



EPI UPDATES

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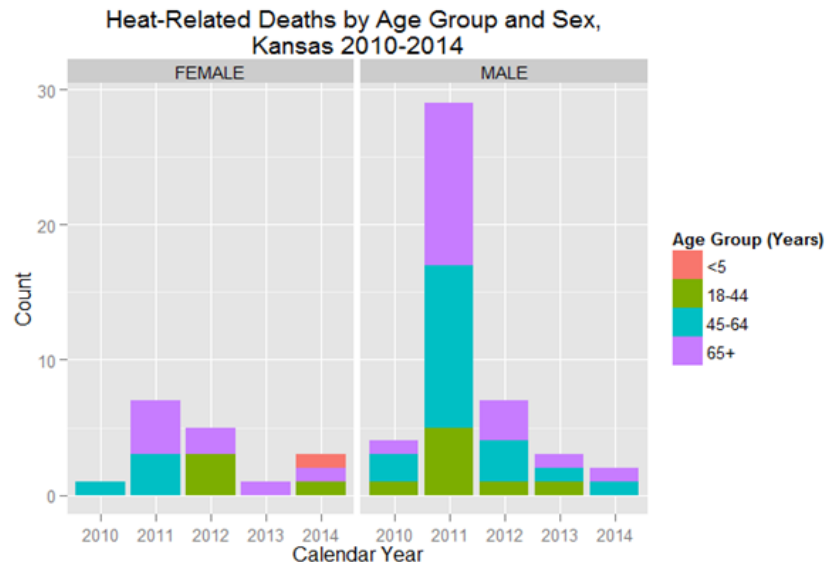
Extreme Heat-Related Mortality

by Henri Ménager, MPH

Exposure to natural extreme heat can cause serious illness, injuries, and death especially among vulnerable populations. During the past five years, several Kansas residents died as a result of exposure to extreme heat. Although under-reported, deaths due to exposure to extreme heat are on average higher than those caused by tornados, snow storms, floods, and other extreme weather events combined. The same observation can be made at the national level¹. Despite the severity of the health outcomes, they are relatively easy to prevent. Following an initiative of the Kansas Environmental Public Health Tracking Program, several internal and external partners have created the *Extreme Weather Events Work Group* with the goal of increasing collaboration, information, and resource sharing among partners in preventing extreme weather-related illness, injuries, and death. As the weather is warming up in Kansas, this article is intended to be a reminder of the dangers associated with summer temperatures while providing an update of the death statistics for the 2010-2014 seasons.

From 2010 to 2014, an average of 12.4 Kansas residents died following accidental exposure to natural heat per year. The risk factors include: advanced age, co-morbidities, low socio economic level, social isolation, and alcohol and substance abuse². As indicated in the chart below, the number of deaths vary from year to year. In addition, men and the elderly were more likely than others to die of heat illness.

Since it is difficult to predict the weather patterns over a long period of time, it is strongly recommended that public health officials and key partners make sufficient preparations ahead of the summer months in order to mitigate the effects of heat waves on the population. To assist local communities in their planning efforts, the *Extreme Weather Events Work Group* published an Extreme Heat Toolkit. The toolkit can be downloaded at: <http://keap.kdhe.state.ks.us/EPHT/portal/PPortal/ContentData.aspx>. Additional resources are available at: <http://www.bt.cdc.gov/disasters/extremeheat/> and <http://ephtracking.cdc.gov/showClimateChangeExtremeHeat.action>.



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In order to assess the prevalence of heat response plans in Kansas communities, the Extreme Weather Events Work Group will conduct a survey of all Kansas counties within the next few weeks. This short survey will not only establish a baseline for future evaluations but will also assess the level of awareness about the Extreme Heat Toolkit. The local health departments are strongly encouraged to participate in the survey.

Note: For this summary report, deaths from excessive heat exposure were defined using codes from the International Classification of Diseases, 10th Revision. Such deaths included those in which exposure to excessive natural heat (X30) was reported as either the underlying or a contributing cause of death. Deaths from exposure to excessive heat of man-made origin (W92) were excluded.

References:

1. Extreme Heat Prevention Guide. Centers For Disease Control and Prevention. Accessed on 3/10/2015 at: http://emergency.cdc.gov/disasters/extremeheat/heat_guide.asp
2. Luber GE, Sanchez CA, Conklin LM. *Heat-Related Deaths--United States, 1999-2003*. MMWR July 28, 2006 / 55 (29);796-798.

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 3/7/15

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:

$$\frac{(\text{Lab Test Date or Date Diagnosed – Presumptive}) - (\text{Date Reported to Public Health})}{\leq \text{KDHE-required disease reporting timeframe}}$$

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

$$\frac{(\text{Date LHD Investigation Started}) - (\text{Date Reported to Public Health})}{\leq \text{CDC-required timeframe}}$$

Disease Reporting

Disease	KDHE Required Timeframe	Statewide Received	Statewide Received On Time	%	% Change From Previous Month
Hepatitis A	7 days	6	3	100	-
Salmonellosis	7 days	306	301	98	-
<i>E. coli</i> , STEC	7 days	44	44	100	-
Shigellosis	7 days	33	32	97	-
Tularemia	7 days	12	12	100	-
Varicella	7 days	189	172	91	-
Botulism	4 hours*	-	-	-	-
Measles	4 hours*	10	9	90	-
Meningococcal disease	4 hours*	-	-	-	-
Pertussis	4 hours*	165	146	88	-

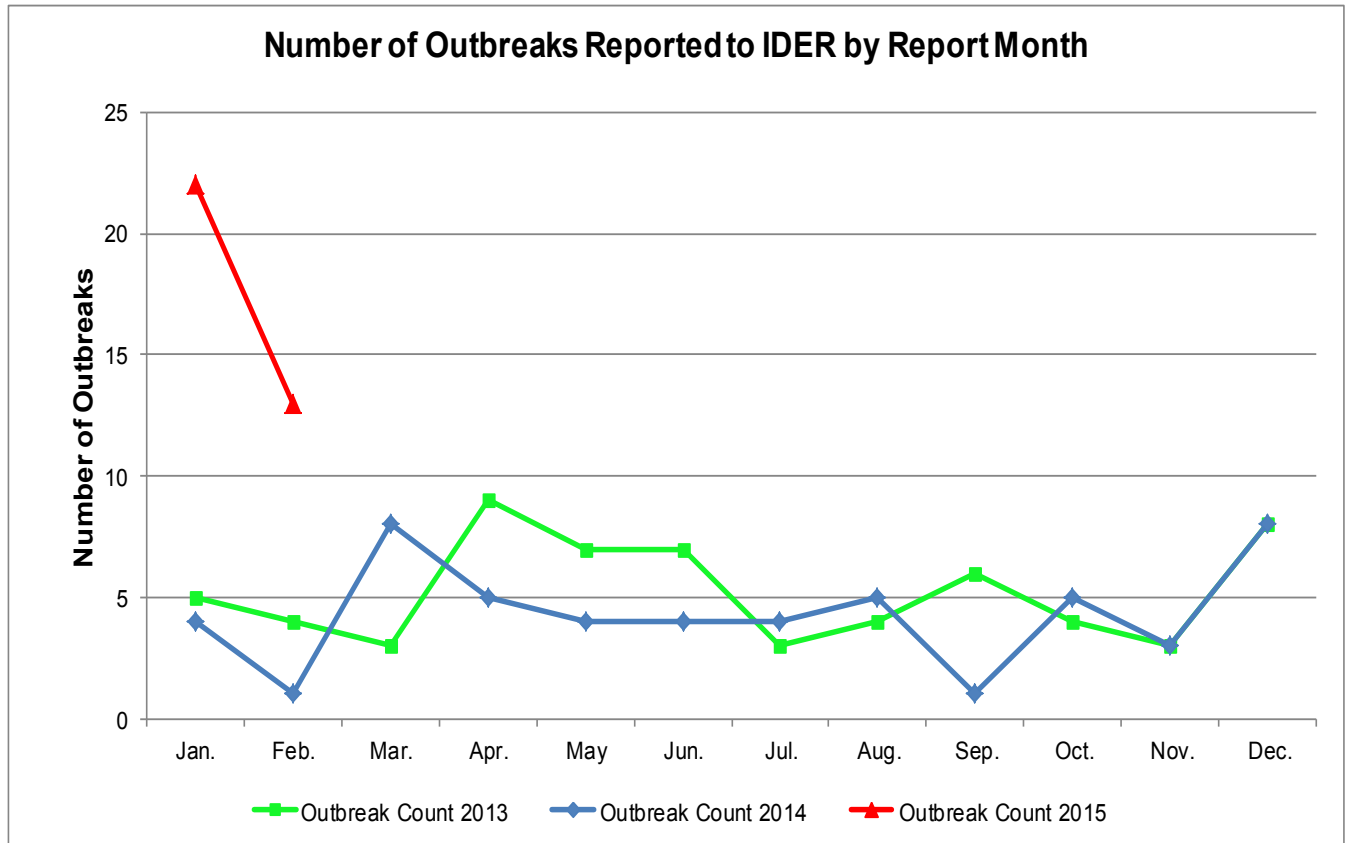
*Because EpiTrax does not capture time reported to public health, KDHE is allowed to "consider cases as immediately reported if the selected case event date and date of first report to a health department occur on the same date."

Disease Control

Disease	CDC Required Timeframe	Statewide Received	Statewide Investigated On Time	%	% Change From Previous Month
Hepatitis A	7 days	6	6	100	-
Salmonellosis	3 days	306	245	80	-1
<i>E. coli</i> , STEC	3 days	44	35	80	-2
Shigellosis	3 days*	33	24	73	-3
Tularemia	2 days	12	9	75	-
Varicella	1 day*	189	167	88	+2
Botulism	1 day	-	-	-	-
Measles	1 day	10	10	100	-
Meningococcal disease	1 day	-	-	-	-
Pertussis	1 day*	165	130	79	+2

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

Monthly Outbreak Summaries



Date Reported	Facility Type	Transmission	Disease	County
2/2/2015	Adult care facility	Person-to-Person	Influenza	Sedgwick
2/3/2015	Prison or jail	Person-to-Person	Influenza	Shawnee
2/4/2015	Adult care facility	Person-to-Person	Influenza	Greenwood
2/5/2015	Hospital	Food	Listeriosis	Sedgwick
2/6/2015	Adult care facility	Person-to-Person	Norovirus	Johnson
2/11/2015	Restaurant - Sit-down dining	Indeterminate / Other / Unknown	Norovirus	Sedgwick
2/17/2015	Out of Country	Indeterminate / Other / Unknown	Giardiasis	Multiple Counties
2/17/2015	Restaurant - Other	Food	Unknown Etiology	Ellis
2/18/2015	Adult care facility	Person-to-Person	Influenza	Leavenworth
2/23/2015	Adult care facility	Person-to-Person	Influenza	Graham
2/24/2015	Restaurant - Sit-down dining	Food	Norovirus	Saline
2/24/2015	Restaurant - Sit down dining	Food	Norovirus	Lyon
2/27/2015	Restaurant - Sit-down dining	Indeterminate / Other / Unknown	Unknown Etiology	Wyandotte

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 February 1 to February 28, 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 surveillance indicators except for time to completion, time to acceptance, and symptom profile were greater than 90% complete for all pertussis cases reported! All surveillance indicators except for onset date and mortality were 100% completed for *Haemophilus influenzae* cases, and all cases were accepted and completed within their respective time limits. All indicators for *Streptococcus pneumoniae* cases were greater than 90% complete with the exception of onset date. The indicators for date of birth, gender, race, and ethnicity were 100% complete for all reported varicella cases.

Still room for improvement... The indicators for onset date, mortality, vaccination status and transmission setting were less than 90% complete for varicella. Only 68.2% of varicella case investigations were completed within the 14 day time limit, and only 86.4% were accepted within the three day time limit. A mere 40.9% of varicella cases had a completed symptom profile. Of 53 reported pertussis cases, only 67.9% were completed within the 14 day time limit, and only 83% were accepted within the three day time limit. Symptom profile completion rates were 77.4% for pertussis, well below the 90% goal. Only 81.3% of *Streptococcus pneumoniae* cases were completed within the 14 day time limit, and less than 70% were accepted within the three day time limit.

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 February 1 to February 28, 2015 in Kansas

Indicators	<i>Haemophilus influenzae</i> , invasive	Pertussis	<i>Streptococcus pneumoniae</i> , invasive	Varicella
Number of reported cases	4	53	16	22
% of cases with date of birth	100%	100%	100%	100%
% of cases with gender	100%	100%	100%	100%
% of cases with race	100%	100%	100%	100%
% of cases with ethnicity	100%	100%	100%	100%
% of cases with onset date [‡]	75.0%	94.3%	81.0%	86.4%
% of cases with hospitalized noted	100%	96.2%	100%	86.4%
% of cases with died noted	75.0%	96.2%	94.0%	86.4%
% of cases with vaccination status*	100%	94.3%	93.8% [§]	86.4%
% of cases with transmission setting [¶]	N/A**	90.6%	N/A**	72.7%
% of investigations completed by local health departments within 14 days ^{§§}	100%	67.9%	81.3%	68.2%
% of cases accepted within 3 days of report to LHD ^{¶¶}	100%	83.0%	68.8%	86.4%
Median # of days from report to case acceptance (range) ^{¶¶}	0.5 (0-1)	0 (0-26)	1 (0-30)	0 (0-5)
% of cases with completed symptom profiles	N/A**	77.4%	N/A**	40.9%

*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.

February 2014		State's Total Number of Cases* = 175	
EpiTrax Indicators			
EpiTrax Field	Number of Cases with Field Completed	Percent Completed	
Address City	174	99	
Address County	175	100	
Address Zip	174	99	
Date of Birth	175	100	
Died	163	93	
Ethnicity†	158	90	
Hospitalized	166	95	
Occupation	114	65	
Onset Date	151	86	
Pregnancy††	72	77	
Race †	162	93	
Sex †	175	100	
Date LHD investigation started	170	97	
Date LHD investigation Completed	161	92	
Performance Measures			
	Number of Cases	Percent of Cases	
Cases accepted by LHDs for case investigation within three days of report to public health	148	85	
Cases that had investigations completed by LHDs within 14 days of report to public health	138	79	

* 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.



Disease	Reported Disease Counts - February 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
Amebiasis (<i>Entamoeba histolytica</i>)	1	0	0	0	0	0	1	1
Anaplasma phagocytophilum (f. HGE)	0	0	1	0	0	0	1	0
Campylobacteriosis	27	7	0	6	0	0	40	31
Carbapenem-resistant Enterobacteriaceae	0	0	0	0	0	3	3	2
Cryptosporidiosis	0	1	0	1	0	0	2	5
Dengue	0	0	1	0	0	0	1	0
Ebola Active Monitoring	7	0	0	0	0	0	7	0
Ehrlichiosis, <i>Ehrlichia chaffeensis</i> (f. HME)	1	0	0	0	0	0	1	1
Giardiasis	5	3	0	0	1	0	9	8
<i>Haemophilus influenzae</i> , invasive disease	0	4	0	0	0	0	4	3
Hepatitis A	3	0	0	5	0	0	8	26
Hepatitis B virus infection, chronic	14	1	210	10	0	0	235	60
Hepatitis B, acute	0	0	1	1	0	0	2	5
Hepatitis C virus, past or present	100	51	79	1	0	0	231	179
Hepatitis C, acute	1	0	0	0	0	0	1	2
Hepatitis E, acute	1	0	0	0	0	0	1	0
Influenza	1	7	9	0	0	0	17	8
Lyme Disease (<i>Borrelia burgdorferi</i>)	7	0	7	0	0	0	14	11
Measles (rubeola)	1	0	9	0	0	0	10	3
Meningitis, Bacterial Other	2	0	0	0	0	0	2	2
Meningococcal disease (<i>Neisseria meningitidis</i>)	1	0	0	0	0	0	1	0
Mumps	0	0	2	0	1	0	3	4
Norovirus	0	3	0	0	0	0	3	19
Outbreak Case - Unknown Etiology	0	3	0	0	0	0	3	4
Pertussis	26	10	48	17	5	0	106	47
Rabies, animal	2	3	2	0	2	0	9	8
Rubella	0	0	18	0	0	0	18	43
Salmonellosis	1	23	0	0	1	0	25	19
Shiga toxin-producing <i>Escherichia coli</i> (STEC)	2	2	3	0	0	0	7	8
Shigellosis	1	1	0	0	0	0	2	7
Spotted Fever Rickettsiosis (RMSF)	4	0	1	0	0	0	5	4
Streptococcal disease, invasive, Group A	0	10	1	0	0	0	11	6
<i>Streptococcus pneumoniae</i> , invasive disease	4	12	0	0	0	0	16	17
Toxic-shock syndrome (streptococcal)	1	0	0	0	0	0	1	1
Transmissible Spongiform Enceph (TSE / CJD)	2	0	0	0	0	0	2	1
Varicella (Chickenpox)	10	1	17	11	0	0	39	45
West Nile virus non-neuroinvasive disease	0	0	1	0	0	0	1	1
Grand Total	225	142	411	52	10	3	842	581