



EPI UPDATES

December
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Negative Pertussis PCR Test Results

by Jennifer Schwartz

This year has been an active year for reports of pertussis cases. As of Dec. 17, 2012, over 1,800 potential cases of pertussis have been reported in 2012. Given the increase in reported cases, this has resulted in a substantial amount of time required by local health department staff to conduct investigations, particularly in counties experiencing clusters involving a lot of contacts. It is imperative that limited public health resources are targeted appropriately, and investigations should be focused on the highest priorities.

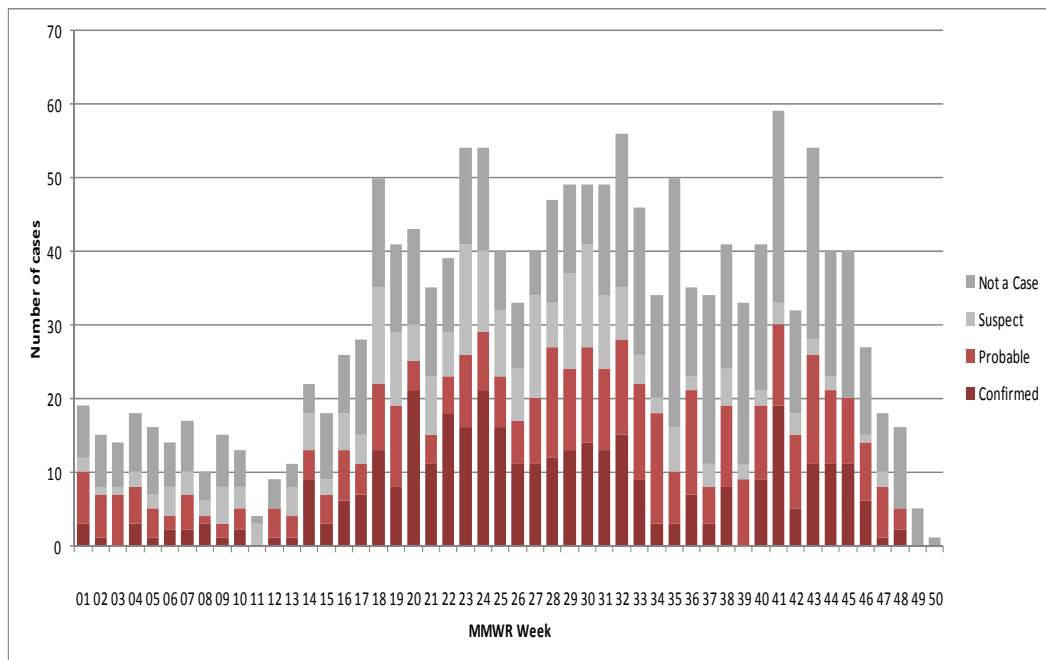
BEPHI staff recently analyzed 2012 pertussis surveillance data for case classification and laboratory testing results, specifically polymerase chain reaction (PCR) testing results (Figure 1). Approximately 40% of the case re-

ports met either the confirmed or probable surveillance case definition. Almost half of the reported cases had a negative PCR test result and 70% of those never met the confirmed or probable case definition. Although the performance of PCR test can vary substantially by laboratory, and both false positive and false negative results can occur, the PCR test is generally a highly sensitive test. Therefore, most patients with a negative PCR test most likely do not have pertussis, particularly in the absence of epidemiologic evidence linking the patient to a confirmed pertussis case.

Based on these results, BEPHI is planning to discontinue entering pertussis

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Figure 1. Pertussis Cases in Kansas by Case Classification and MMWR Week for 2012, Dec. 17, 2012.



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reports with negative PCR tests starting **Jan. 1, 2013** and recommends that local health department staff do not devote substantial resources for investigating any such reports that are sent directly to the local health departments. Surveillance staff in BEPHI will also be contacting laboratories reminding them that negative pertussis PCR results are not reportable and that they should cease reporting them to KDHE. If you have comments or concerns, please contact Jennifer Schwartz at jschwartz@kdheks.gov.

Early Influenza Season is Under Way, Still Time to Vaccinate

by Amie Worthington

The Centers for Disease Control and Prevention (CDC) have announced significant increases in influenza activity in the United States in the last three weeks, indicating that an early influenza season is under way.¹ This is the earliest activity in nearly a decade, since 2003-2004, which was an early and severe influenza season.

The Outpatient Influenza-like Illness Surveillance Network (ILINet) is a collaboration between CDC and state, local, and territorial health departments. The purpose of the surveillance is to track influenza-like illness (ILI), recognize trends in influenza transmission, determine the types of influenza circulating, and detect changes in influenza viruses. Influenza-like illness is defined by the CDC as fever ($\geq 100^{\circ}\text{F}$ or $\geq 37.8^{\circ}\text{C}$) with cough or sore throat, in the absence of a known cause other than influenza.

In the 2012-2013 season, Kansas has 43 sentinel sites participating in ILINet. These sites are distributed across the State, allowing KDHE to analyze the burden of disease geographically (Figure 1). Kansas is currently experiencing regional geographic spread; increases have been noted for the past four weeks (Figure 2). The Kansas Health and Environmental Laboratories have reported 10 positive influenza specimens, including eight A/H3 and two influenza B.

Since Oct. 1, 2012, CDC has antigenically characterized 249 influenza viruses, including ten 2009 influenza A (H1N1) viruses, 155 influenza A (H3N2) viruses, and 84 influenza B viruses. These characterizations indicate the viruses circulating are closely matching the components of the vaccine. The viruses antigenically characterized are as follows:

- The 2009 influenza A (H1N1) viruses were characterized as A/California/7/2009-like. This is the influenza A (H1N1) component of the Northern Hemisphere vaccine for the 2012-13 season.
- Of the 155 influenza A (H3N2) viruses, 153 were characterized as A/Victoria/361/2011-like. This is the influenza A (H3N2) component of the Northern Hemisphere influenza vaccine for the 2012-13 season.
- Approximately 68% of the 84 influenza B viruses belonged to the B/Yamagata lineage of viruses, and were characterized as B/Wisconsin/1/2010-like, the influenza B component for the 2012-13 Northern Hemisphere influenza vaccine. The remaining 32% of the tested influenza B viruses belonged to the B/Victoria lineage of viruses.

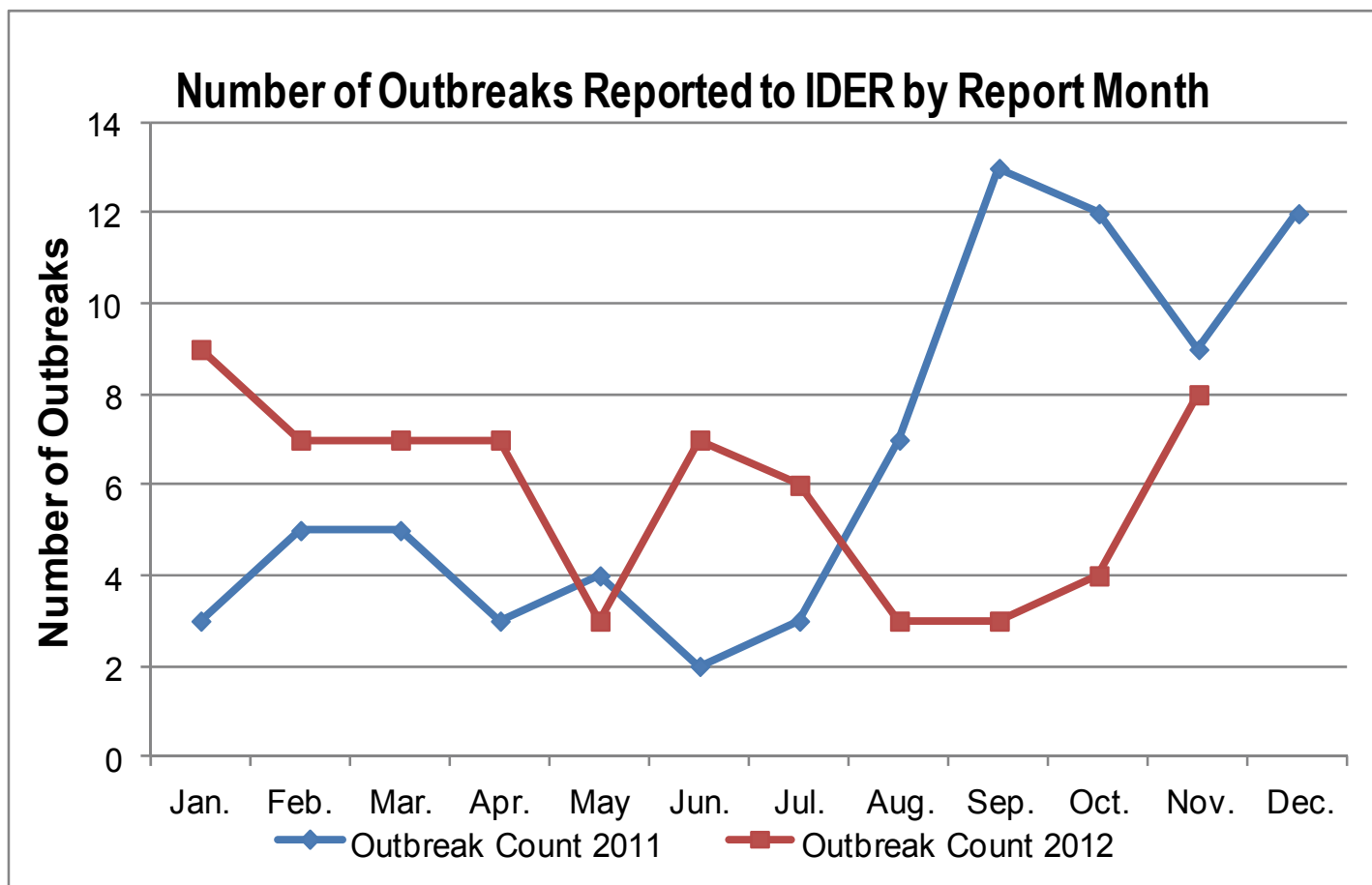
CDC urges influenza vaccination for nearly everyone ages six months and older, especially children, adults 65 and older, pregnant women, and people with asthma, diabetes, and other long-term conditions who are at high risk from influenza complications.² If a patient experiences an adverse reaction to the influenza vaccine, please report the occurrence to the Vaccine Adverse Event Reporting System at <http://vaers.hhs.gov/esub/index>.

Follow Kansas influenza activity and testing results are available at <http://www.kdheks.gov/flu/surveillance.htm>. FluView provides national surveillance updates at <http://www.cdc.gov/flu/weekly/index.htm>.

1. Situation Update: Summary of Weekly FluView [Internet]. Atlanta (GA): Centers for Disease Control and Prevention; [updated 2012 Dec 14; cited 2012 Dec 18]. Available from: <http://www.cdc.gov/flu/weekly/summary.htm>.

2. Preventing Seasonal Flu with Vaccination [Internet]. Atlanta (GA): Centers for Disease Control and Prevention; [updated 2012 Sep 18; cited 2012 Dec 18]. Available from: <http://www.cdc.gov/flu/protect/vaccine/index.htm>.

MONTHLY OUTBREAK SUMMARIES



Facility Type	Organism	Transmission	County	Outbreak Status	Date Reported
Restaurant	Unknown-GI	Food	Barton	Closed	Nov. 6, 2012
Hotel	Unknown-GI	Food	Reno	Active	Nov. 14, 2012
Caterer	<i>Clostridium perfringens</i>	Food	Montgomery	Closed	Nov. 14, 2012
Restaurant	Unknown-GI	Indeterminate/	Shawnee	Closed	Nov. 14, 2012
Restaurant	Unknown-GI	Food	Johnson	Closed	Nov. 15, 2012
Caterer	Unknown-GI	Food	Harper	Active	Nov. 20, 2012
Unknown	Shiga Toxin-producing <i>Escherichia coli</i> (STEC)	Person-to-Person	Gray	Closed	Nov. 26, 2012
Grocery Store	Unknown-GI	Food	Johnson	Closed	Nov. 28, 2012

Vaccine-Preventable Disease Surveillance Indicators

By Chelsea Raybern

The completeness and quality of specific surveillance indicators for vaccine-preventable diseases (VPDs) reported to the Kansas Department of Health and Environment from November 1—30, 2012 can be found in the table below. The bolded percentages represent the indicators that have less than 90% completion. Fields in EpiTrax that were filled in as unknown or left blank were considered unanswered for the completeness of indicators. The case counts presented in this report are preliminary numbers and are subject to change.

Keep up the good work! When compared to last month's surveillance data, completeness of some indicators remained high. Date of birth and sex were completed for at least 99%, and death was completed for more than 90% of all VPDs reported from November 1—30, 2012. Three indicators for varicella [ethnicity, hospitalized, and died] have all improved and are over 90% complete. The range and median number of days from report date to case acceptance for all VPDs except for pertussis have improved since last month. The percentages and numbers in italics and blue represent indicators that have improved since last month.

Still room for improvement...Completeness of vaccination status and transmission setting was much lower than 90% for all reported VPDs during the month of November. Completed investigations were also much lower than 90% for all reported VPDs except mumps. Completeness for five of the eleven varicella indicators [race, onset date, vaccination status, transmission setting, and completed investigations] and completeness for more than half of the pertussis indicators [date of birth, race, ethnicity, onset date, completed investigations, and median number of days to accept a case] were lower than the indicators in October. Even though vaccination status and transmission setting were completed more frequently for pertussis cases reported in November when compared to October, they were still only 68% and 28% complete respectively. The median number of days for local health departments to accept pertussis cases has increased eightfold.

Our goal is to reach 90% or higher completion on all indicators. For the one timeliness indicator (report to investigation start), the data shows delayed investigation start times, which suggests room for improvement. Accepting cases and starting the investigation the same day the local health department receives notification will help us improve on this indicator.

For questions regarding this data, please contact Chelsea Raybern at (785) 296-0339 or craybern@kdheks.gov.

VPD Indicators Reported from November 1—30, 2012 in Kansas

Indicators	<i>Haemophilus Influenzae, invasive</i>	Mumps	Pertussis	<i>Streptococcus pneumoniae, invasive</i>	Varicella
Number of reported cases	4	1	191	18	39
% of cases with date of birth	100%	100%	99%	100%	100%
% of cases with sex	100%	100%	100%	100%	100%
% of cases with race	100%	100%	88%	83%	85%
% of cases with ethnicity	75%	100%	85%	61%	<i>95%</i>
% of cases with onset date	75%	100%	80%	72%	79%
% of cases with hospitalized noted	75%	100%	<i>90%</i>	83%	<i>92%</i>
% of cases with died noted	100%	100%	99%	<i>100%</i>	<i>92%</i>
% of cases with vaccination status	50%	100%	<i>68%</i>	17%*	79%
% of cases with transmission setting	N/A [§]	0%	<i>28%</i>	N/A [§]	41%
% of investigations completed by local health departments [†]	25%	100%	56%	67%	67%
Median # of days from report to case acceptance (range) [‡]	0 (0-1)	<i>0 (0)</i>	8 (0-29)	<i>1 (0-12)</i>	<i>0 (0-15)</i>

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

§ Indicator field not included in supplemental disease form

† Status includes when local health department completes investigation, approves the case, or when the case is closed by state

‡ Time from public health report date to when local health department accepts case

Disease	Month reported to EpiTrax - November 2012						
	State Case Status					Grand Total	Average 2009—2011
	Confirmed	Probable	Suspect	Not a Case	Unclassified		
Count	Count	Count	Count	Count	Count	Count	
<i>Anaplasma phagocytophilum</i> (f. HGE)	0	0	0	0	1	1	1
Anthrax	0	0	0	1	0	1	0
Babesiosis	0	0	0	0	1	1	0
Campylobacteriosis	3	0	9	0	27	39	38
Cryptosporidiosis	1	0	0	0	7	8	11
Ehrlichiosis, <i>Ehrlichia chaffeensis</i> (f. HME)	0	0	0	0	1	1	1
Giardiasis	3	0	1	0	7	11	18
HUS—Hemolytic Uremic Syndrome postdiarrheal	0	0	3	0	1	4	1
<i>Haemophilus influenzae</i> , invasive disease (Including Hib)	3	0	0	0	1	4	2
Hepatitis A	0	0	0	19	29	48	41
Hepatitis B Pregnancy Event	0	0	0	0	3	3	n/a
Hepatitis B virus infection, chronic	2	11	0	2	19	34	39
Hepatitis B, acute	1	1	0	2	0	4	9
Hepatitis C virus, past or present	61	1	9	2	88	161	152
Hepatitis C, acute	0	0	0	0	2	2	0
Legionellosis	1	0	0	0	3	4	2
Lyme Disease (<i>Borrelia burgdorferi</i>)	0	0	0	3	5	8	11
Measles (Rubeola)	0	0	0	1	3	4	1
Meningitis, Bacterial Other	2	0	0	1	0	3	2
Mumps	1	0	0	3	0	4	3
Parapertussis	0	0	0	0	8	8	n/a
Pertussis	33	30	5	53	133	254*	43
Q Fever (<i>Coxiella burnetii</i>), acute	0	0	0	0	1	1	0
Rabies, animal	0	1	2	5	4	12	3
Salmonellosis	27	0	0	0	3	30	31
Shiga toxin-producing <i>Escherichia coli</i> (STEC)	7	0	0	2	5	14	8
Shigellosis	8	0	0	0	1	9	20
Spotted Fever Rickettsiosis (RMSF)	0	2	1	7	13	23	8
Streptococcal disease, invasive, Group A	1	0	0	0	1	2	1
<i>Streptococcus pneumoniae</i> , invasive disease	12	0	0	0	6	18	15
Transmissible Spongiform Enceph (TSE/CJD)	0	0	0	1	0	1	3
Tularemia (<i>Francisella tularensis</i>)	0	0	0	0	1	1	1
Varicella (Chickenpox)	3	20	0	11	15	49	50
West Nile virus non-neuroinvasive disease	0	0	1	1	7	9	5
Grand Total	169	66	31	114	396	776	

* Increase in case count is due to outbreak(s).