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EPI UPDATES

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Kansas Department of Health and Environment

Bureau of Epidemiology and Public Health Informatics

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Demographic Characteristics of Hypothermia-Related Decedents during the 2011-2012 Cold Season in Kansas

by Henri Ménager, MPH

Objectives: In the United States, the annual incidence rate of hypothermia-related deaths is low (4/1,000,000 population)(1). Hypothermia causes approximately 600 deaths a year (2) and affects particularly the elderly, the very young, the homeless, and people with altered mental state (1). However, death due to exposure to excessive natural cold (ICD-10=X31) is preventable (1, 3, 4). Hypothermia is defined as a core body temperature less than or equal to 95° F. Symptoms include lethargy, weakness, loss of coordination, confusion, uncontrollable shivering, and reduced respiratory and heart rate(4).

In Kansas, from 2005 to 2010, there were 33 resident deaths as reported on death certificates due to exposure to natural cold, an average of 5.5 deaths per year. In 2011, there were an additional 7 deaths due to exposure to cold. The purpose of this report is to describe the demographic characteristics of those decedents.

Methods: For the purpose of this analysis, copies of death certificates submitted to the Office of Vital Statistics (OVS) at the Kansas Department of Health and Environment (KDHE) were reviewed. Criteria for selection included all deaths that that occurred between October 1, 2011 and April 30, 2012 where exposure to natural cold (ICD-10 Code= X31) was listed as the immediate or underlying cause of death.

Results: From October 1, 2011 to April 30, 2012, there were seven resident deaths in Kansas due to hypothermia following exposure to natural cold. Two of the decedents were female and five were male. The mean age at death was 55 years for women and 66 years for men. The youngest decedent was 28

(Continued on page 2)

CALENDAR OF UPCOMING EVENTS:

EpiTrax Webinar Series

When: Aug. 9, 2012

Where: GoToMeeting Webinar. Sign up for the 9am—10:30 session: https://www1.gotomeeting.com/register/896065672 or the 12pm—1:30pm Session: https://www1.gotomeeting.com/register/332327208.

For more information please contact Susan Dickman at (785) 296-7732 or sdickman@kdheks.gov.

World Rabies Day Webinar

When: Sept. 20-21, 2012

Where: For more information, see page 5 and go to http://www.worldrabiesday.org/

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KPHA Fall Conference

When: Oct. 1-3, 2012

Where: Capital Plaza Hotel, Topeka, KS. For more information: http://webs.wichita.edu/?u=conferences&p=/KPHA/.

(Continued from page 1)

years old and the oldest was 91 years old. Except for one decedent where race and ethnicity were not reported, all were White and non-Hispanic. Four decedents died outdoors or outside of their home, two died in a medical facility, and one was found at home with no functioning heating system. Three had dementia or intoxication as a contributing cause of death. Five decedents had a high school level of education or less. The counties where the decedents died included: Brown, Butler, Harper, Johnson, Lincoln, Sedgwick, and Shawnee.

Discussion: Following guidelines from the National Center for Health Statistics (NCHS) regarding publication of mortality rates for fewer than 20 cases (5), only counts are presented in this report. Those guidelines stipulate that rates for fewer than 20 cases are highly unstable. However, this report could be useful to public health professionals as it provides timely information on a highly preventable cause of injury, illness, and death. Also, it would be beneficial to correlate the death reports with recorded climatic data. This will allow not only confirmation of the exposure but also identification of risk factors associated with climatic patterns. One should also take into consideration the non-fatal injuries and illnesses that occur during cold weather. From November 1, 2011 to March 15, 2012, Kansas hospitals, through the EMResource reporting system, voluntarily reported 164 injuries and illnesses due to exposure to the cold weather. This number is most likely an undercount since not all hospitals reported their cases. However, it provides a glimpse of the burden of cold weather on the state's healthcare facilities.

Conclusions: Despite the fact that Kansas and other states in the Midwest experienced a very mild winter during the 2011-2012 season (the northeastern region of Kansas registered less than 4 inches of snow for the whole season (6)), seven Kansas residents died following exposure to environmental cold. All decedents had known risk factors including altered mental state (dementia or intoxication), advanced age or being male. Public health interventions tailored to persons at increased risk for death and injury due to exposure to excessive natural cold are needed in Kansas. Further data analyses are warranted to better understand the risk factors associated with local weather patterns, geography, built environment, and other socioeconomic characteristics.

Table 1. Distribution of Decedents by Place of Death

Place of Death	Frequency	Percent
Emergency Room/ Outpatient	1	14.29 %
Inpatient	1	14.29 %
Other	4	57.14 %
Own Residence	1	14.29 %
TOTAL	**7**	**100.00 %**

Table 2. Distribution of Decedents by Level of Education

Education	Frequency	Percent
8th grade or less	2	28.57 %
High School graduate or GED	3	42.86 %
Some college credits - No degree	1	14.29 %
Unknown	1	14.29 %
TOTAL	**7**	**100.00 %**

Acknowledgements:

Aubrey Myer, Nosologist, Office of Vital Statistics, KDHE

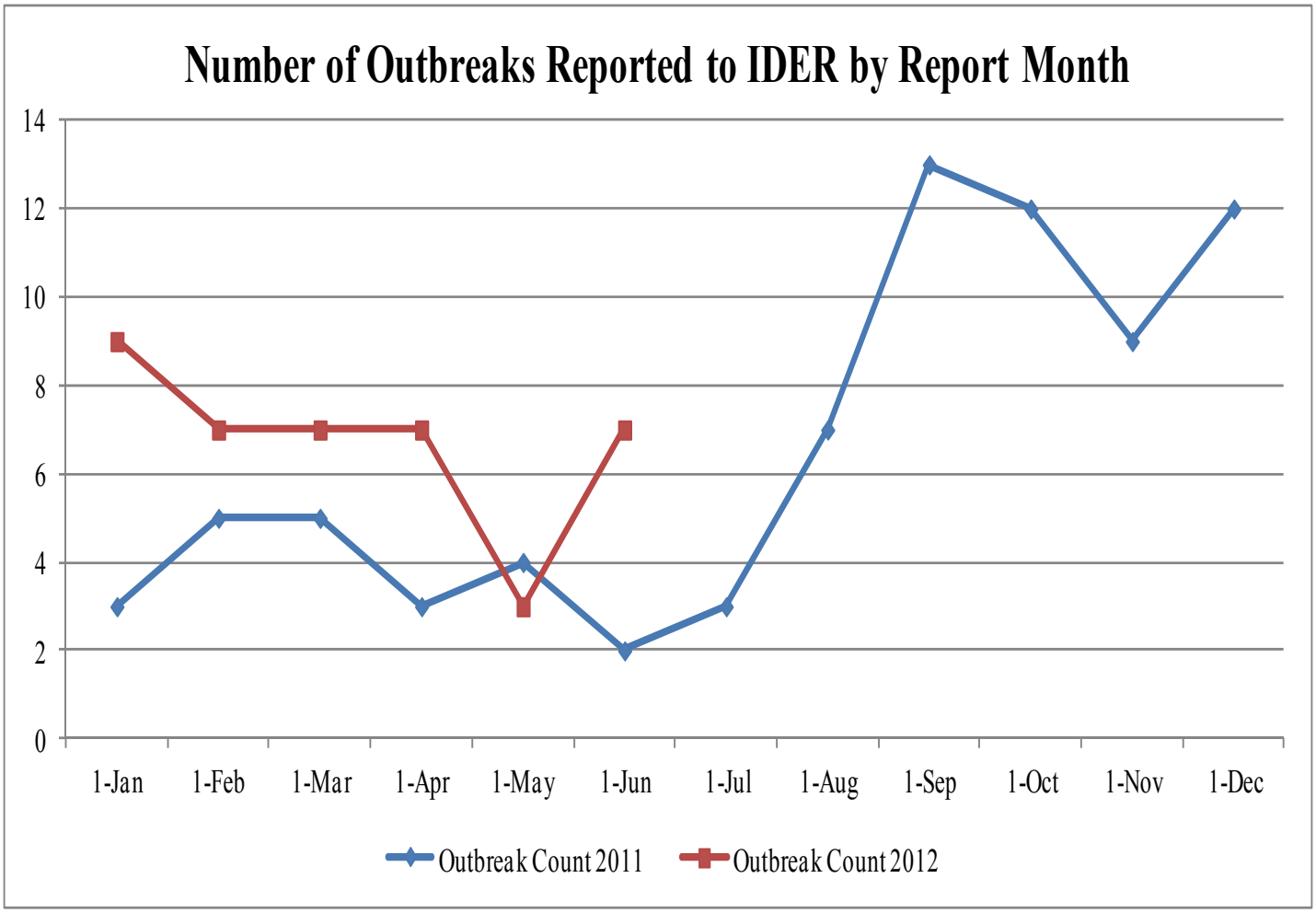
Diana Baldry, Nosologist, Office of Vital Statistics, KDHE

Dr. Farah Ahmed, Environmental Health Officer, KDHE

References:

1. Hypothermia-related Deaths—United States, 1999-2002 and 2005. MMWR. Morbidity and Mortality Weekly Report 2006;55(10):282-4.
2. Hypothermia-related Deaths—United States, 2003. MMWR. Morbidity and Mortality Weekly Report 2004;53(8):172-3.
3. Hypothermia-related Mortality—Montana, 1999-2004. MMWR. Morbidity and Mortality Weekly Report 2007;56(15):367-8.
4. Hypothermia-related Deaths—United States, 2003-2004. MMWR. Morbidity and Mortality Weekly Report 2005;54(7):173-5.
5. Kleinman JC, Kiely JL. Infant Mortality. Healthy People 2000 statistical notes/National Center for Health Statistics 1991;1(2):1-11.
6. NCDC. National Climatic Data Center: Protecting the Past, Revealing the Future. In; 2011. p. National Climatic Data Center.

Monthly Outbreak Summaries



Facility Type	Organism	Transmission	County	Outbreak Status	Reported Date
Restaurant	*Salmonella*	Food	Cowley	Closed	6/4/2012
Private Home	Pertussis	Person-to-Person	Pottawatomie	Active	6/4/2012
Restaurant	Unknown-GI	Indeterminate / Other / Unknown	Johnson	Closed	6/25/2012
Multi-state	*E.coli* 0157	Food		Active	6/5/2012
Multi-state	*S. bareilly*	Food		Active	6/18/2012
Multi-state	*S. Thompson*	Food		Active	6/27/2012
Multi-state	*S. anatum*	Food		Active	6/29/2012

	Month reported to EpiTrax - June 2012						
	State Case Status					Grand Total	Average 2009—2011
	Not Available	Confirmed	Not a Case	Probable	Suspect		
Disease	Count	Count	Count	Count	Count	Count	Count
Amebiasis (*Entamoeba histolytica*)	0	0	1	1	1	3	0
Anaplasma phagocytophilum (f. HGE)	1	0	1	1	3	6	3
Campylobacteriosis	2	43	0	0	35	80	81
Cryptosporidiosis	0	3	0	9	0	12	12
Ehrlichiosis, *Ehrlichia chaffeensis (f. HME)*	0	3	4	4	10	21	8
Giardiasis	0	8	0	0	11	19	14
Haemophilus influenzae, invasive disease (Including Hib)	0	1	0	0	0	1	2
Harmful Algal Bloom Illness— Human	0	2	2	0	1	5	1
Hepatitis A	1	0	29	5	20	55	26
Hepatitis B virus infection, chronic	0	2	0	26	0	28	7
Hepatitis B, acute	0	0	0	7	1	8	43
Hepatitis C virus, past or present	1	160	1	1	12	175	168
Hepatits C, acute	0	1	0	0	0	1	0
Legionellosis	0	1	0	1	2	4	3
Lyme Disease (*Borrelia burgdorferi)*	1	1	26	0	21	49	33
Measles (Rubeola)	0	0	0	0	1	1	2
Meningitis, Bacterial Other	0	2	0	0	0	2	3
Mumps	0	0	2	1	0	3	5
Outbreak Case - Unknown Etiology	0	2	0	0	0	2	3
Parapertussis	0	0	0	0	5	5	0
Pertussis	15	47	39	14	108*	223	45
Rabies, animal	6	8	3	0	0	17	13
Rubella	0	0	2	0	1	3	0
Salmonellosis	3	55	0	0	0	58	47
Shiga toxin-producing *Escherichia coli* (STEC)	0	9	1	0	2	12	12
Shigellosis	0	5	0	0	0	5	28
Spotted Fever Rickettsiosis (RMSF)	0	0	22	12	70	104	39
St. Louis encephalitis virus non-neuroinvasive disease	0	0	0	0	1	1	0
Streptococcal disease, invasive, Group A	0	2	0	0	0	2	5
Streptococcus pneumoniae, invasive disease	0	11	0	0	0	11	8
Toxic-shock syndrome (staphyloccal)	0	0	0	0	1	1	2

	Month reported to EpiTrax - June 2012						
	State Case Status					Grand Total	Average 2009—2011
	Not Available	Confirmed	Not a Case	Probable	Suspect		
Disease	Count	Count	Count	Count	Count	Count	Count
Transmissible Spongioform	0	0	2	0	0	2	1
Tularemia (*Francisella tularensis)*	0	1	0	0	3	4	3
Varicella (Chickenpox)	4	2	11	18	4	39	25
West Nile virus non-neuroinvasive disease	0	0	5	2	3	10	8
Grand Total	34	369	151	102	316	972	
* Increase due to outbreak							

World Rabies Day Webinar

September 20-21, 2012

The Global Alliance for Rabies Control, in cooperation with the U.S. Centers for Disease Control and Prevention, is pleased to announce the 3rd Annual World Rabies Day Webinar to be held September 20-21, 2012. The Webinar brings together noted leaders in rabies research, One-Health advocates, professionals, students, and World Rabies Day event planners in real-time to discuss the important public health issue of rabies while providing a forum for dialogue within and across disciplines.

The two day event will focus on canine rabies elimination; human rabies surveillance, prevention and intervention; wildlife rabies control; information and education campaigns; and building sustainable programs. Day 1 (Sept. 20th) will concentrate on presentations from Asia, the Middle East, Europe, and Africa. Day 2 (Sept. 21st) will spotlight talks from North America, Latin America, and the Caribbean Regions.

There is no cost to attend the webinars, but you must register in advance. For more information, or to register, go to; http://www.worldrabiesday.org/.

Kansas State Extension Offers Entomology Diagnostic Services

by Ingrid Garrison

Kansas State University's Insect Diagnostic Laboratory provides insect and non-insect arthropods (e.g. spiders, ticks, mites, centipedes, etc.) identification services to any Kansas resident. This free service is available through your local county Extension Agent. If the Extension Agent is unable to identify the insect, they will mail it to the Diagnostic Laboratory. Local Health Departments may find this service useful for clients with specific questions (e.g. what kind of tick do I have?). K-State does not test insects or non-insects for any infectious disease.

To submit a sample, complete the appropriate form, found at http://www.entomology.ksu.edu/p.aspx?tabid=375 and take the specimen to the local County Extension Office. The local Extension Office can be found at http://www.ksre.ksu.edu/p.aspx?tabid=39.

Please visit us at:
www.kdheks.gov/epi

Kansas Department of Health and Environment

EpiTrax Powered by TriSano®

EpiTrax Help and Hints By Susan Dickman

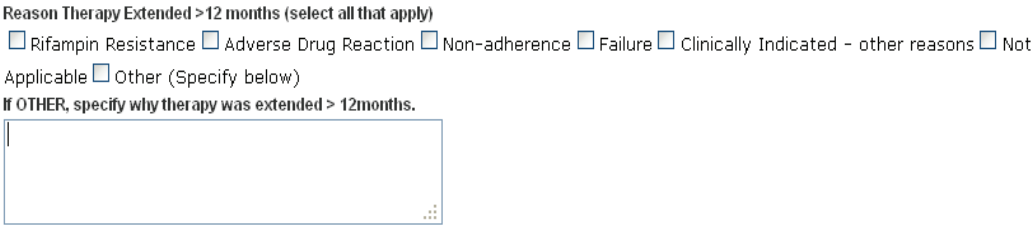
1. Clinical Tab

a. **Treatment Section.** When TB medications are ordered, make sure that treatment information is entered in the "Treatment" section. Leave the "Date treatment started" blank until medications are received and then go back in to enter the date the medications were started.

The medications will be shipped according to what is listed in the treatment section. If no medications are listed, none will be shipped.

b. **Reason Therapy Extended >12 months OTHER box.** This box is to be used only when the TB program at KDHE gives you instructions on what to enter in this area. This section is very rarely used.

c. **Clinicians.** In the clinician's area, fill in the clinician who is ordering the medications. This is the person who signed the protocol for treatment.



2. Laboratory tab.

a. Users are encouraged to attach the laboratories (non-KDHE laboratory results) to the case in EpiTrax.

b. Scan the lab onto your computer. (If you do not have a scanner, please contact Phil Griffin, TB Director at KDHE to see if there is an option.) Please save the lab with the date of attachment. For example "QFT Lab Report 7-12-12."

c. To attach a lab, click on "Add Attachment."

i. Browse for the lab report you scanned onto your computer and click the "Open button" to select the file. Click the "Create" button to add the attachment. You can return to the case by clicking on "Edit CMR" at the top right of the page.

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KDHE Mission:

To Protect and Improve the Health and Environment of all Kansans

Our Vision

Healthy Kansans living in safe and sustainable environments.

PATIENT NAME	DISEASE	JURISDICTIONS	STATUS	EVENT CREATED
Morbidity Event Show | Print | Delete | Add Task | Add Attachment | Export to CSV | Create a new event from this one | Events	Tuberculosis, Latent Infection (LTBI)	Saline County Route to Local Health Depts.	Under Investigation Investigator: MARIA SHOULTYS Brief note: Action required: Complete Assign to queue Assign to investigator: MARIA SHOULTYS	2012-06-20

ii. The attachment can be viewed in the "Notes" tab of the case.

[Disable Tabs]

Demographic | Clinical | Laboratory | Contacts | Encounters | Epidemiological | Reporting | Investigation | Notes | Administrative

Attachments [Hide]

Event Attachments

FILE NAME	CATEGORY	CONTENT TYPE	SIZE	UPLOADED	
QFT_Lab_Report_7_12_12.pdf	Laboratory results	application/pdf	26302	Fri, 13 Jul 2012 12:28:51 -0500	Open | Delete

3. Contacts tab. It is vitally important when doing the contact investigation to list the names of the contacts in the "Contacts" tab. Even if you only have the contact's name, list those in the "Contacts" tab.

a. As you begin your investigation and you find more information on the contacts, you can then go back to the contacts and begin entering the disposition dates on each contact.

b. When a contact is brought in for treatment, you will promote that contact to a new CMR.

i. Click on "Show contact."

Contact Information [Hide]

Contacts

Name

Search

Name	Disposition	Disposition date	
Phone Mobile:	Not infected	April 09, 2012	
	Contact type: Other	Remove	Show Contact | Edit Contact

ii. Click the link "Promote to CMR."

CONTACT NAME	DISEASE
Contact Event Edit | Print | Delete | Add Task | Add Attachment | Promote to CMR	Tuberculosis, Active

iii. Change the disease in the "Clinical" tab to Tuberculosis, Latent Infection (LTBI).

[Disable Tabs]

Demographic | Clinical | Laboratory | Contacts | Encounters | Epidemiological | Reporting | Investigation | Notes | Administrative

Clinical Information [Hide]

Disease

Disease: Tuberculosis, Latent Infection (LTBI)

Onset date

Date diagnosed

NOTE: Do not create a new case for LTBI—you must promote the contact to a new CMR and change the disease to LTBI.

(Continued on page 8)

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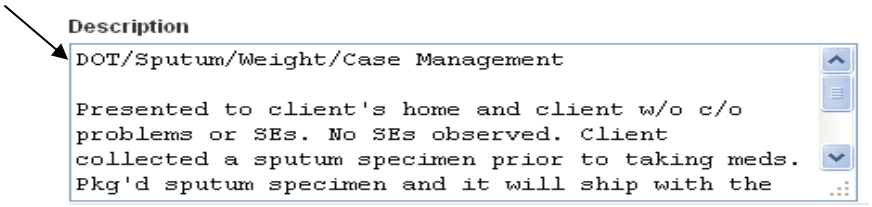
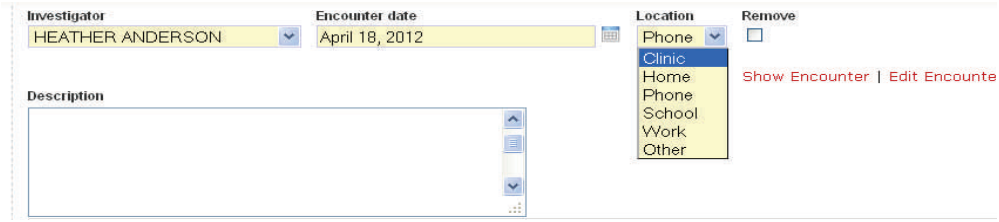
4. **Encounters tab.** In TB, this is the most frequently used tab after the case has been created. Make sure the specific encounter reason is at the top of the encounter note—not buried in the encounter.

   a. **Put sputum collections at the beginning of the note—**if more than one sputum, please enter it as "2x Sputum collected." The date of the sputum collection should be the date of collection by patient—not when you get it. (The date should be the same date as the collection date on the lab requisition.)



   b. Then Encounter can include phone calls, where the encounter took place, etc. Be sure to indicate the location using the drop down box—the drop down defaults to "Clinic" so be sure to change the location if it is not at the clinic.



   c. LTBI encounters—document the risk assessment monthly—do not just dispense medications—this is your legal protection. The nursing assessments should include any signs and symptoms.

   d. Active TB cases – DOT can be the only note on the encounter; however, make sure that periodic assessments are done and entered in encounters.

5. **Investigation tab.** Make sure to complete TST/IGRA and CXRs (chest x-rays) entry before ordering medications. It is encouraged to attach all CXR results to the case and attach them according to the date of the CXR. For example: "CXR result 7-12-12."

6. **Notes tab.** The "Notes" tab is not used for TB; all notes should be entered in the "Encounters" tab.

7. **TB cases will have the same case closing protocol as the other diseases in EpiTrax.**