



EPI UPDATES

March
2013

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An Outbreak of Shiga-Toxin *Escherichia coli* O26 in a Day Care among Diapered Children, October 2012

by Sheri Tubach, MPH, MS

Outbreaks of enteric illnesses occur in child care facilities (centers, preschools, school age programs, day care homes, group day care homes, and 24 hour residential and group boarding homes) frequently, especially in facilities that care for diapered children. Lack of fecal continence, poor hand washing, and frequent hand to mouth contact among these young children can facilitate the spread of disease. In October 2012, the Missouri Department of Health and Senior Services (MDHSS) notified the Kansas Department of Health and Environment (KDHE) that they had received Shiga-toxin *Escherichia coli* (STEC) specimens from four children residing in the same county in Kansas. Upon further testing, all four specimens matched by serotype and by subtype. The local health department was notified and began an outbreak investigation, in conjunction with KDHE, to determine common exposures and to implement prevention and control measures.

Four individuals diagnosed with STEC were identified. The ages in the case-patients ranged from eight to thirty months (median: 22 months). Two were male and two were female. Diarrhea was reported among all four case-patients; none were reported as having bloody diarrhea. All four children were seen by a health care provider; none were hospitalized. All four children attended the same day care. The onset of illness ranged from October 4, 2012 to October 8, 2012. Transmission was limited to the four children, who were

not yet toilet-trained. No documented transmission occurred among the other children and staff at the day care or any family members.

The MDHSS serotyped the STEC to be O26 (non-O157), and all were indistinguishable by subtype.

According to KDHE regulations, no infected child shall attend a child-care facility or a family day care home until two negative stool cultures are obtained at least 24 hours apart and no sooner than 48 hours following discontinuation of antibiotics. Therefore, all four children were excluded from day care until two stool cultures tested negative.

This was an outbreak of STEC that was limited to children not yet toilet-trained. The exclusion of the children who had tested positive, thorough environmental cleaning, and compliance with strict hand washing guidelines limited the spread of this outbreak. KDHE recommends that child-care providers have policies that are clearly written for excluding sick children from the child-care setting. These policies should be given to parents when the child is enrolled to prevent problems later when the child is ill. In addition, outbreaks of any disease in day cares are reportable to KDHE. For additional information in controlling enteric outbreaks in day care settings, please refer to the following guidance document: http://www.kdheks.gov/epi/download/Enteric_Disease_in_Daycare_Centers.pdf

CALENDAR OF UPCOMING EVENTS:

8th Annual Governor's Public Health Conference

When: Mon. Apr. 29—Wed. May 1

Where: DoubleTree by Hilton Hotel Wichita Airport, Wichita, Kansas

Register: <http://webs.wichita.edu/?u=conferences&p=publichealth/>

How to Conduct Investigations Associated with Correctional Facilities

by Daniel Neises, MPH

Background

Upon receiving notification of a new disease case report in EpiTrax, the electronic disease surveillance system, Local Health Department (LHD) staff begin an investigation, as directed by KDHE’s Disease Investigation Guidelines. The investigation may entail contacting the submitting laboratory, the reporting physician, and the case patient to obtain clinical and epidemiological information.

If the case patient resides in a correctional facility, it may be unclear what agency is responsible for the public health investigation.

Tuberculosis, Sexually Transmitted Disease, and HIV/AIDS Investigations

For guidance on correctional facility investigations for these diseases, contact KDHE’s Bureau of Disease Control and Prevention:

- TB: (785) 296-2547
- STD: (785) 296-5596
- HIV/AIDS: (785) 296-6174

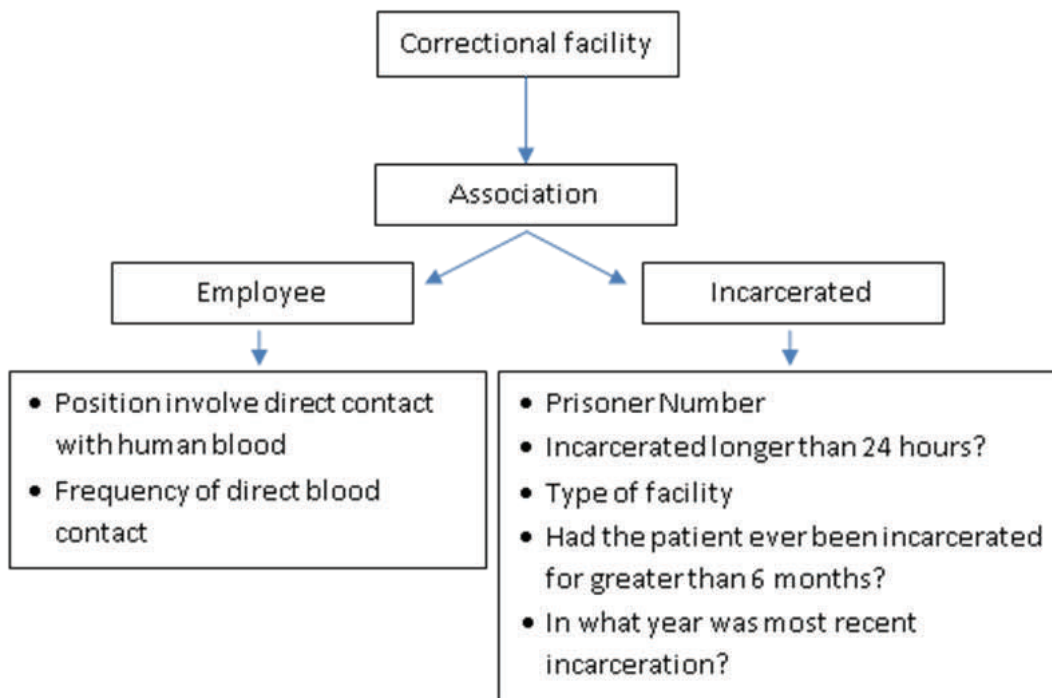
Other Reportable Diseases

For case patients residing in city, county, and state correctional facilities:

- The LHD should work with a correctional facility official (such as an infection control nurse, if the facility is large enough to employ one) to collect the information required for that disease.
- If the LHD has difficulty working with the correctional facility, the LHD should contact Viola Riggins or Paul Engler at the Kansas Department of Corrections (785-296-0045) for guidance.
- Disease-specific forms to aid in data collection can be found alongside the Disease Investigation Guidelines at http://www.kdheks.gov/epi/disease_investigation_guidelines.htm, in the “Report Forms” column.
- EpiTrax fields specific to correctional facilities should be completed. These are found under the “Epidemiological” tab (Figure 1).

If the case patient resides in a federal correctional facility (e.g., USP Leavenworth), an investigation by the LHD is not required. The federal facilities handle all investigations internally.

Figure 1. EpiTrax Fields Specific to Correctional Facilities.



Vaccine-Preventable Disease Surveillance Indicators

Chelsea Raybern, 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 February 1 to February 28, 2013 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! Date of birth, gender, race, ethnicity, hospitalization, and death were completed for at least 90% of all VPDs reported from February 1 to February 28, 2013. All surveillance indicators were completed for the four *Haemophilus influenzae* cases, and all surveillance indicators were completed for at least 96% of varicella cases except for transmission setting. Local health departments completed investigations for 95% of all reported pertussis cases and 96% of all reported varicella cases. The median number of days for local health departments to accept *Haemophilus influenzae* and *Streptococcus pneumoniae* cases were 0 and 2, respectively. When compared to last month's surveillance data, completeness of indicators has improved for many of the diseases. The percentages and numbers highlighted in red represent improvement.

Still room for improvement...Completeness of vaccination status was much lower than 90% for pertussis and *Streptococcus pneumoniae* cases reported in February. Transmission setting for pertussis and varicella cases was only completed for 40% and 33% of reported cases, respectively. Even though the median number of days for local health departments to accept *Streptococcus pneumoniae* cases was two, the range was 0 to 15 days. The median number of days for acceptance of pertussis and varicella cases was 16 with a range of 0 to 22 days and seven days with a range of 0 to 14 days, respectively.

Please focus on completing these fields in EpiTrax for all VPDs as the goal is to reach 90% or higher completion on all indicators. For the one timeliness indicator (report to case acceptance) the data shows delayed case acceptance, so please work towards accepting cases and starting the investigation the same day the local health department receives notification.

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

VPD Indicators Reported from February 1 to February 28, 2013 in Kansas.

Indicators	<i>Haemophilus influenzae, invasive</i>	Pertussis	<i>Streptococcus pneumoniae, invasive</i>	Varicella
Number of reported cases	4	20	21	24
% of cases with date of birth	100%	100%	100%	100%
% of cases with gender	100%	100%	100%	100%
% of cases with race	100%	90%	100%	100%
% of cases with ethnicity	100%	90%	90%	96%
% of cases with onset date	100%	90%	81%	96%
% of cases with hospitalized noted	100%	90%	100%	100%
% of cases with died noted	100%	90%	100%	100%
% of cases with vaccination status	100%	30%	38%*	100%
% of cases with transmission setting	N/A [§]	40%	N/A [§]	33%
% of investigations completed by local health departments [†]	100%	95%	86%	96%
Median # of days from report to case acceptance (range) [‡]	0 (0)	16 (0-22)	2 (0-15)	7 (0-14)

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

§ Indicator field not included in supplemental disease form

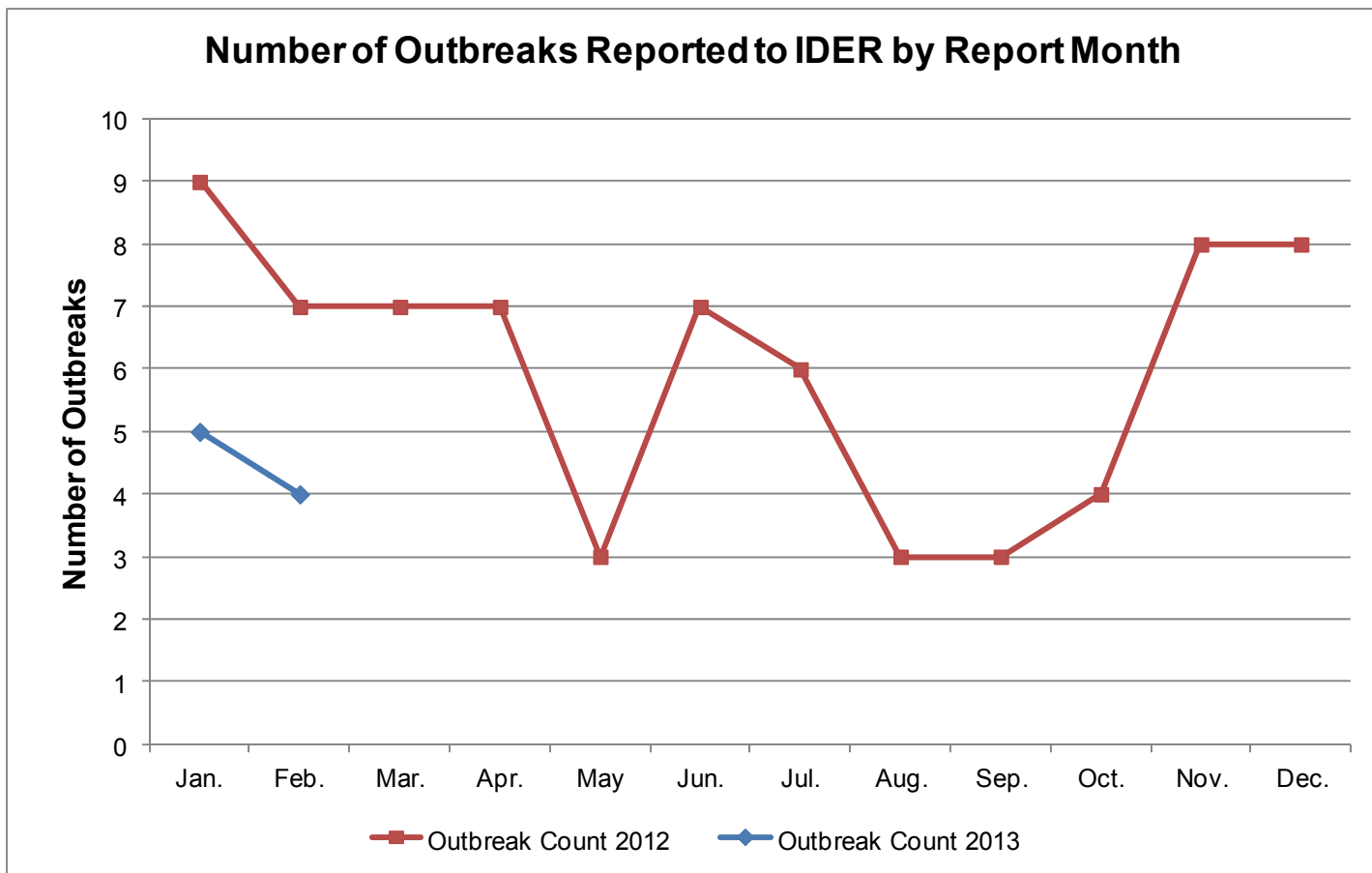
† Status includes when local health department completes investigation, approves the case, or when the case is closed by state

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

Disease	Month Reported to EpiTrax - February 2013						
	State Case Status					Grand Total	Average
	Not Available	Confirmed	Not a Case	Probable	Suspect		
Count	Count	Count	Count	Count	Count	Count	
Babesiosis	0	0	0	0	1	1	0
Campylobacteriosis	7	0	14	1	13	35	27
Cryptosporidiosis	2	1	0	0	2	5	8
Ehrlichiosis, <i>Ehrlichia chaffeensis</i> (f. HME)	1	0	0	0	0	1	1
Giardiasis	5	0	0	0	4	9	12
HUS - Hemolytic Uremic Syndrome postdiarrheal	0	0	0	0	1	1	0
<i>Haemophilus influenzae</i> , invasive disease (Including Hib)	3	0	0	0	1	4	1
Hepatitis A	0	0	0	23	0	23	37
Hepatitis B pregnancy event	0	0	0	0	4	4	2
Hepatitis B virus infection, chronic	0	16	0	19	3	38	33
Hepatitis B, acute	0	2	0	2	0	4	9
Hepatitis C virus, past or present	93	1	8	19	73	194	136
Hepatitis, viral other	0	0	0	0	1	1	0
Influenza	2	0	0	0	0	2	0
Lyme Disease (<i>Borrelia burgdorferi</i>)	0	0	0	10	12	22	10
Malaria (<i>Plasmodium spp.</i>)	1	0	0	0	1	2	2
Measles (Rubeola)	0	0	0	2	2	4	2
Meningitis, Bacterial Other	1	0	0	0	0	1	2
Mumps	0	0	0	1	3	4	5
Norovirus	3	0	1	1	1	6	24
Outbreak Case - Unknown Etiology	2	0	0	0	5	7	17
Pediculosis (lice)	0	0	0	0	1	1	0
Pertussis	10	4	2	5	6	27 *	58
Q Fever (<i>Coxiella burnetii</i>), acute	0	0	0	0	1	1	1
Rabies, animal	2	0	0	3	3	8	4
Salmonellosis	18	0	0	0	4	22	18
Shiga toxin-producing <i>Escherichia coli</i> (STEC)	2	0	2	0	2	6	3
Shigellosis	3	0	0	0	1	4	12
Spotted Fever Rickettsiosis (RMSF)	0	0	0	0	3	3	3
Streptococcal disease, invasive, Group A	2	0	0	0	1	3	6
<i>Streptococcus pneumoniae</i> , invasive disease	20	0	0	0	1	21	14
Varicella (Chickenpox)	3	16	0	15	4	38	46
West Nile virus non-neuroinvasive disease	0	0	0	1	2	3	2
Grand Total	180	40	27	102	156	505	505

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

MONTHLY OUTBREAK SUMMARIES



Facility Type	Organism	Transmission	County	Reported Date
Long-term Care Facility	Norovirus	Person-to-Person	Johnson	02/07/2013
School	Varicella (Chickenpox)	Person-to-Person	Labette	02/11/2013
Restaurant	Outbreak Case - Unknown Etiology	Food	Shawnee	02/15/2013
Restaurant	Outbreak Case - Unknown Etiology	Food	Johnson	02/18/2013