



# Communicable Disease

Annual Report



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## 2018 Annual Report for Taney County, Missouri

### Reportable Conditions

The Missouri Department of Health and Senior Services (DHSS), under reporting rule [19 CSR 2020.020](#), designates what diseases, disabilities, conditions and findings must be reported to the local health agency or DHSS. Data for this report was collected from multiple sources, including medical providers, laboratories, and hospitals. Timely reporting and rapid investigations are critical for identifying possible outbreaks, assuring appropriate preventive treatment and education, and guiding the planning and evaluation of disease prevention and control programs.

### 2018 Snapshot

In 2018, the Taney County Health Department received and investigated 357 disease case reports. Upon investigation, 237 cases ultimately met the MO DHSS guidelines to be counted as either confirmed or probable cases. Not included in these counts are influenza cases and sexually transmitted infection (STI) cases. Additional information on Influenza and STI cases in Taney County are located in separate reports on the [TCHD website](#).

### Disease Burden to the Community

The number of reported cases of communicable diseases almost certainly under represents the true number of cases occurring in Taney County. Conditions with mild symptoms often go unreported as ill individuals often recover without treatment or may be treated by a medical provider without diagnostic testing. Conditions with life threatening or other severe symptoms are more likely to result in hospitalization and diagnosis via laboratory testing. Increased regional and national media attention to specific conditions can also impact reporting by driving more ill individuals to seek treatment and more providers to be on the lookout for known symptoms of the newsworthy illness. Finally, it is important to note that ill individuals may be diagnosed clinically by their medical providers with a given illness but upon further investigation may not meet the Centers for Disease Control and Prevention (CDC) requirements for inclusion as a confirmed or probable case.

The tables and charts below provide additional information on case counts and rates for selected conditions in Taney County.

Table 1:

**Reported Cases of Selected Communicable Diseases  
Taney County, Missouri 2018**

<b>CONDITION</b>	<b>REPORTED CASES COUNTS*</b>
Animal Bites	66
Campylobacteriosis	28
Coccidioidomycosis	0
Cryptosporidiosis	4
E. coli Shiga Toxin Positive	0
E. coli O157:H7	0
Ehrlichia Chaffeensis	14
Giardiasis	2
Haemophilus Influenzae, Invasive	4
Hepatitis B Acute	0
Hepatitis B Chronic	2
Hepatitis B Pregnant	1
Legionellosis	0
Listeriosis	0
Lyme	1
MOTT	5
Mumps	0
Pertussis	1
Rabies Post Exposure Prophylaxis	5
Rocky Mountain Spotted Fever	12
Salmonellosis	9
Shigellosis	0
Strep Pneumoniae Invasive	4
TB Disease	0
TB Infection	1
Varicella (Chickenpox)	5
<b>Total</b>	<b>164</b>

*\*Reported case counts include confirmed and probable cases only*

Table 2:

2014-2018 Reported Diseases/Conditions Taney County with 5 YR Mean & Rate per 100,000								
CONDITION	2014	2015	2016	2017	2018	5 YR Mean	2018 Rate per 100,000*	MO 2018 Rate per 100,000**
ANIMAL BITES	8	7	44	112	66	47.4	121.53	131.43
CAMPYLOBACTERIOSIS	1	9	7	25	28	14	51.56	22.92
COCCIDIOIDOMYCOSIS	0	0	0	0	0	0	0.00	0.43
CRYPTOSPORIDIOSIS	0	2	0	1	4	1.4	7.37	5.56
E COLI SHIGA TOXIN POSITIVE	1	0	1	0	0	0.4	0.00	4.86
E COLI 0157 H7	0	1	0	0	0	0.2	0.00	1.13
EHRlichia CHAFFEENSIS	4	3	7	10	14	7.6	25.78	5.38
EHRlichia EWINGII	0	0	1	3	1	1	1.84	0.21
GIARDIASIS	0	1	2	3	2	1.6	3.68	3.88
HEMOLYTIC UREMIC SYNDROME	0	1	0	0	0	0.2	0.00	0.16
HEPATITIS A ACUTE	0	0	2	0	0	0.4	0.00	3.93
HEPATITIS B (PREGNANCY) PRENATAL	0	0	0	1	1	0.4	1.84	1.88
HEPATITIS B ACUTE	0	0	0	0	0	0	0.00	0.28
HEPATITIS B CHRONIC	1	1	3	1	2	1.6	3.68	7.25
HEPATITIS C CHRONIC	47	106	101	81	67	80.4	123.37	76.11
INFLUENZA DEATH <18 YEARS	0	0	0	1	0	0.2	0.00	0.03
LEGIONELLOSIS	0	0	0	6	0	1.2	0.00	2.37
LISTERIOSIS	0	0	1	0	0	0.2	0.00	0.25
MALARIA	0	0	1	0	0	0.2	0.00	0.25
MEASLES	0	1	0	0	0	0.2	0.00	0.23
MOTT	5	7	6	12	5	7	9.21	13.12
MUMPS	0	0	1	2	0	0.6	0.00	0.38
PERTUSSIS	1	1	0	0	1	0.6	1.84	2.67
RABIES POST EXPOSURE PROPHYLAXIS	0	7	8	11	5	6.2	9.21	11.37
ROCKY MOUNTAIN SPOTTED FEVER	0	1	6	7	12	5.2	22.10	10.58
SALMONELLOSIS	8	1	9	7	9	6.8	16.57	21.30
SHIGELLOSIS	0	0	1	0	0	0.2	0.00	5.07
STREP PNEUMONIAE INVASIVE	0	0	2	9	4	3	7.37	11.11
TB INFECTION	3	8	11	3	1	5.2	1.84	26.94
TOXIC SHOCK (STREP) SYNDROME	0	0	1	2	0	0.6	0.00	0.16
TULAREMIA	1	1	0	2	1	1	1.84	0.29
VARICELLA (CHICKENPOX)	0	2	1	2	5	2	9.21	2.34
VIBRIOSIS	0	0	1	0	0	0.2	0.00	0.59

\*Calculated using Taney County 2017 Population Estimate of 54,308 Source: U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates

\*\*Calculated using Missouri 2017 Population Estimate of 6,113,532 and Statewide Disease Counts from MO DHSS Source: U.S. Census Bureau, 2017 Population Estimate (as of July 1, 2017)

## Discussion of Data

Case counts of conditions are of limited value without the context provided by comparison. Included in Table 2 are columns for rates of each reported condition per 100,000 population for both Taney County and the Missouri as a whole. Table 3 below expands on this further and provides calculated rates per 100,000 population for the past 5 years for both Taney County and Missouri. Selected conditions have been displayed in Charts 1-6 for visual comparison of the rates for Taney County and Missouri.

Table 3:

CONDITION	2014 Rate per 100,000*	MO 2014 Rate per 100,000**	2015 Rate per 100,000*	MO 2015 Rate per 100,000**	2016 Rate per 100,000*	MO 2016 Rate per 100,000**	2017 Rate per 100,000*	MO 2017 Rate per 100,000**	2018 Rate per 100,000**	MO 2018 Rate per 100,000**	5 Yr Mean	MO 5 Yr Mean
ANIMAL BITES	15.07	119.59	13.07	123.71	81.70	123.14	207.97	130.43	121.53	131.43	87.87	125.66
CAMPYLOBACTERIOSIS	1.88	9.87	16.81	19.97	13.00	22.64	46.42	24.16	51.56	22.92	25.93	19.91
COCCIDIOIDOMYCOSIS	0.00	0.33	0.00	0.18	0.00	0.33	0.00	0.34	0.00	0.43	0.00	0.32
CRYPTOSPORIDIOSIS	0.00	2.77	3.73	6.63	0.00	6.95	1.86	5.41	7.37	5.56	2.59	5.47
E COLI SHIGA TOXIN POSITIVE	1.88	1.86	0.00	2.98	1.86	3.27	0.00	3.30	0.00	4.86	0.75	3.25
E COLI O157 H7	0.00	1.14	1.87	1.06	0.00	2.24	0.00	1.47	0.00	1.13	0.37	1.41
EHRlichIA CHAFFEENSIS	7.53	5.61	5.60	3.82	13.00	3.83	18.57	4.83	25.78	5.38	14.10	4.69
EHRlichIA EWINGII	0.00	0.15	0.00	0.12	1.86	0.15	5.57	0.33	1.84	0.21	1.85	0.19
GIARDIASIS	0.00	3.80	1.87	4.15	3.71	5.58	5.57	3.96	3.68	3.88	2.97	4.27
HEMOLYTIC UREMIC SYNDROME	0.00	0.10	1.87	0.23	0.00	0.28	0.00	0.20	0.00	0.16	0.37	0.19
HEPATITIS A ACUTE	0.00	0.36	0.00	0.15	3.71	0.26	0.00	0.44	0.00	3.93	0.74	1.03
HEPATITIS B (PREGNANCY) PRENATAL	0.00	2.44	0.00	2.48	0.00	1.72	1.86	2.49	1.84	1.88	0.74	2.20
HEPATITIS B ACUTE	0.00	0.53	0.00	0.58	0.00	0.64	0.00	0.51	0.00	0.28	0.00	0.51
HEPATITIS B CHRONIC	1.88	7.17	1.87	8.65	5.57	7.00	1.86	6.72	3.68	7.25	2.97	7.36
HEPATITIS C CHRONIC	88.54	103.47	197.93	128.77	187.55	83.50	150.41	80.13	123.37	76.11	149.56	94.40
INFLUENZA DEATH <18 YEARS	0.00	0.00	0.00	0.02	0.00	0.00	1.86	0.05	0.00	0.03	0.37	0.02
LEGIONELLOSIS	0.00	1.78	0.00	2.45	0.00	2.62	11.14	2.27	0.00	2.37	2.23	2.30
LISTERIOSIS	0.00	0.18	0.00	0.08	1.86	0.05	0.00	0.11	0.00	0.25	0.37	0.13
MALARIA	0.00	0.25	0.00	0.31	1.86	0.33	0.00	0.44	0.00	0.25	0.37	0.32
MEASLES	0.00	0.45	1.87	0.02	0.00	0.00	0.00	0.00	0.00	0.23	0.37	0.14
MOTT	9.42	14.55	13.07	13.15	11.14	13.98	22.28	13.12	9.21	13.12	13.02	13.58
MUMPS	0.00	0.10	0.00	0.53	1.86	5.51	3.71	7.13	1.84	0.38	1.48	2.73
PERTUSSIS	1.88	9.26	1.87	4.40	0.00	5.89	0.00	6.72	1.84	2.67	1.12	5.79
RABIES POST EXPOSURE PROPHYLAXIS	0.00	7.86	13.07	7.56	14.86	9.04	20.43	9.63	9.21	11.37	11.51	9.09
ROCKY MOUNTAIN SPOTTED FEVER	0.00	4.41	1.87	5.36	11.14	5.79	13.00	9.63	22.10	10.58	9.62	7.16
SALMONELLOSIS	15.07	13.92	1.87	16.28	16.71	17.33	13.00	16.23	16.57	21.30	12.64	17.01
SHIGELLOSIS	0.00	23.14	0.00	18.63	1.86	13.70	0.00	6.92	0.00	5.07	0.37	13.49
STREP PNEUMONIAE INVASIVE	N/A	N/A	N/A	N/A	3.71	3.32	16.71	9.96	7.37	11.11	9.26	8.13
TB INFECTION	5.65	55.09	14.94	48.53	20.43	49.44	5.57	26.94	1.84	26.94	9.69	41.39
TOXIC SHOCK (STREP) SYNDROME	0.00	0.02	0.00	0.03	1.86	0.10	3.71	0.05	0.00	0.16	1.11	0.07
TULAREMIA	1.88	0.33	1.87	0.48	0.00	0.58	3.71	0.57	1.84	0.29	1.86	0.45
VARICELLA (CHICKENPOX)	0.00	2.94	3.73	2.30	1.86	2.10	3.71	2.88	9.21	2.34	3.70	2.51
VIBRIOSIS	0.00	0.13	0.00	0.08	1.86	0.10	0.00	0.43	0.00	0.59	0.37	0.27

\*Calculated using Taney County 2013-2017 Population Estimates Source: U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates

\*\*Calculated using Missouri 2013-2017 Population Estimates and Statewide Disease Counts from MO DHSS Source: U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates

Taney County Health Department continually monitors these trends and takes into account outside factors that may explain changes in disease occurrence beyond simple increases in morbidity. For example, recent advances in testing for enteric pathogens (i.e. widespread availability of PCR testing) has contributed to a significant statewide increase in *Campylobacteriosis* reports. This may partially explain the significant increases in Taney County in the past two years to a record 28 reported cases *Campylobacteriosis* cases in 2018, compared with the 5 year mean of 14 cases. A comparison of 2018 rates, however, show that Taney county had approximately 225% more reported cases of *Campylobacteriosis* than the state as a whole per 100,000 population. This trend will be important to monitor in coming years to assist TCHD and local partners as we attempt to limit the impact these infectious diseases have on residents and visitors to our county.

TCHD also received numerous anecdotal reports in Spring/Summer of 2018 regarding ticks being more numerous in the area than usual. The complete 2018 data for Taney County shows that the rate of illness from *Rocky Mountain Spotted Fever* was 1.7x higher than in 2017. The Taney County infection rate for *Ehrlichia chaffeensis* also increased significantly and the county had its' first confirmed cases of *Anaplasma phagocytophilum* since 2011. While this data alone does not confirm that ticks were present in Taney County in unusually high numbers in 2018, it does correlate an increased burden of tick-borne illness to complaints from local residents.

Chart 1:

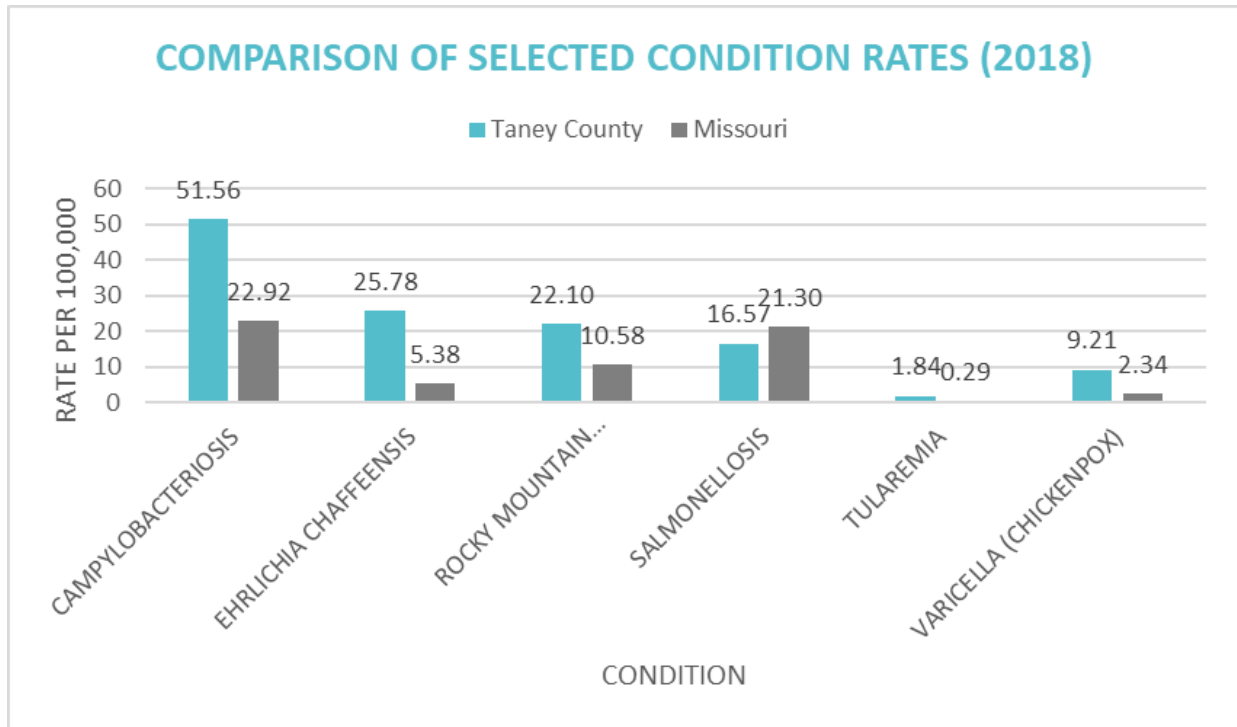


Chart 2:

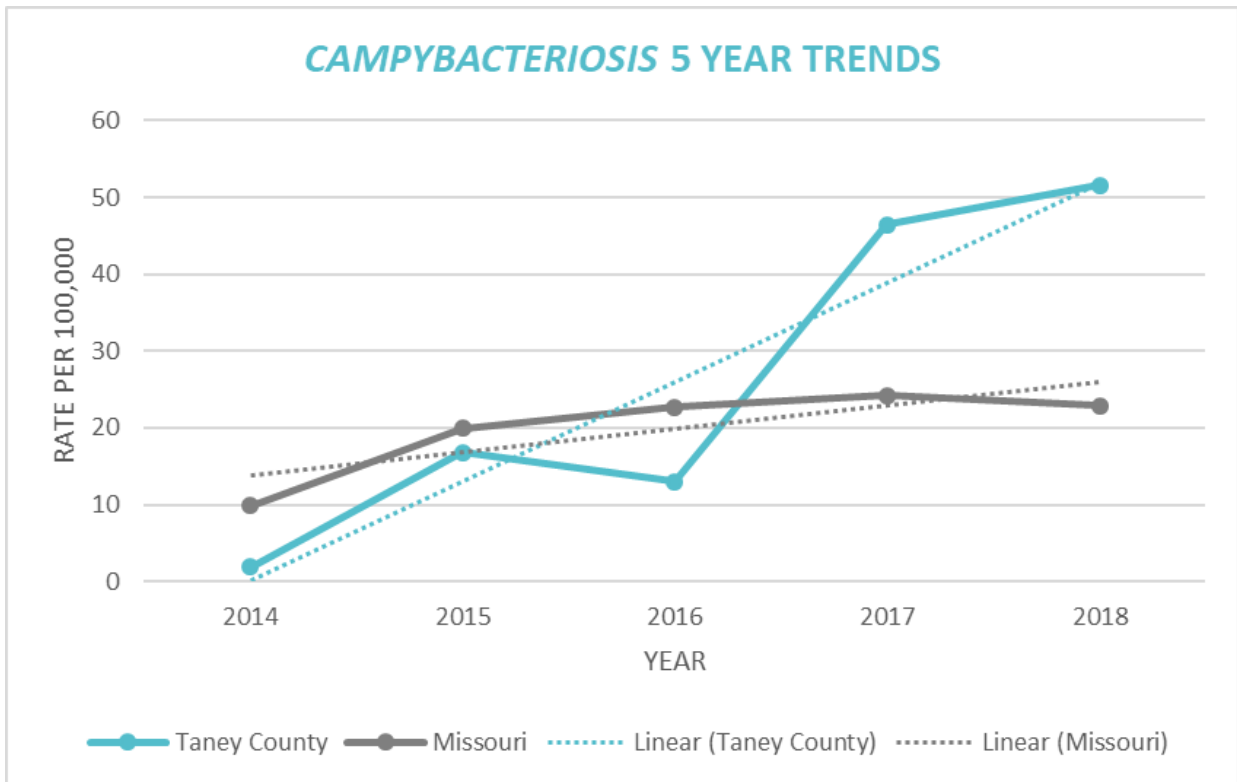


Chart 3:

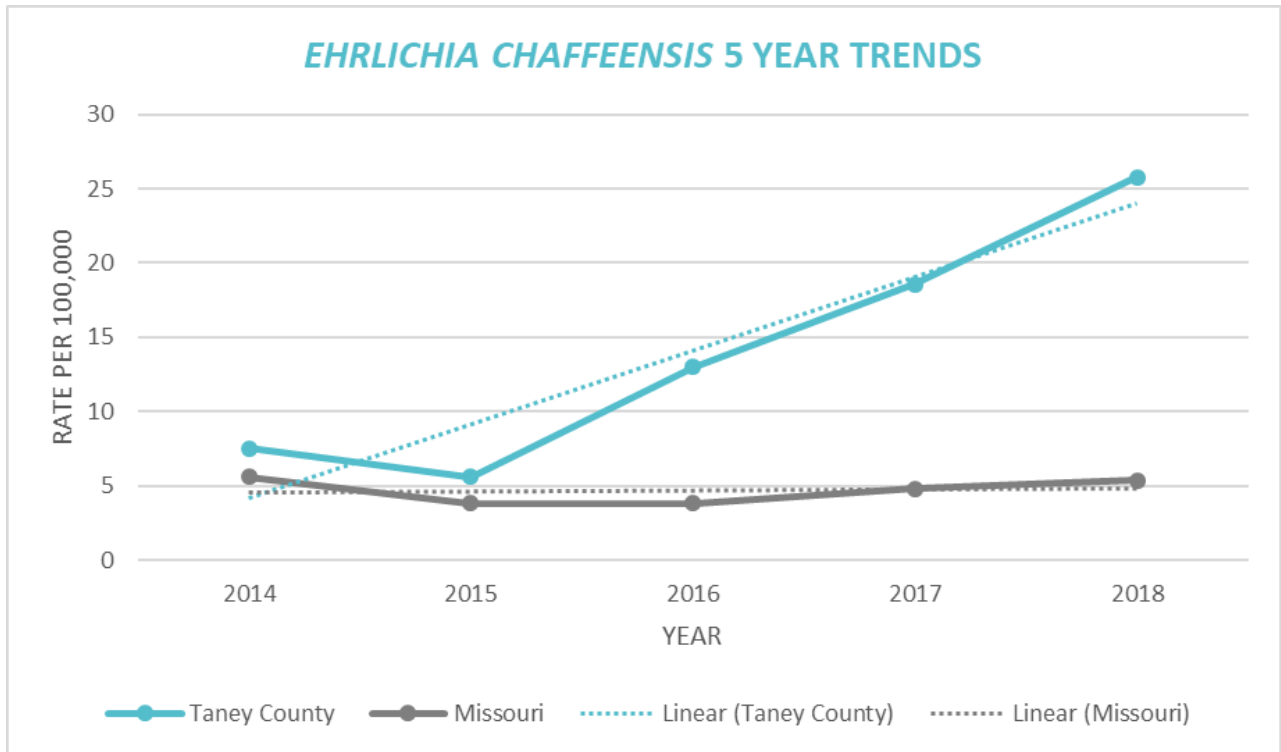


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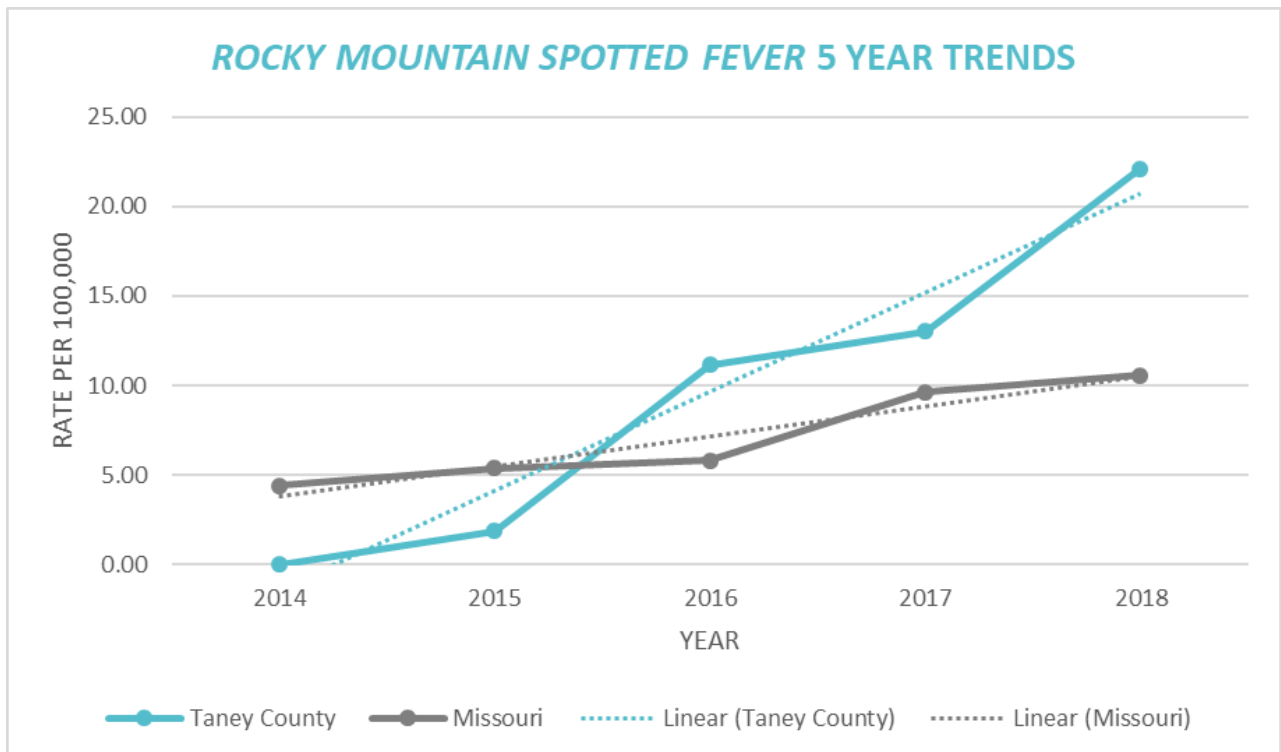


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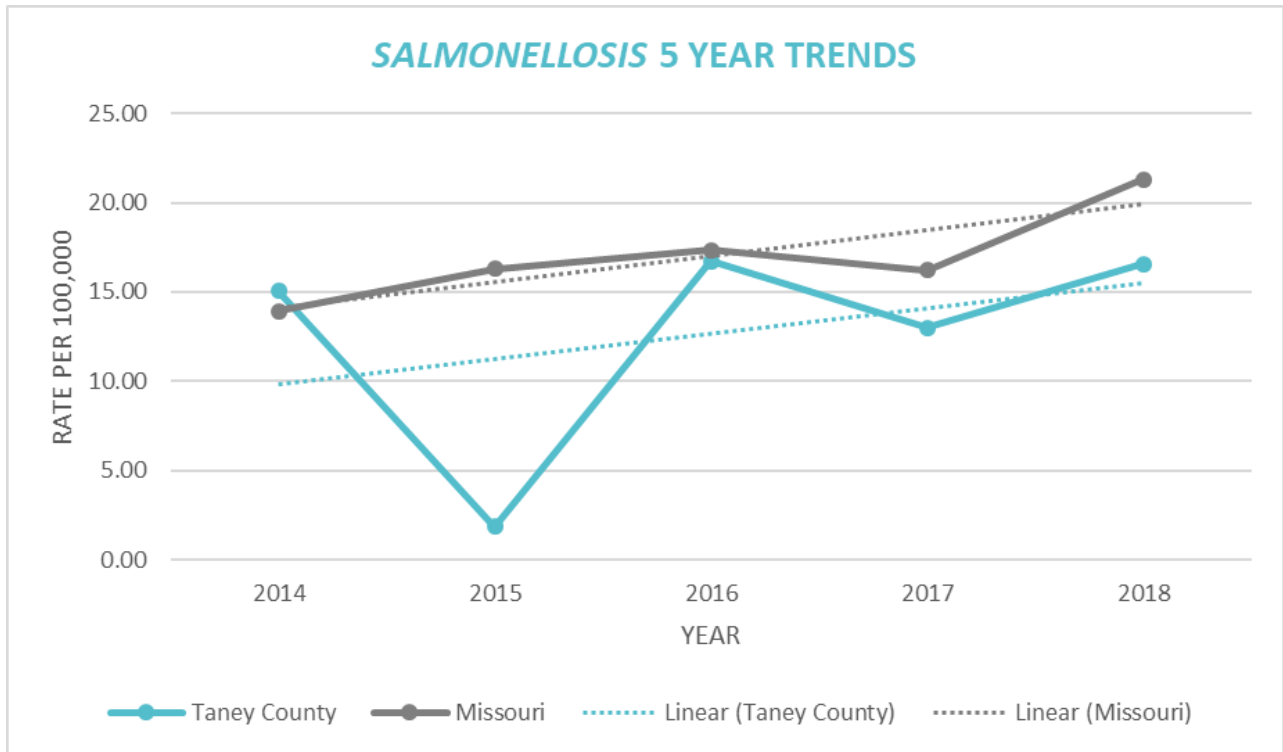


Chart 6:

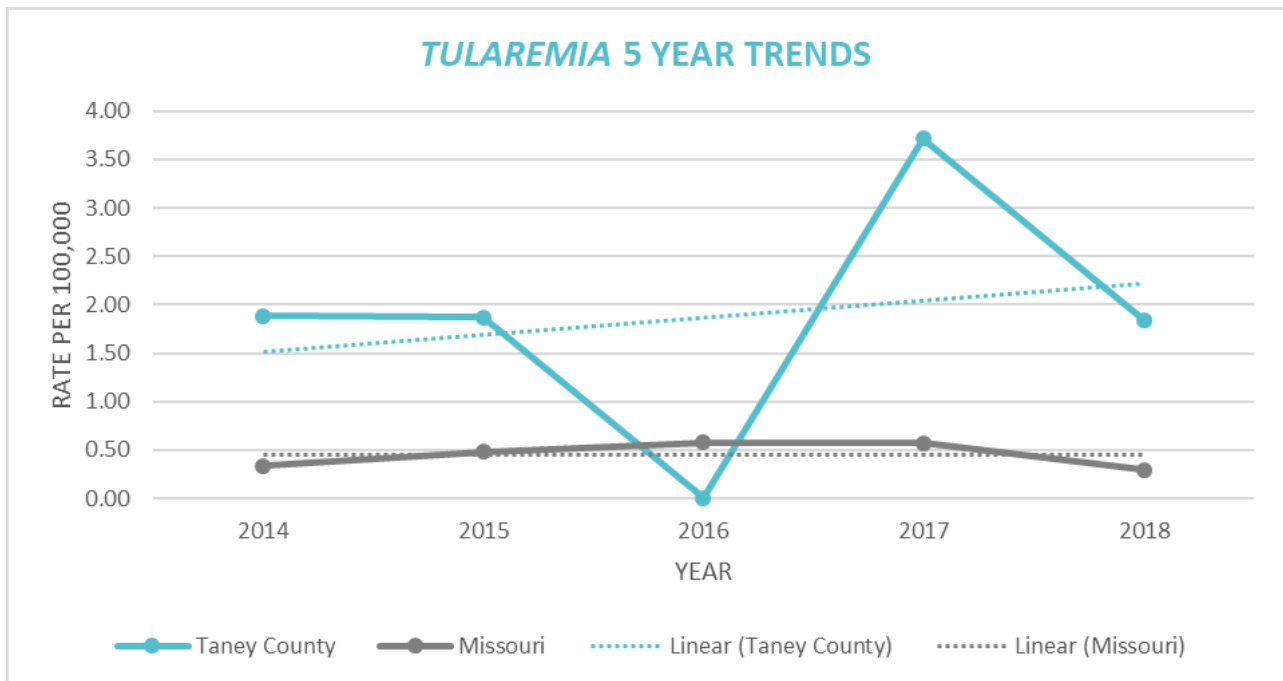
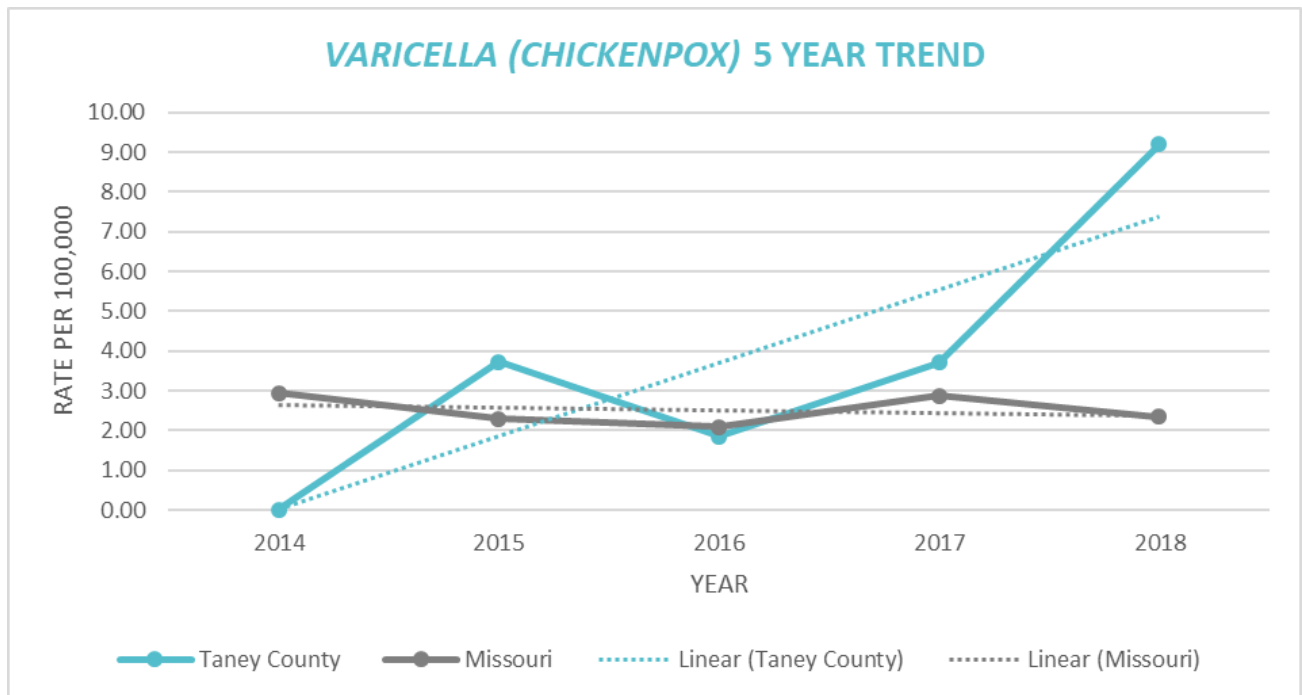




Chart 7:



All charts calculated using Taney County\* & Missouri\*\* 2013-2017 Population Estimates Source: U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates and Statewide Disease Counts from MO DHSS

## Outbreaks

Outbreaks are the occurrence of more cases of disease than expected in a given area or among a specific group of people during a particular period of time. The Taney County Health Department employs one full-time Epidemiologist and one full-time Communicable Disease Nurse who routinely handle all communicable disease investigations including outbreak investigations. Additional resources and staff (such as Environmental Specialists and additional clinical staff) may be called upon for assistance as needed. When an outbreak investigation is initiated, TCHD staff work closely with community partners to identify potential cases and stop the spread of illness.

TCHD investigated one confirmed outbreak in Taney County during 2018. Table 3 contains a brief summary of the outbreak investigated.

Table 3:

Summary of Disease Outbreaks Investigated in Taney County 2018			
Onset	Setting	Agent	Summary
January	Long-Term Care	Influenza A	21 cases of respiratory illness were reported (including 6 staff members). Testing confirmed the presence of Influenza A in 14 of the individuals tested, Influenza AH3 in 2 cases and a single resident tested positive for Influenza B. No secondary cases were reported.

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