza	Wyandotte
2/14/2018	School or college	Person-to-person	Influenza	Wyandotte
2/14/2018	Child care facility	Person-to-person	Influenza	Wyandotte
2/15/2018	School or college	Person-to-person	Influenza	Wyandotte
2/15/2018	School or college	Person-to-person	Influenza	Wyandotte
2/15/2018	School or college	Person-to-person	Influenza	Wyandotte
2/16/2018	School or college	Person-to-person	Influenza	Wyandotte
2/20/2018	Restaurant	Food	Unknown Etiology	Saline
2/21/2018	School or college	Person-to-person	Influenza	Harvey
2/21/2018	Adult care facility	Person-to-person	Influenza	Wyandotte
2/21/2018	School or college	Person-to-person	Influenza	Wyandotte
2/26/2018	Adult care facility	Person-to-person	Influenza	Cowley
2/27/2018	Adult care facility	Person-to-person	Influenza	Franklin
2/27/2018	Adult care facility	Person-to-person	Influenza	Wilson
2/28/2018	Adult care facility	Person-to-person	Influenza	Pottawatomie
2/28/2018	Adult care facility	Person-to-person	Influenza	Sedgwick
2/28/2018	Adult care facility	Person-to-person	Influenza	Sedgwick

