Bureau of Epidemiology & Public Health Informatics

Kansas Department of Health and Environment

EPI UPDATES

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Bureau of Epidemiology & Public Health Informatics

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West Nile Virus Risk Levels and Surveillance System

by Amie Worthington

West Nile virus (WNV) is the leading cause of domestically-acquired arboviral disease in the United States. During the last three seasons, there has been a median of 37 cases of WNV in Kansas. In 2016, five out of 37 cases died as a result of WNV, and 25 were hospitalized.

The Kansas Department of Health and Environment (KDHE) has adapted mosquito surveillance over the last 15 years. After the infusion of WNV funding decreased, mosquito surveillance was focused to Sedgwick County based on historical human case data. From 2013-2016, mosquito data from Sedgwick County served as a proxy for mosquito activity for the entire state. In 2017, KDHE received additional funds for Zika virus response which allowed Kansas to add two new counties, Shawnee and Reno, to the mosquito surveillance program. In 2017, the Kansas Biological Survey (KBS) had identified mosquitoes that tested positive for West Nile virus in Shawnee, Reno, and Sedgwick counties. We have also had two birds test positive and two human cases.

This year, KDHE has developed 'WNV Risk Levels' to help people better understand the current 'risk' for their area of the state. The risk levels (Table 1) are determined by the number of WNV mosquito vectors that are present, historically risky weeks for human WNV infection, and the presence of positive WNV mosquitoes. WNV risk levels are updated weekly on our website as well as the new weekly report. Local health departments can use the risk levels to inform their citizens about the prevention measures they should be taking. This information should also be distributed to long term care facilities since the residents are a high risk population for developing complications from WNV.

For more information and to stay updated on weekly risk levels, visits KDHE's arboviral website at http://www.kdheks.gov/epi/arboviral_disease.htm.

Table 1: West Nile Virus Risk Levels in Kansas

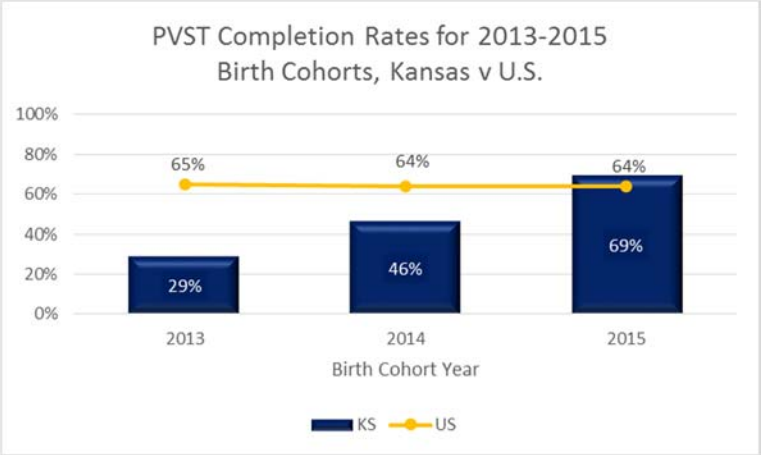
Key to West Nile Virus Risk Levels in Kansas - 2017		
Risk	**What it Means**	**What You Can Do**
Minimal	The mosquito species that carries WNV has not been detected. This does *not* mean the risk is zero.	**To Prepare:** Mosquito-Proof Your Home: • Keep screens on windows and doors in good repair. • Use air conditioning if you have it. • Drain - Reduce number of mosquitoes around your home by emptying standing water from flowerpots, gutters, buckets, pool covers, pet water dishes, discarded tires, and birdbaths on a regular basis.
Low	The mosquito species that carries WNV has been detected. Infection with WNV is unlikely.	**To Prevent:** • Wear mosquito repellent during high mosquito hours (dusk to dawn) • Wear long sleeves and long pants during high mosquito hours (dusk to dawn) • Use mosquito netting on baby carriages and playpens
Moderate	High numbers of mosquitoes that can spread WNV have been detected. Infection with WNV is likely or has already occurred.	**To Prevent: add to previous level** • Wear mosquito repellent continuously • Wear long sleeves and long pants when weather permits • Dump standing water twice weekly
High	1) Mosquitoes have tested positive for WNV *OR* 2) this week has been identified as a 'high risk' WNV infection week based on historical human cases. Many people may get infected with WNV in your area.	**To Prevent: add to previous level** • People over 50 or those who are immune compromised may consider adjusting outdoor activity to avoid peak mosquito hours (from dusk to dawn).
Always know your risk – check risk level regularly at http://www.kdheks.gov/epi/arboviral_disease.htm		

Kansas Improves to Protect Infants Born to Mothers with Hep B

by Kelly Gillespie, MPH

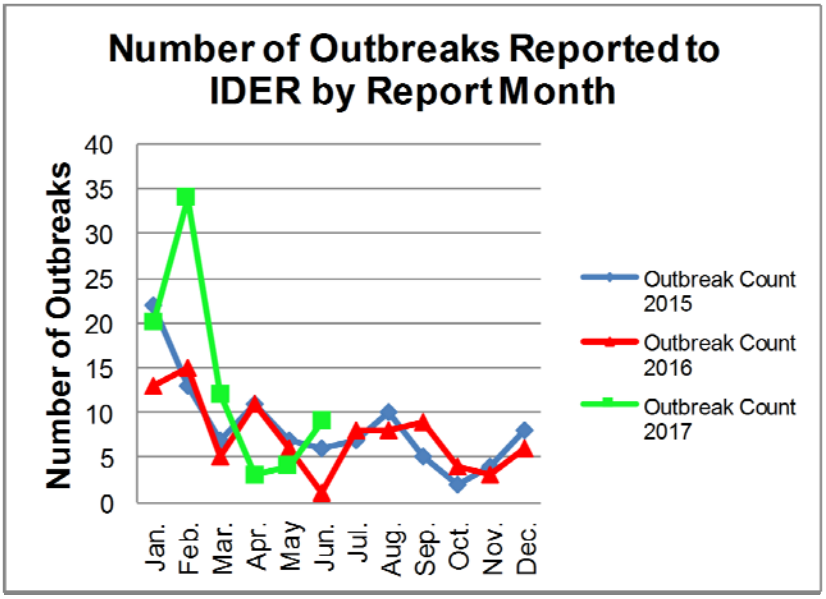
Infants born to mothers with hepatitis B infection have up to a 90% chance of becoming infected. Without intervention, those children have a 25% chance of dying prematurely to complications from this virus. Upon completion of the vaccine series, it is imperative that each child exposed to hepatitis B during delivery receive post-vaccine serological testing (PVST) to ensure he/she is not infected and that immunity has been conferred to prevent future infection.

PVST rates are a main measure of success for the Kansas Perinatal Hepatitis B Prevention Program (PHBPP). Over the past three years Kansas has seen a steady increase among children born in 2015 (2015 birth cohort) who have received PVST; exceeding the national average as reported by the Centers for Disease Control and Prevention (CDC). From 29% completion rate in 2013 to 69% in 2015, Kansas has exceeded the national average (see chart).



To ensure this trend continues, the PHBPP has developed numerous resources for patients, providers, and local health departments. All resources can be found on the updated PHBPP website located at http://www.kdheks.gov/immunize/phbpp.htm

Outbreaks Report



Date Reported	Facility Type	Transmission	Disease	County
6/5/2017	Restaurant	Food	Unknown Etiology	Sedgwick
6/9/2017	Camp	Unknown	Unknown Etiology	Multiple Counties
6/9/2017	Workplace	Person-to-Person	Mumps	Wyandotte
6/21/2017	Restaurant	Food	Unknown Etiology	Johnson
6/22/2017	Caterer	Food	Unknown Etiology	Johnson
6/27/2017	Unknown	Unknown	Salmonellosis	Shawnee
6/28/2017	Adult care facility	Unknown	Salmonellosis	Russell
6/29/2017	International Travel	Person-to-Person	Measles (rubeola)	Multiple Counties
6/30/2017	Restaurant	Food	Unknown Etiology	Johnson

Vaccine-Preventable Disease Surveillance Indicators

by Allison Zaldivar, 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 June 1 to June 30, 2017 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! All but one of the indicators surpassed the 90% benchmark for all VPDs reported from June 1 to June 30, 2017.

Still room for improvement... Mumps had one indicator fall below the benchmark. The indicator that did not meet the 90% completion benchmark is bolded in the chart below.

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 Allison Zaldivar at (785) 368-8208 or Allison.Zaldivar@ks.gov.

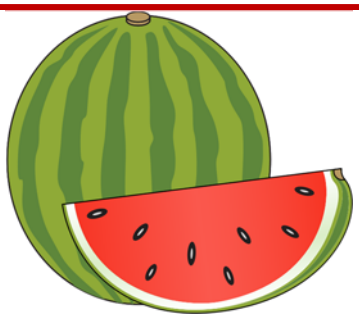
VPD Indicators Reported from June 1 to June 30, 2017 in Kansas

Indicators	*Haemophilus influenzae,* invasive	Mumps	Pertussis	*Streptococcus pneumoniae,* invasive	Varicella
Number of reported cases	3	13	24	21	5
% of cases with date of birth	100%	100%	100%	100%	100%
% of cases with gender	100%	100%	100%	100%	100%
% of cases with race	100%	100%	100%	100%	100%
% of cases with ethnicity	100%	100%	100%	100%	100%
% of cases with onset date‡	100%	100%	100%	100%	100%
% of cases with hospitalized noted	100%	100%	100%	100%	100%
% of cases with died noted	100%	100%	100%	100%	100%
% of cases with vaccination status*	100%	100%	100%	95%	100%
% of cases with transmission setting¶	N/A**	**77%**	100%	N/A**	100%
% of cases with completed symptom profiles	N/A**	98%	99%	N/A**	93%

*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 field is not included in supplemental disease form; *S. pneumoniae* and *H. influenzae* do not have clinical case definitions.
§Indicator considered complete if either polysaccharide or conjugate pneumococcal vaccine history is documented.
¶Unknown is considered a valid response for this indicator.

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.



https://openclipart.org/detail/189410/watermelon

Disease Targets

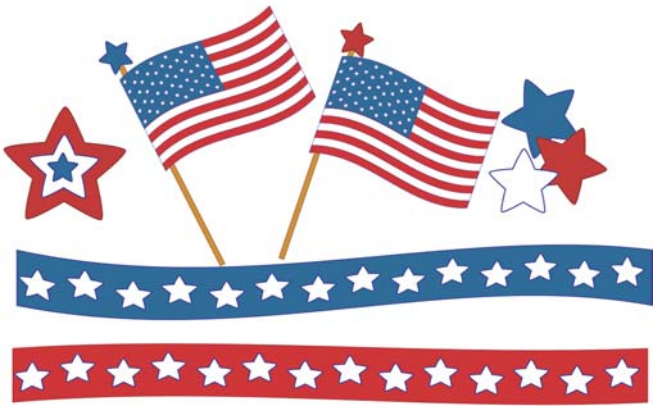
Diseases	Disease Control (Days)*	Completed Case Investigation (Days)**
Anthrax; Botulism; Brucellosis; Cholera; Diphtheria; Hantavirus Pulmonary Syndrome; Hepatitis A; Influenza deaths in children <18 years of age; Measles; (Meningitis, bacterial); Meningococcemia; Mumps; Plague; Poliomyelitis; Q Fever; 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 *Escherichia coli* (STEC); Trichinosis; Vibriosis (not cholera)	3	5
Arboviral disease (including West Nile virus, Chikungunya, and Dengue); *Haemophilus influenzae*, invasive disease; *Streptococcus pneumoniae*, 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 spongioform 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)**

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

County Level Surveillance Indicators

Please watch for county level surveillance indicators to come out next week.



http://simplydesigning.porch.com/4th-of-july-extravaganza_29/