

Inside This Issue:

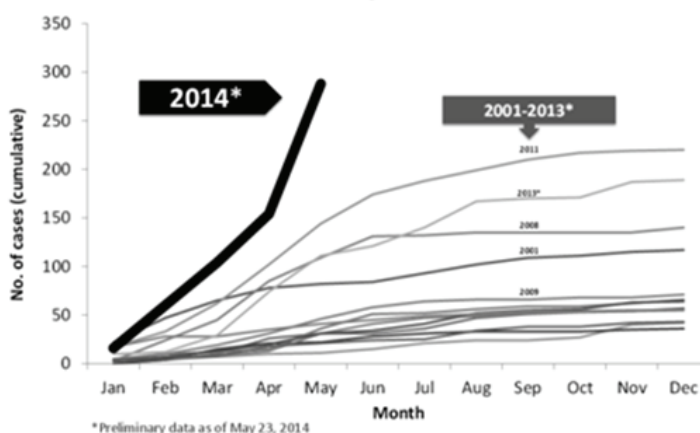
Measles: Tips for the Local Investigator	1-2
Disease Reporting & Control	2-3
Monthly Outbreak Summary	4
VPD indicators	5
Data Quality Indicators	6
Disease Investigation Update	7
EpiTrax Hints	7
Disease Counts	8

Kansas Department of Health & Environment

Bureau of Epidemiology & Public Health Informatics

D. Charles Hunt, MPH,
State Epidemiologist
& Director, BEPHILou Saadi, Ph.D., Deputy
Director & State RegistrarSheri Tubach, MPH, MS,
Senior Epidemiologist
Director, IDERDaniel Neises, MPH
Senior EpidemiologistFarah Ahmed, PhD, MPH,
Environmental Health OfficerIngrid Garrison, DVM, MPH,
DACVPM, State Public
Health VeterinarianBonnie Liscek, MPS,
Director, Surveillance Systems
& *Epi Updates* EditorCurtis State Office Building
1000 SW Jackson St.
Topeka, KS 66612Email: epihotline@kdheks.gov
Epi Hotline: 877-427-7317**Measles: Tips for the Local Investigator**

By M. Ella Vajnar

Measles, U.S., 2001-2014*
Cumulative Number by Month of Rash OnsetSource: www.cdc.gov/media/releases/2014/a0529-measeles.html

are considering measles in patients with fever and rash, but no new cases have been added to the 14 confirmed Kansas cases of measles reported in 2014. In light of the current events, it is pertinent that the local public health investigator be prepared to investigate any suspect measles cases with an understanding of what is needed to assess a potential measles risk.

First, inquire about the symptoms the patient is experiencing and when symptoms started. Is there fever, cough, coryza, or conjunctivitis? What was the highest measured temperature? Have the caller describe the rash. Where did it start on the body and what direction did it proceed? Are there Koplik spots (small, red irregularly-shaped spots with blue-white centers found on the oral mucosa)?

Second, inquire about the MMR vaccine status of the patient. A single dose of measles containing vaccine is 93% effective, and two doses are 97% effective. So even though history of MMR vaccine may not exclude a measles diagnosis, it is needed for the risk assessment. When was the last vaccine dose received? Could the present situation be the result of a vaccine associated reaction? Also inquire if the patient, even though fully vaccinated, has had any situation that may have altered his or her immune response to a measles exposure.

Finally, assess the patient history during the three weeks prior to onset. Has there been any international travel or domestic travel to locations with known measles outbreaks? Has there been any contact with an international traveler or a person who traveled domestically to locations with a known measles outbreak? Has the patient had contact with a person that had a febrile rash illness?

In most cases, patients who have had a recent MMR vaccination and are experiencing a rash without fever or with only a low-grade fever may be having an adverse reaction to the vaccine. Only if there are other clinical symptoms suggesting measles and the possibility of contact with a potential measles source, should such patients be tested for measles. To assess the possibility of measles in these situations,

(Continued on page 2)

In May of 2014, the Centers for Disease Control and Prevention (CDC) in the United States, reported measles cases in the United States had reached a 20-year high. The trend continued as the year ended with 644 total cases being reported. From January 1 until January 30 of this year, a total of 102 people in 14 states have been reported as having measles. Most of these cases are part of a large, ongoing multi-state outbreak linked to an amusement park in California. In Kansas, there is heightened awareness among Kansas medical providers who

(Continued from page 1)

a culture must be done with strain typing to confirm a wild type measles infection. A person with a rash that is highly suggestive of only a vaccine reaction should be reported to the Vaccine Adverse Events Reporting System at <http://vaers.hhs.gov/index>. Vaccine-associated reactions do not require isolation as measles, mumps, and rubella vaccine viruses are not transmitted from the vaccinated person.

If after the risk assessment measles is a possibility, immediately report the suspected measles infection to the EpiHotline at 1-877-427-7317 and ensure that the medical facility implements airborne infection control precautions. The patient should be masked and if possible isolated in a negative pressure room. Only staff immune to measles should be near the patient. Instruct the medical provider that the specimens that need to be collected for testing are a nasopharyngeal swab for RT-PCR and serum for measles IgG and IgM. Inquire when and where the testing will be done. If needed, the Kansas Health and Environmental Laboratories can assist with measles PCR testing, but prior approval is necessary through the EpiHotline.

For further guidance, refer to the following:

General Information: www.kdheks.gov/epi/measles.htm

Measles Disease Investigation Guideline: www.kdheks.gov/epi/disease_investigation_guidelines.htm

Frequently asked questions: <http://www.cdc.gov/measles/about/faqs.html>

Current information on the domestic measles outbreak: www.cdc.gov/measles/cases-outbreaks.html

Disease Reporting and Disease Control Performance Measures

by Daniel Neises, MPH

Public Health Emergency Preparedness Cooperative Agreement
 Capability #13: Public Health Surveillance and Epidemiological Investigation
 Budget Period 3 (July 2014 – June 2015), as of 2/9/15

Selected Diseases:

Disease	Case Classification Criteria
Hepatitis A	confirmed
Salmonellosis	confirmed, excluding typhoid fever
<i>E. coli</i> , STEC	confirmed
Shigellosis	confirmed
Tularemia	confirmed and probable
Varicella	confirmed and probable
Botulism	confirmed, excluding infant botulism
Measles	confirmed
Meningococcal disease	confirmed
Pertussis	confirmed, with laboratory results

Disease Reporting: Proportion of selected disease reports received by a public health agency within the awardee-required timeframe. Calculated by using EpiTrax fields:

(Lab Test Date or Date Diagnosed – Presumptive) – (Date Reported to Public Health) ≤ KDHE-required disease reporting timeframe

Disease Control: Proportion of reports of selected disease for which initial control measures were initiated within an appropriate timeframe. Calculated by using EpiTrax fields:

(Date LHD Investigation Started) – (Date Reported to Public Health) ≤ CDC-required timeframe

Disease Reporting

Disease	KDHE Required Timeframe	Statewide Received	Statewide Received On Time	%	% Change From Previous Month
Hepatitis A	7 days	3	3	100	-
Salmonellosis	7 days	261	256	98	-
<i>E. coli</i> , STEC	7 days	39	39	100	-
Shigellosis	7 days	25	24	96	-
Tularemia	7 days	12	12	100	-
Varicella	7 days	153	139	91	-1
Botulism	4 hours*	-	-	-	-
Measles	4 hours*	10	9	90	+1
Meningococcal disease	4 hours*	-	-	-	-
Pertussis	4 hours*	134	118	88	-

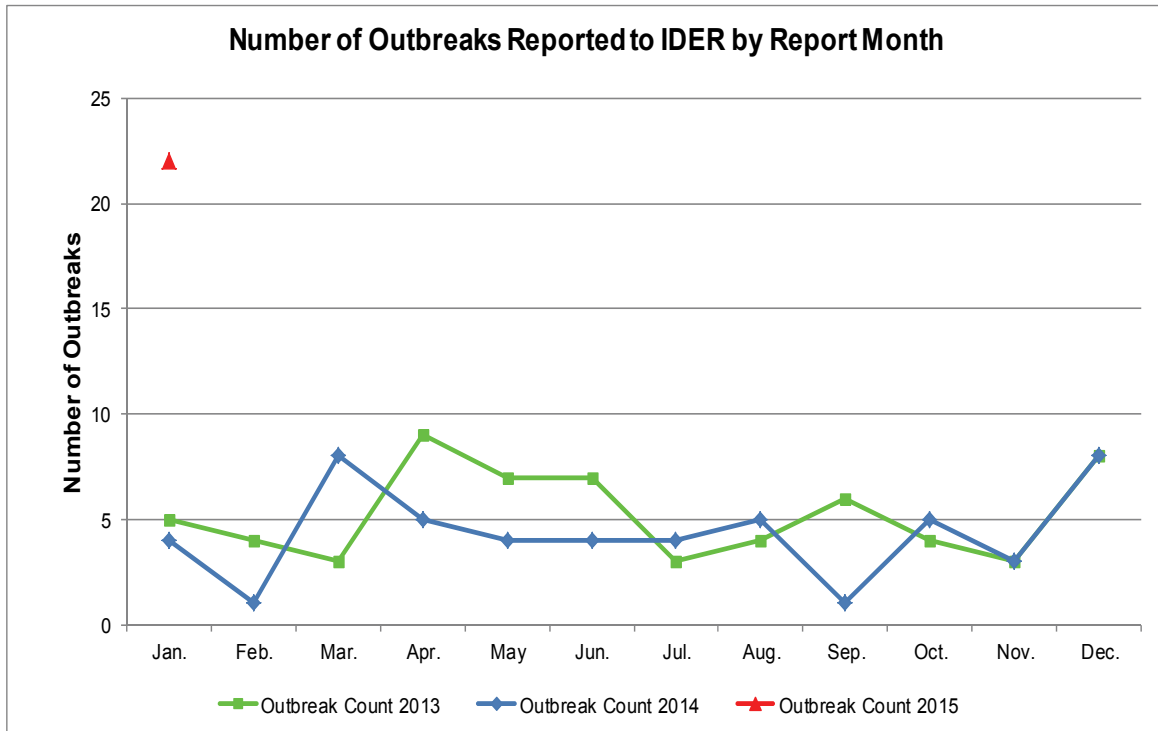
*Because EpiTrax does not capture time reported to public health, KDHE is allowed to "consider cases as immediately reported if the selected case event date and date of first report to a health department occur on the same date."

Disease Control

Disease	CDC Required Timeframe	Statewide Received	Statewide Investigated On Time	%	% Change From Previous Month
Hepatitis A	7 days	3	3	100	-
Salmonellosis	3 days	261	212	81	-1
<i>E. coli</i> , STEC	3 days	39	32	82	-9
Shigellosis	3 days*	25	19	76	-
Tularemia	2 days	12	9	75	-14
Varicella	1 day*	153	132	86	-1
Botulism	1 day	-	-	-	-
Measles	1 day	10	10	100	-
Meningococcal disease	1 day	-	-	-	-
Pertussis	1 day*	134	103	77	+1

*Collecting data for these diseases is optional. KDHE has defined these timeframes, not CDC.

Monthly Outbreak Summaries



Date Reported	Facility Type	Transmission	Disease	County
1/2/2015	Adult care facility	Person-to-Person	Influenza	Shawnee
1/2/2015	Adult care facility	Person-to-Person	Influenza	Johnson
1/5/2015	Adult care facility	Person-to-Person	Influenza	Sedgwick
1/5/2015	Prison or jail	Person-to-Person	Influenza	Shawnee
1/7/2015	Multi-County	Food	Norovirus	Neosho
1/7/2015	Adult care facility	Person-to-Person	Influenza	Johnson
1/7/2015	Adult care facility	Person-to-Person	Influenza	Sedgwick
1/7/2015	Adult care facility	Person-to-Person	Influenza	Smith
1/7/2015	Adult care facility	Person-to-Person	Influenza	Neosho
1/12/2015	Adult care facility	Person-to-Person	Influenza	Johnson
1/13/2015	Adult care facility	Person-to-Person	Norovirus	Johnson
1/13/2015	Adult care facility	Person-to-Person	Influenza	Sedgwick
1/16/2015	Adult care facility	Person-to-Person	Influenza	McPherson
1/16/2015	Adult care facility	Person-to-Person	Influenza	Johnson
1/16/2015	Adult care facility	Person-to-Person	Influenza	Shawnee
1/20/2015	Adult care facility	Person-to-Person	Influenza	Sedgwick
1/20/2015	Adult care facility	Person-to-Person	Influenza	Lyon
1/20/2015	Hospital	Person-to-Person	Influenza	Douglas
1/23/2015	School or college	Person-to-Person	Pertussis	Barton
1/25/2015	Adult care facility	Person-to-Person	Influenza	Gove
1/26/2015	School or college	Person-to-Person	Pertussis	Johnson
1/30/2015	Adult care facility	Person-to-Person	Influenza	Ford

Vaccine-Preventable Disease Surveillance Indicators

by Anne Straily, DVM, 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 January 1 to January 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! All indicators were 100% completed for *Haemophilus influenzae*! The indicators date of birth, gender, race, and ethnicity were more than 94% completed for pertussis, *Streptococcus pneumoniae*, and varicella. The indicators for onset date, hospitalized, mortality, and vaccination status were at least 96% completed for pertussis. Hospitalization was completed for 94% of *Streptococcus pneumoniae*. Greater than 90% of varicella cases were accepted within three days of report to the local health departments. This is a significant improvement from December 2014!

Still room for improvement... Onset date, hospitalized, mortality, vaccination status, and transmission setting were less than 90% completed for varicella cases reported during the month of January. Only 4% of confirmed and probable varicella cases had completed symptom profiles; characterization of the rash was the indicator that was most frequently omitted. Less than 90% of pertussis cases had completed symptom profiles; the indicator that was most frequently omitted was total duration of cough. Indicators for mortality and vaccination status were less than 90% completed for *Streptococcus pneumoniae*. Less than 90% of pertussis, *Streptococcus pneumoniae*, and varicella case investigations were completed within 14 days. Less than 90% of pertussis and *Streptococcus pneumoniae* cases were accepted within 3 days of report to the local health departments.

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 Anne Straily at (785) 296-5588 or astraily@kdheks.gov.

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

Indicators	<i>Haemophilus influenzae</i> , invasive	Pertussis	<i>Streptococcus pneumoniae</i> , invasive	Varicella
Number of reported cases	3	83	18	24
% of cases with date of birth	100%	99%	100%	96%
% of cases with gender	100%	100%	100%	100%
% of cases with race	100%	99%	100%	100%
% of cases with ethnicity	100%	99%	94%	100%
% of cases with onset date [‡]	100%	96%	89%	79%
% of cases with hospitalized noted	100%	100%	94%	88%
% of cases with died noted	100%	100%	89%	88%
% of cases with vaccination status*	100%	96%	83% [§]	88%
% of cases with transmission setting [¶]	N/A**	88%	N/A**	83%
% of investigations completed by local health departments within 14 days ^{§§}	100%	41%	83%	79%
% of cases accepted within 3 days of report to LHD ^{¶¶}	100%	89%	89%	92%
Median # of days from report to case acceptance (range) ^{¶¶¶}	1 (0-2)	1 (0-21)	0 (0-13)	0 (0-2)
% of cases with completed symptom profiles	N/A**	78%	N/A**	4%

*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. A table of the previous month's statewide indicators and performance measures will be included in this newsletter each month. In the next several months, a separate breakdown of data completeness will be provided directly to the individual local health departments. 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. For questions about this data, please contact Sheri Tubach at (785) 296-6215 or email at stubach@kdheks.gov.

January 2014		State's Total Number of Cases* = 199	
EpiTrax Indicators			
EpiTrax Field	Number of Cases with Field Completed	Percent Completed	
Address City	199	100	
Address County	199	100	
Address Zip	190	95	
Date of Birth	195	98	
Died	189	95	
Ethnicity†	159	80	
Hospitalized	191	96	
Occupation	104	52	
Onset Date	178	89	
Pregnancy††	93	81	
Race †	167	84	
Sex †	199	100	
Date LHD investigation started	197	99	
Date LHD investigation Completed	192	96	
Performance Measures			
	Number of Cases	Percent of Cases	
Cases accepted by LHDs for case investigation within three days of report to public health	163	82	
Cases that had investigations completed by LHDs within 14 days of report to public health	164	82	

* 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.



Kansas Disease Investigation Guideline Updates

by Mary Ella Vajnar

The following disease investigation guidelines have been updated with the 2015 revisions to the national surveillance case definitions for invasive *Haemophilus influenzae* disease, meningococcal disease, and dengue. They can be accessed at www.kdheks.gov/epi/disease_investigation_guidelines.htm.

Dengue Disease Investigation Guideline
Haemophilus influenzae Investigation Guideline
 Meningococcal Investigation Guideline



Measles Investigation Reminders

Risk factors for measles:

- Fever, often spikes up to 104°F.
- Red, maculopapular rash that may become confluent, typically starts at hairline, then face and spreads down body.
- Cough, coryza (runny nose), or conjunctivitis (watery red eyes).
- Koplik spots.
- History of international travel, contact with international travelers, or domestic travel to locations with measles outbreaks.
- No or unknown MMR vaccine status. (History of MMR vaccine does not exclude a measles diagnosis).
- Contact with a person that had a febrile rash illness.

EpiTrax Hints

by Shannon Sandall

Please remember to conduct a search before entering provider or diagnostic facility information. This will save you time and help to reduce our searching speed in the system.

Instructions on conducting searches may be found on page 15 of the EpiTrax User Manual (http://www.kdheks.gov/epi/download/EpiTrax_User_Guide.pdf). This information is copied below for your convenience.

Clinicians:

This section allows you to enter information regarding the patient's doctor(s). You **must** first search for the clinician using the search field provided.

If the clinician is found by performing a search, you will click on the red "Add" link located next to the doctor's telephone number to add that clinician to the case record.

If you need to add more than one clinician, you may use the red "Add a clinician" link to search for and add more doctor's associated with the case.

Diagnostic Facilities:

Here you may list any facilities that assist with the diagnosis of the disease. These facilities may be hospitals, doctor's offices, schools, correctional facilities, or any other facility where the patient is receiving care. You **must** first search for the diagnostic facility using the search field provided. Search using the first word in the name of the facility.

Note: If the first word could be abbreviated (i.e. St. or Saint) search both ways before creating a new facility.

You will want to follow the same rules for entering the diagnostic facilities address information as you would for the patient address information (see page 12).

If you need to enter more than one diagnostic facility, you may use the red "Add a diagnostic facility" link to insert more fields for reporting purposes.

If you have further questions about searches or any other EpiTrax technical questions, please contact us at 785-296-7127 or epitraxadmin@kdheks.gov.

Disease	Reported Disease Counts - January 2015						Grand Total	3 Year Avg. 2012-2014
	Not Available	Confirmed	Not a Case	Probable	Suspect	Unknown		
	Count	Count	Count	Count	Count	Count	Count	Count
Brucellosis	1	0	1	0	0	0	2	0
Campylobacteriosis	10	11	0	8	3	0	32	41
Carbapenem-resistant Enterobacteriaceae	0	0	0	0	0	4	4	2
Chikungunya Fever	0	0	0	0	1	0	1	0
Cryptosporidiosis	0	1	0	2	0	0	3	5
Diphtheria (<i>Corynebacterium diphtheriae</i>)	1	0	0	0	0	0	1	0
Ebola Active Monitoring	1	0	1	0	0	0	2	0
Ehrlichiosis, <i>Ehrlichia chaffeensis</i> (f. HME)	1	0	0	0	0	0	1	1
Giardiasis	4	4	0	0	0	0	8	13
<i>Haemophilus influenzae</i> , invasive disease	0	3	1	0	0	0	4	6
Hepatitis A	2	0	0	1	0	0	3	41
Hepatitis B virus infection, chronic	16	1	214	13	1	0	245	54
Hepatitis B, acute	0	0	3	3	0	0	6	6
Hepatitis C virus, past or present	105	44	67	1	7	0	224	183
Hepatitis C, acute	2	1	0	0	0	0	3	1
Hepatitis E, acute	0	0	1	0	0	0	1	0
Influenza	0	45	10	4	0	0	59	35
Legionellosis	2	0	2	0	0	0	4	3
Listeriosis	1	0	0	0	0	0	1	1
Lyme Disease (<i>Borrelia burgdorferi</i>)	5	0	4	0	1	0	10	12
Measles (rubeola)	1	0	2	0	1	0	4	7
Meningitis, Bacterial Other	1	0	1	0	0	0	2	4
Methicillin- or oxacillin- resistant <i>Staphylococcus aureus</i> coagulase-positive (MRSA a.k.a. ORSA)	0	0	0	0	0	1	1	0
Mumps	1	0	5	0	0	0	6	4
Norovirus	0	8	1	1	0	0	10	16
Pertussis	56	15	22	7	6	0	106	48
Rabies, animal	10	7	1	0	1	0	19	11
Rubella	0	0	25	0	0	0	25	14
Salmonellosis	4	21	0	0	0	0	25	24
Shiga toxin-producing <i>Escherichia coli</i> (STEC)	2	5	2	0	2	0	11	8
Shigellosis	1	6	0	0	0	0	7	10
Spotted Fever Rickettsiosis (RMSF)	5	0	2	1	0	0	8	6
Streptococcal disease, invasive, Group A	3	7	0	0	0	0	10	4
Streptococcal disease, invasive, Groups C & G	0	1	0	0	0	0	1	0
<i>Streptococcus pneumoniae</i> , invasive disease	5	13	0	0	0	0	18	28
Transmissible Spongiform Enceph (TSE / CJD)	0	0	1	0	0	0	1	2
Tularemia (<i>Francisella tularensis</i>)	1	0	0	0	0	0	1	0
Varicella (Chickenpox)	10	7	44	9	0	0	70	44
West Nile virus non-neuroinvasive disease	0	0	3	0	0	0	3	2
Grand Total	251	200	413	50	23	5	942	635