

Bureau of Epidemiology & Public Health Informatics



EPI UPDATES

October
2017

Inside This Issue:

CRO Investigations	1
VPD Indicators	2
Quality Indicators	3
Disease Targets	4
Changes to Blood Lead Cases	5-6
Outbreaks Report	6

Kansas Department of Health & Environment

Bureau of Epidemiology & Public Health Informatics

Farah Ahmed, MPH, PhD
Environmental Health Officer & Interim Director

Lou Saadi, Ph.D., Deputy
Director & State Registrar

Sheri Tubach, MPH, MS,
Director, IDER

Bonnie Liscek, MPS,
Director, Surveillance Systems
& *Epi Updates* Editor

Daniel Neises, MPH
Senior Epidemiologist

Chelsea Raybern, MPH
Senior Epidemiologist

Ingrid Garrison, MPH, DVM,
DACVPM, State Public
Health Veterinarian

Curtis State Office Building
1000 SW Jackson St.
Topeka, KS 66612

Email: epihotline@kdheks.gov

Epi Hotline: 877-427-7317

Fax: 1-877-427-7318

Carbapenem-Resistant Organism Investigations

by Justin Blanding, MPH

Carbapenem-resistant organisms (CRO), also referred to as CRE (carbapenem-resistant Enterobacteriaceae), are bacteria that have developed resistance to all or almost all antibiotics. These bacteria can be found in normal human intestinal flora and can sometimes spread outside the gut causing serious infections, such as bacteremia, bacteriuria, wound infections, and pneumonia. It is important to note that CRO kill up to half of patients who get bloodstream infections from them. CRO utilize various resistance mechanisms (e.g., extended-spectrum β -lactamase (ESBL), porin mutations). One mechanism in particular, carbapenemase, is believed to be associated with the increase of CRO in the United States. Carbapenemase is an enzyme produced by the bacteria that directly breaks down carbapenem antibiotics. CP-CRO (carbapenemase producing, CRO/CRE) are not only difficult to treat but have the ability to spread the resistance mechanism to other bacteria. Therefore, the Council of State and Territorial Epidemiologists (CSTE) have added CP-CRO to the list of nationally notifiable diseases starting in January 2018. In preparation for this, the Kansas Department of Health and Environment (KDHE) is updating state regulations to make CRO reportable in Kansas.

Healthcare exposures are the main risk factor for CRO infection; therefore, the Healthcare-Associated Infections and Antimicrobial Resistance (HAI/AR) Program at KDHE will conduct CRO disease investigations in Kansas. Our state public health laboratory, the Kansas Health and Environmental Laboratories (KHEL), already works closely with the Centers for Disease Control and Prevention (CDC) Antimicrobial Resistance Laboratory Network (ARLN) to test specimens for the identification of carbapenemase. Once KHEL receives an isolate, it is forwarded to CDC's Regional ARLN in Minnesota for identification of CP-CRO. In the upcoming months, KHEL will be able to perform necessary laboratory testing to identify CP-CRO.

Despite investigations being performed by HAI/AR at KDHE, local health departments are able to view any CRO cases that reside in their jurisdiction in EpiTrax. Please report any suspect CRO cases to KDHE, so that an investigation can be initiated. If you have any questions or need to report suspect CRO, contact the HAI/AR Program's Antimicrobial Resistance Epidemiologist (Justin Blanding) at Justin.Blanding@ks.gov or the KDHE Epidemiology Hotline at 877-427-7317.

Vaccine-Preventable Disease Surveillance Indicators

by Allison Zaldivar, MPH

Over the last few months the completeness and quality of surveillance indicators for vaccine-preventable diseases (VPDs) have consistently neared and surpassed the goal of 90% completion on all indicators. For that reason, it has been decided that disseminating the completion of each indicator monthly is no longer necessary. Moving forward, completeness of VPD indicators will be monitored and published on a quarterly basis.

Please see the indicators for each disease reported from July 1 to September 30, 2017 in the chart below. As always, the bolded percentages represent the indicators that have less than 90% completion and the data presented in the chart is preliminary and subject to change.

Keep up the good work! For questions, please contact Allison Zaldivar at (785) 368-8208 or Allison.Zaldivar@ks.gov.

VPD Indicators Reported during Quarter 3 (July 1 to September 30, 2017) in Kansas

Indicators	<i>Haemophilus influenzae</i> , invasive	Measles	Pertussis	<i>Streptococcus pneumoniae</i> , invasive	Varicella
Number of reported cases	8	1	52	29	23
% of cases with date of birth	100%	100%	98%	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%	97%	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*	88%	100%	100%	100%§	100%
% of cases with transmission setting¶	N/A**	100%	100%	N/A**	100%
% of cases with completed symptom profiles	N/A**	88%	100%	N/A**	91%

*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.



EpiTrax Data Quality Indicators

by Sheri Tubach, MPH, MS

BEPHI 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. 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. County level indicators are now emailed to each local health department monthly. The indicators, hospitalized, occupation, and onset date remain below 80%. Notably 26% of cases have not had an interview attempted. The goal is to have a majority of indicators and performance measures at or above 90%. For questions, contact Sheri Tubach at sheri.tubach@ks.gov.

September 2017		State's Total Number of Cases* = 300	
EpiTrax Indicators			
EpiTrax Field	Number of Cases with Field Completed	Percent Completed	
Address City	294	98	
Address County	300	100	
Address Zip	293	98	
Date of Birth	298	99	
Died	269	90	
Ethnicity†	248	83	
Hospitalized	260	87	
Occupation	224	75	
Onset Date	228	76	
Pregnancy††	104	79	
Race †	258	86	
Sex †	300	100	
Date LHD Investigation Started	214	71	
Date LHD Investigation Completed	187	62	
Persons Interviewed	200	68	
Persons Lost to Follow-Up	11	4	
Persons Refused Interview	4	1	
Persons Not Interviewed	77	26	
	Number of Cases	Percent of Cases	
Disease control measures began within the target for each disease [^]	201	67	
Case investigations were completed within the target for each disease [^]	127	42	

* Calculations do not include Hepatitis B - chronic, Hepatitis C – chronic, 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.

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 <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, chronic; 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

***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) OR (Date Reported to KDHE)**

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

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.



Changes Made to Blood Lead Records in EpiTrax

by Shannon Sandall

Beginning October 16, 2017, Blood Lead records in EpiTrax will no longer be using Encounters. Patient address history, clinician information, and facility information is now displayed on the Laboratory tab.

Before: Patient address and clinician/facility information were displayed inside Encounters.

EDIT ENCOUNTER EVENT Save & Continue Save & Exit

Encounter event was successfully updated.

Encounter 2015-10-27 Parent Patient: [REDACTED] Blood lead poisoning

Show

[Disable Tabs] Encounter Clinical Lab Investigation Notes

Clinical Information Hide

Disease:
Blood lead poisoning

Treatments

Treatment given	Treatment	Date of treatment	Date treatment stopped	Remove
Yes	Chelation	October 20, 2015	October 26, 2015	<input type="checkbox"/>

Add a Treatment

Ordering Provider [Hide]

Ordering Provider
Linda King, MD

Ordering Provider Phone
913-555-5555 10 digits with optional delimiters. E.g. 9999999999 or 999-999-9999

Ordering Facility
King Hospital

Ordering Facility Phone
913-444-4444 10 digits with optional delimiters. E.g. 9999999999 or 999-999-9999

EDIT ENCOUNTER EVENT Save & Continue Save & Exit

Encounter 2015-10-27 Parent Patient: [REDACTED] Blood lead poisoning

Show

[Disable Tabs] Encounter Clinical Lab Investigation Notes

Encounter Information Hide

Encounter

Investigator: LINDA KING
Encounter date: October 27, 2015
Location: Clinic

Description
Add a treatment

Address [Hide]

Address ID: [REDACTED]
Street number: 1234
Street name: Anywhere Street
Unit number: Apt 3

City: Overland Park
State: Kansas
County: Johnson
Zip code: 66213

Type of address: Primary

Date residence first occupied: [REDACTED]
Date residence last occupied: [REDACTED]

continued from page 5

After: Patient address information and clinician information can now be found on the Laboratory tab. Encounters are no longer used for Blood Lead records.

Lab

Accession number Test type Organism Test result Result value Units

Reference range Test status Specimen source Collection date Lab test date Specimen sent to state lab?

Comment

[Add a new lab result to this lab](#)

Address [Hide]

Address ID Street number Street name Unit number

City State County Zip code

Anywhere USA Kansas 00000

Type of address

Date residence first occupied Date residence last occupied

10/17/2017

Ordering Provider [Hide]

Ordering Provider

Dr. Smith

Ordering Provider Phone

999-999-9999 10 digits with optional delimiters. E.g. 9999999999 or 999-999-9999

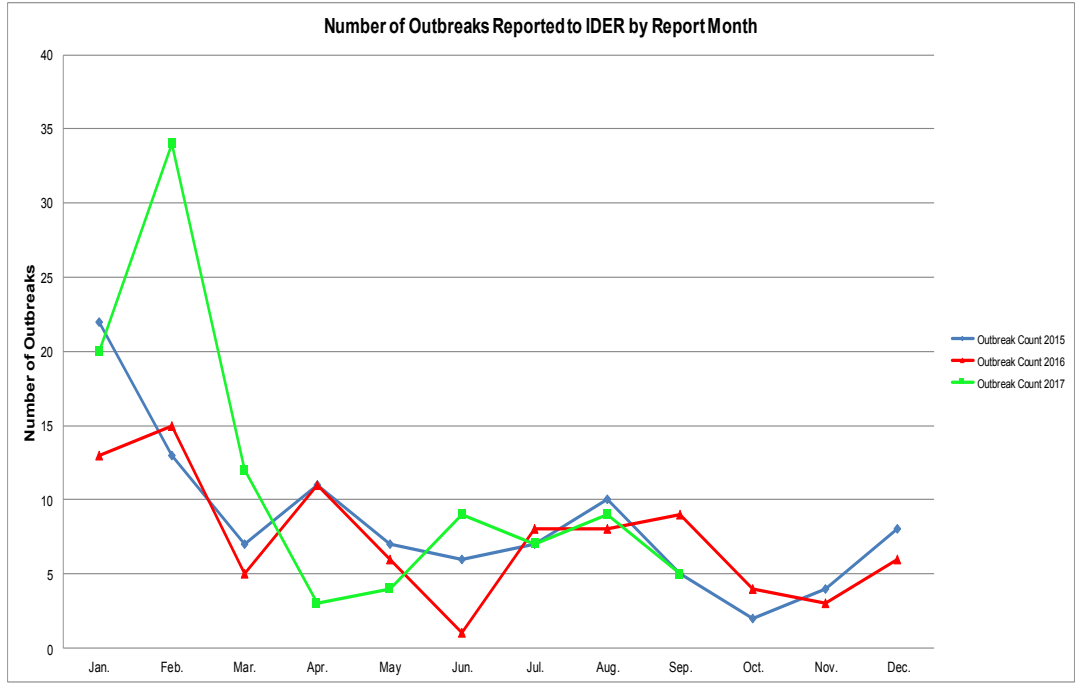
Ordering Facility

Hospital USA

Ordering Facility Phone

999-999-9999 10 digits with optional delimiters. E.g. 9999999999 or 999-999-9999

Outbreaks Report



Date Reported	Facility Type	Transmission	Disease	County
9/1/2017	Caterer	Food	Unknown Etiology	Johnson
9/14/2017	Adult care facility	Person-to-Person	Norovirus	Harvey
9/20/2017	Child care center	Indeterminate / Other / Unknown	Campylobacteriosis	Saline
9/26/2017	School or college	Person-to-Person	Shigellosis	Wyandotte
9/27/2017	Other	Indeterminate / Other / Unknown	Shiga toxin-producing Escherichia coli (STEC)	Wilson