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One Health Surveillance

by Ingrid Garrison, DVM, MPH, DACVPM

One Health is defined as, "the integrative effort of multiple disciplines working locally, nationally, and globally to attain optimal health for people, animals, and the environment."¹ Zoonotic diseases, those transmissible from animals to humans, comprise nearly 50% of the reportable diseases in Kansas and approximately 75% of all recent emerging infectious diseases.

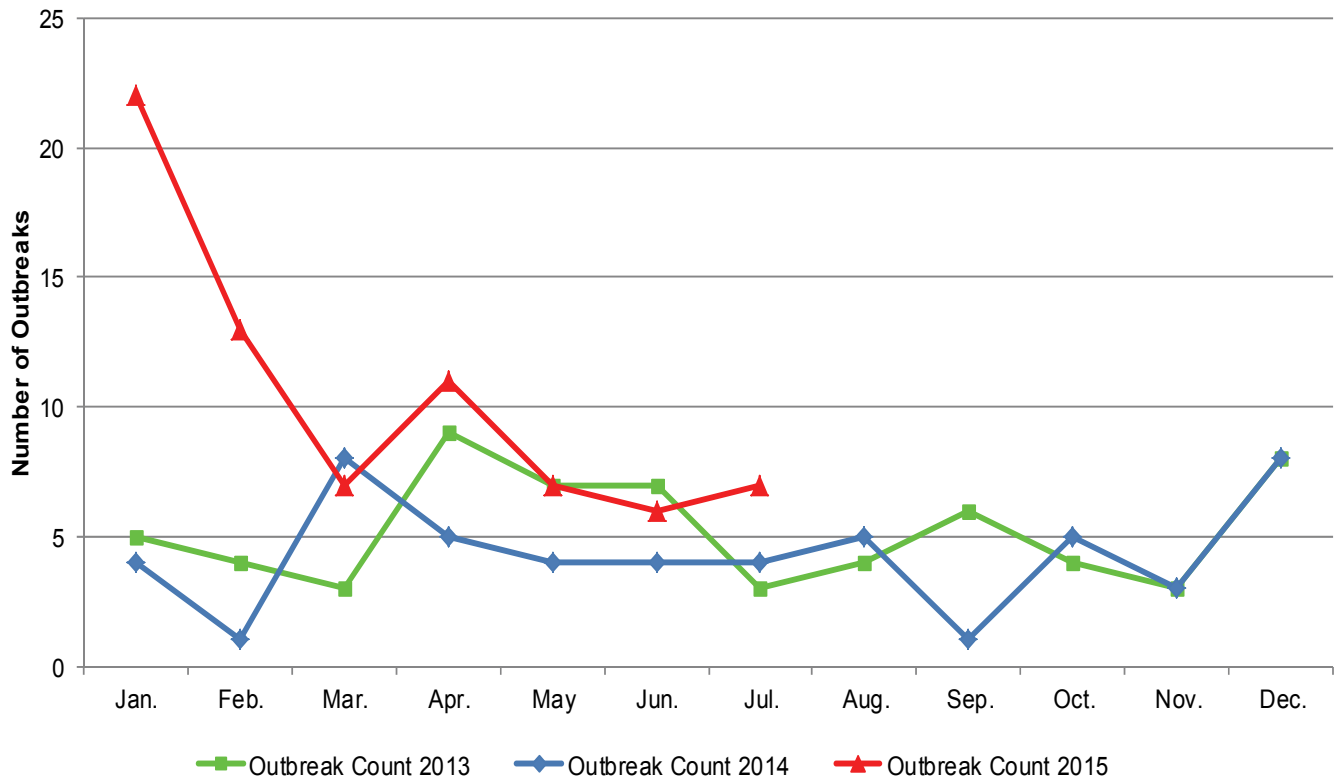
Animals may be the first to come into contact with, and display signs of, an infectious agent that can be transmitted to people. Therefore, animals may be able to serve as sentinels, or an early warning system, for human health threats. Rabies is an excellent example of One Health in action; however, we are currently unable to utilize the surveillance data to its full capacity because negative animal rabies test results are not entered into EpiTrax. Local health departments are unaware of animals submitted for rabies testing unless an animal is diagnosed as rabies positive. The Kansas Department of Health and Environment (KDHE), Infectious Disease Epidemiology and Response Section has partnered with the Kansas State University Veterinary Diagnostic Laboratory (KSU VDL) to develop electronic laboratory reporting for all rabies specimens submitted in Kansas. We anticipate this new, and exciting, capability to be functional by mid-2016.

In addition to rabies, KSU VDL will report select laboratory-positive zoonotic diseases to KDHE. This will include, but will not be limited to: arboviral diseases (i.e., West Nile virus), brucellosis, leptospirosis, Q fever, spotted fever rickettsiosis, and tularemia. KDHE will enter these reports into EpiTrax so local health departments can view cases in their jurisdiction. KSU VDL will provide the submitting veterinarian information on the disease, as well as a fact sheet for the client. We are breaking new ground in this important field and welcome your ideas as we develop this system. Please contact Dr. Ingrid Garrison (igarrison@kdheks.gov) with suggestions for the development and use of this new system.

1. American Veterinary Medical Association. <https://www.avma.org/KB/Resources/Reference/Pages/One-Health.aspx> Accessed 08/13/2015.



Number of Outbreaks Reported to IDER by Report Month



Date Reported	Facility Type	Transmission	Disease	County
7/2/2015	Adult care facility	Unknown	Rhinovirus/Enterovirus	Shawnee
7/13/2015	Other	Food	Shigellosis/STEC	Sedgwick
7/16/2015	Hospital	Unknown	Non-Reportable Condition	Wyandotte
7/26/2015	Private home	Person-to-Person	Pertussis	Sedgwick
7/27/2015	Restaurant	Food	Unknown Etiology	Douglas
7/28/2015	Other	Food	Salmonellosis	Shawnee
7/31/2015	Child care center	Person-to-Person	Campylobacteriosis	Ellis



Vaccine-Preventable Disease Surveillance Indicators

by Mychal Davis, MPH

The completeness and quality of specific surveillance indicators for vaccine-preventable diseases (VPDs) reported to the Kansas Department of Health and Environment (KDHE) from July 1 to July 31, 2015, can be found in the table below. The bolded percentages represent the indicators that have less than 90% completion. The case counts presented in this report are preliminary numbers and are subject to change.

Keep up the good work! Almost all indicators were at least 90% complete for all pertussis cases reported, except for vaccination status information. All indicators were greater than 90% complete for *Haemophilus influenzae*. The indicators date of birth, gender, race, and ethnicity were 100% completed for varicella, *Haemophilus influenzae*, and meningococcal disease cases.

Still room for improvement...Varicella cases did not reach the 90% benchmark for completed symptom profile information and the transmission setting fields. Also, the pertussis and *Streptococcus pneumoniae* did not reach the 90% benchmark for reporting the vaccination status of the cases.

Please continue to focus on completing these fields in EpiTrax for all VPDs as the goal is to reach 90% or higher completion on all indicators. For questions regarding this data, please contact Mychal Davis at (785) 368-8208 or mda-vis@kdheks.gov.

VPD Indicators Reported from July 1 to July 31, 2015 in Kansas

Indicators	<i>Haemophilus influenzae</i> , invasive	Meningococcal disease	Pertussis	<i>Streptococcus pneumoniae</i> , invasive	Varicella
Number of reported cases	1	1	71	8	7
% of cases with date of birth	100%	100%	97%	100%	100%
% of cases with gender	100%	100%	100%	100%	100%
% of cases with race	100%	100%	92%	100%	100%
% of cases with ethnicity	100%	100%	90%	88%	100%
% of cases with onset date [‡]	100%	100%	94%	100%	94%
% of cases with hospitalized noted	100%	100%	97%	100%	94%
% of cases with died noted	100%	100%	96%	100%	94%
% of cases with vaccination status*	100%	100%	83%	50% [§]	94%
% of cases with transmission setting [¶]	N/A**	0%	94%	N/A**	57%
% of cases with completed symptom profiles	N/A**	N/A**	96%	N/A**	47%

*Excludes cases with a State Case Status of "Out of State" or "Not a Case."

‡Data is pulled from onset date field within the clinical tab, not the investigation tab.

*Unknown is considered a valid response if patient is older than 18 years of age.

§Indicator considered complete if either polysaccharide or conjugate pneumococcal vaccine history is documented.

¶Unknown is considered a valid response for this indicator.

**Indicator field is not included in supplemental disease form; *S. pneumoniae* and *H. influenzae* do not have clinical case definitions.

§§ Status is calculated based on when local health department completes investigation.

¶¶ Time is from public health report date to when local health department accepts case.

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. The first column is the EpiTrax field. The second column represents the number of cases with data in the field, and the third column, Percent Completed, represents the frequency of completion of the data field in EpiTrax. The indicators in red text represent a decrease in the percent complete since last month. Six indicators (blue) represent an increase in field completion. In order to align with preparedness targets for initiation of disease control measures and to set goals for case investigation completeness, targets for these measures are shown in the table below. We hope that these targets will help local health departments prioritize case investigations. For questions, contact Sheri Tubach at [stu-bach@kdheks.gov](mailto:stuebach@kdheks.gov).

July 2015		State's Total Number of Cases* = 446	
EpiTrax Indicators			
EpiTrax Field	Number of Cases with Field Completed	Percent Completed	
Address City	435	98	
Address County	446	100	
Address Zip	431	97	
Date of Birth	440	99	
Died	380	85	
Ethnicity†	374	84	
Hospitalized	393	88	
Occupation	182	41	
Onset Date	362	81	
Pregnancy††	142	67	
Race †	387	87	
Sex †	443	99	
Date LHD investigation started	423	95	
Date LHD investigation Completed	365	82	
Performance Measures			
	Number of Cases	Percent of Cases	
Disease control measures began within the target for each disease [^]	279	63	
Case investigations were completed within the target for each disease [^]	128	29	

* Calculations do not include Hepatitis B - chronic, Hepatitis C – past or present, or 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 on the following page for disease control and case investigation targets.

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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; Meningococemia; 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, postdiarrheal; 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, past or present; 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

* Calculations do not include Hepatitis B - chronic, Hepatitis C – past or present, or Rabies.

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

Pertussis and Varicella Webinars Available on KS-Train

With school back in session, we want to remind you of the varicella and pertussis webinar “KDHE: Varicella: Forgotten Fields and Pertussis: Form Changes and Investigation Refresher” posted on KS-Train at <https://ks.train.org/DesktopModules/eLearning/CourseDetails/CourseDetailsForm.aspx?tabid=96&courseid=1056723&backURL=L0Rlc2t0b3BTaGVsbC5hc3B4P3RhYkIkPTk2>.

This training session provides clinical information, case investigation tips, and fields in EpiTrax specific to varicella and pertussis. Watch this webinar and be prepared before your first school-related case!



	Reported Disease Counts - July 2015						Grand Total	3 Year Avg. 2012-2014
	Not Available	Confirmed	Not a Case	Probable	Suspect	Unknown		
Disease	Count	Count	Count	Count	Count	Count	Count	Count
Anaplasma phagocytophilum (f. HGE)	1	1	2	1	0	0	5	5
Babesiosis	0	0	1	0	0	0	1	1
Bourbon Virus	1	0	0	0	0	0	1	0
Brucellosis	1	0	2	0	0	0	3	1
Campylobacteriosis	28	30	0	27	0	0	85	86
Carbapenem-resistant Enterobacteriaceae	0	0	0	0	1	3	4	1
Chikungunya Fever	0	1	0	1	0	0	2	1
Cryptosporidiosis	0	4	0	1	0	0	5	8
Cyclosporiasis	0	2	0	0	0	0	2	1
Dengue	0	1	0	0	0	0	1	1
Ebola Active Monitoring	1	0	3	0	0	0	4	0
Ehrlichiosis, <i>Ehrlichia chaffeensis</i> (f. HME)	6	3	4	6	0	0	19	29
Ehrlichiosis, <i>Ehrlichia ewingii</i>	1	0	0	0	0	0	1	0
Ehrlichiosis/Anaplasmosis, undetermined	0	0	2	0	0	0	2	1
Giardiasis	4	5	0	0	0	0	9	14
HUS - Hemolytic Uremic Syndrome postdiarrheal	0	0	1	0	0	0	1	0
<i>Haemophilus influenzae</i> , invasive disease	0	1	0	0	0	0	1	5
Hepatitis A	1	0	0	2	0	0	3	22
Hepatitis B virus infection, chronic	5	0	211	16	0	0	232	51
Hepatitis B, acute	0	0	5	3	0	0	8	8
Hepatitis C virus, past or present	68	61	73	0	1	0	203	278
Hepatitis C, acute	2	0	0	0	0	0	2	3
Influenza	0	0	2	0	0	0	2	0
Legionellosis	5	1	2	0	0	0	8	3
Listeriosis	0	1	0	0	0	0	1	3
Lyme Disease (<i>Borrelia burgdorferi</i>)	10	0	12	2	1	0	25	39
Malaria (<i>Plasmodium spp.</i>)	2	1	0	0	0	0	3	1
Measles (rubeola)	0	0	1	0	0	0	1	15
Meningitis, Bacterial Other	1	0	2	0	1	0	4	2
Meningococcal disease (<i>Neisseria meningitidis</i>)	1	0	0	0	0	0	1	0
Methicillin-resistant Staphylococcus aureus	1	0	0	0	0	0	1	0
Mumps	0	0	1	0	0	0	1	5
Norovirus	0	2	0	0	0	0	2	0
Pertussis	32	31	9	4	4	0	80	106
Q Fever (<i>Coxiella burnetii</i>), Chronic	1	0	2	0	0	0	3	0
Rabies, animal	3	5	5	1	1	0	15	17
Rhinovirus/Enterovirus	4	0	0	0	6	0	10	0
Rubella	0	0	28	0	0	0	28	29
Salmonellosis	3	49	1	8	2	0	63	53
Shiga toxin-producing <i>Escherichia coli</i> (STEC)	10	14	7	0	5	0	36	14
Shigellosis	12	15	0	1	0	0	28	8
Spotted Fever Rickettsiosis (RMSF)	29	0	22	26	0	0	77	80
Streptococcal disease, invasive, Group A	0	4	1	0	0	0	5	4
<i>Streptococcus pneumoniae</i> , invasive disease	2	6	0	0	0	0	8	6
Transmissible Spongiform Enceph (TSE / CJD)	1	0	0	0	0	0	1	1
Tularemia (<i>Francisella tularensis</i>)	6	5	2	1	4	0	18	7
Typhoid Fever (<i>Salmonella typhi</i>)	0	1	0	0	0	0	1	0
Varicella (Chickenpox)	5	0	17	3	0	0	25	39
West Nile virus neuroinvasive disease	0	0	0	1	0	0	1	2
West Nile virus non-neuroinvasive disease	0	0	31	1	0	0	32	17
Yersiniosis	0	1	0	0	0	0	1	0
Grand Total	247	245	449	105	26	3	1,075	967