

EPI Update

A BULLETIN ON EPIDEMIOLOGY AND PUBLIC HEALTH IN KNOXVILLE AND EASTERN TENNESSEE



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Shigella Update

Shigellosis is an acute bacterial infection that causes symptoms of stomach cramping, diarrhea, bloody diarrhea and fever. Particularly susceptible are elderly, debilitated or malnourished persons. Dehydration is a risk with severe diarrhea. The bacterium is spread via the fecal-oral route and is therefore easily communicated from per-to-person. Even when a patient is no longer symptomatic, Shigella bacterium can be shed in fecal matter for up to four weeks, increasing the risk of an outbreak. However, because testing for Shigellosis is infrequent and treatment is not always required when the diagnosis is made, it is likely that reported cases represent a small part of actual cases. These factors may partially explain the annual case-rate for Knox County (ten-to-twelve).

Between the dates of October 17 and 18, 2007, nine confirmed cases of Shigellosis were reported to the Knox County Health Department (KCHD), triggering an investigation of a possible outbreak. After completing the initial standard case investigation for all nine cases, epidemiologic evaluation revealed a common link among seven of the nine cases. Each attended or taught at Powell Elementary School. A KCHD Epidemiologist and Environmental Specialist conducted a site visit and environmental inspection of Powell Elementary School. The environmental inspector found clean restrooms with soap readily available, classrooms stocked with waterless hand wash, teachers describing diligent hand washing among their students, and no knowledge of recent illness among cafeteria workers. Several teachers reported recent illness with similar symptoms but had been neither tested nor treated. The Tennessee Department of Health and East Tennessee Regional Health Office were notified of the potential for a community-wide outbreak.

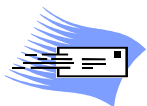
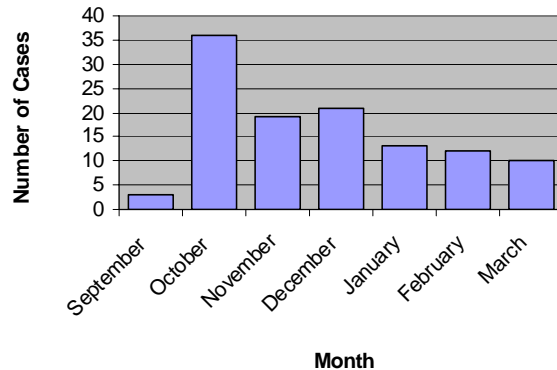
Because of the potential for an outbreak, the decision was made to alert the community. A press conference was held. Press releases went to each local television station as well as the local newspaper. A Shigellosis Fact Sheet and Instructions for Proper Hand Washing were enclosed in a letter to parents that went home with each Knox County School student and were posted on the KCHD and area media websites. Daycare facilities, physician offices, and hospital emergency rooms received detailed guidelines for ill daycare workers/attendees, hospital workers, food handlers, and their contacts via fax and personal delivery.

Cases continue to be reported with the peak of 38 cases occurring in October, 2007. As of March 15, 2008, a total of 112 cases were included in the investigation. The majority of the cases (73%) occurred in children under 10 years of age who attended either an elementary school and/or a day care facility in Knox County.

Although most of the Shigellosis cases were in the Powell and Fountain City communities, the remaining cases were spread throughout Knox County with no apparent common exposure. Spread of this type of disease is particularly difficult to control in the very young as personal hygiene tend to be less than rigorous.

Although the incidence of Shigellosis peaked in October 2007 and the reporting volume has gradually declined, cases continue to occur. This may be due to a sense of hyper-vigilance in the community and/or amplified screening efforts by physicians. Comparison of the cases reported in October 2007 at the height of the outbreak to the cases reported in January and February 2008, indicates that the outbreak is waning. However, the importance of precautionary and control measures should not be minimized as it is likely the community will continue to be challenged by this and other such easily communicated infections.

Shigellosis Cases per Month
September 2007- March 2008



If you would like to receive EPI Update via e-mail
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East Tennessee Regional Health Office Leadership Team

Following a long and distinguished public health career in nursing and administration, the Director of the East Tennessee Regional Health Office, Sandy Halford, retired on February 1, 2008. Sandy served in various positions throughout the region for 27 years.

Fred Adams is serving as East Tennessee's interim regional director, while continuing as regional director of the Northeast Region. Fred is already familiar to many East Tennesseans for his tenure as the region's director in the early 1990s. He anticipates spending two to three days each week in East Tennessee, working the remainder of the week at the Northeast Regional Health Office in Johnson City.

The Regional Health Office welcomed its new assistant regional director, Paula Campbell, home to East Tennessee in December 2007, after several years in Middle Tennessee as Director of Health & Wellness for the Mid-Cumberland Region, and then as Director of the Wilson and Trousdale County Health Departments. Paula began her public health career in 1996 with the Sevier County Health Department as a nutritionist.

Dr. Tara Sturdivant continues to serve the region as medical director and regional health officer. The leadership team for the East Tennessee Regional Health Office may be contacted at (865)546-9221.

TB Update

- The Tennessee Tuberculosis Elimination Program (TTBEP) operates within the Tennessee Department of Health, Bureau of Health Services, and Communicable and Environmental Disease Section. The TTBEP has the primary responsibility for tuberculosis (TB) control throughout the state and is responsible for ensuring efficient and effective surveillance, diagnosis, and treatment services.
- TTBEP provides an array of services to the private medical community and to public and community based agencies and stakeholders. These services include TB-related training and education, as well as comprehensive diagnostic and treatment programs for patients with suspected or confirmed TB disease or latent TB Infection (LTBI). Other services include the investigation of close contacts to all reported cases of TB and the screening of high risk groups to identify persons with LTBI or active disease.
- The State of Tennessee strongly encourages the use of directly observed therapy (DOT) for the treatment of all active TB cases to promote treatment completion. DOT is considered the current standard of care for management of active TB and ensures treatment completion. Treatment completion is critical not only to ensure appropriate patient care, but to prevent further transmission to others.
- The current requirements for reporting TB to the Department of Health, effective July 1, 2004, are as follows: All persons with confirmed or suspected active TB, including pulmonary and/or extrapulmonary disease, must be reported to the Department of Health within 12 hours of diagnosis. This mandatory report must include the name, age, gender, race and address of patient. Formal written notification providing the same information must be submitted to the department within one week, preferably using Public Health Form No. 1600, available from your local county health department. Reporting should include patients who are treated or considered for treatment for active TB.
- Early notification of TB suspects and TB cases enables the Health Department to ensure appropriate treatment of TB suspects and cases, and to provide all patients with appropriate services essential to effective treatment. These services include counseling and education regarding TB disease and treatment, “client centered” case management, free medications under directly observed therapy and monitoring for toxicity and compliance throughout therapy.
- Providers should report TB cases and suspects directly to the Knox County Health Department or Regional Health Office TB clinic designated for the county where the patient resides. Please note that health department clinic providers can provide consultation about possible TB patients and the decision of whether or not to initiate isolation and treatment.
- Please remember to “**Think TB**” when evaluating persons with compatible clinical findings, especially those with known TB risk factors such as foreign birth, HIV, substance abuse, homelessness, immunosuppressive treatment or conditions (i.e. chemotherapy, steroids, or TNF antagonists such as Remicade) and a residence or employment in correctional facilities or long-term care facilities.

Continued on page 4

TB Update continued

	Knox	ETRO
2007 Reported Cases of Pulmonary TB	5	17
2007 Reported Cases of Extra-Pulmonary TB	2	4
2007 Totals	7	21

TB suspect and cases who are Knox County residents should be reported to 865-215-5370. Counties surrounding Knox report to the East TN Regional Health Office at 865-549-5241.

A list of TB risk factors and other TB related resources can be obtained at the following websites:

- <http://www2.state.tn.us/health/CEDS/TB/index.htm>
- <http://www.cdc.gov/nchstp/tb/default.htm>

Radon and You

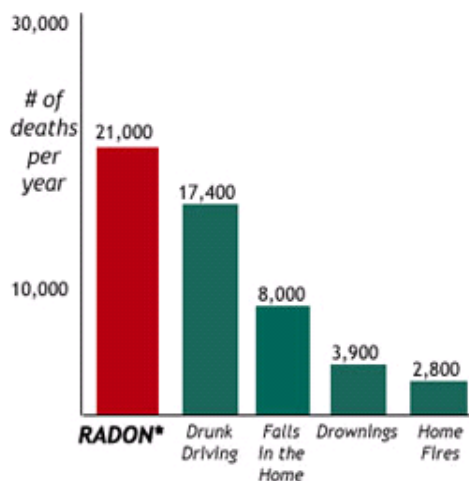


Image source: U.S. EPA
<http://www.epa.gov/radon/pubs/citguide.html>

Radon is a natural cancer-causing radioactive gas that can't be seen, smelled or tasted. Its presence at high levels can pose a health threat. Radon is the leading cause of lung cancer among non-smokers and the second overall leading cause of lung cancer in America, claiming about 21,000 lives in the U.S. annually.

Radon occurs naturally from the breakdown of radioactive minerals in the earth. As a gas, it works its way to the earth's surface, especially where rock formations like karst (fractured limestone with groundwater channels and caves) are found – places like Knox and surrounding counties. The Surgeon General and EPA recommend that all homes be tested for radon. This is especially important for residents of the Knoxville area, as Knox and most surrounding counties are at high risk for radon, due to the local geology.

Tennessee residents can obtain a free radon test kit by contacting the Tennessee Department of Environment and Conservation (TDEC) at the TDEC Radon Hotline (1-800-232-1139) or online at: www.tdec.net/ea/radon. If radon is found in a home, the risk can be reduced by increasing air exchange between indoors and outdoors. TDEC will provide additional information to residents with high radon levels on how to address a radon problem. EPA and TDEC also recommend use of radon-resistant practices in new construction, so radon mitigation can be accomplished, if needed, at a much lower cost.

Additional information on Radon can be found in the EPA publication: **Radon - A Physician's Guide: The Health Threat With A Simple Solution**. This booklet on radon has been developed for physicians by EPA in consultation with the American Medical Association.

Available at: <http://www.epa.gov/radon/pubs/physic.html>

EPI Update

SELECTED DISEASES REPORTED by COUNTY, EAST TN JANUARY - MARCH 2008 YEAR-TO-DATE

Disease	Campylobacter	Salmonella	Shigella	Hep A	Hep B	DRSP	Pen Sen	Strep	MRSA	Chlamydia	Syphilis	Gonorrhea	HIV/AIDS	TB	LAC
Knox County															
YTD '08	4	12	1	1	2	8	29	34	436	18	174	4/8	0	0	0
YTD '07	6	10	41	0	1	9	30	32	431	29	193	7/5	1	0	0
East Tennessee Region															
Anderson	1	3	3	0	0	6	6	2	25	0	3	0/0	1	0	0
Blount	2	1	0	0	0	2	2	4	58	1	7	1/1	1	0	0
Campbell	0	0	22	0	0	1	2	4	10	0	1	0/0	0	0	0
Claiborne	0	0	0	0	0	0	3	2	7	0	2	0/0	0	0	0
Cocke	0	0	0	0	0	0	0	0	30	0	9	2/0	0	0	0
Grainger	1	0	1	0	0	0	1	0	8	0	0	0/0	0	0	0
Hamblen	1	0	0	0	0	0	1	6	45	0	6	0/0	0	0	0
Jefferson	2	0	0	0	0	0	1	2	18	0	0	0/0	0	0	0
Loudon	1	0	2	0	0	0	5	1	13	0	0	0/0	0	0	0
Monroe	3	0	1	0	0	0	0	0	22	0	0	0/0	0	0	0
Morgan	0	0	1	0	0	0	1	0	9	0	1	0/0	0	0	0
Roane	0	2	3	0	1	2	2	4	11	0	2	0/0	0	0	0
Scott	0	0	0	0	1	0	0	0	6	0	0	0/0	0	0	0
Sevier	0	1	1	0	1	0	0	2	33	3	2	0/1	0	0	0
Union	2	1	0	0	0	0	1	1	2	0	0	0/0	0	0	0
YTD '08	13	8	34	0	3	11	25	28	297	4	33	3/2	2	0	0
YTD '07	5	12	0	0	2	4	16	20	363	1	67	3/3	1	0	0

Note: These data only include new cases with a diagnosis of HIV infection (not AIDS) and a concurrent diagnosis of HIV infection and AIDS (AIDS at first diagnosis).

EPI Update

Epi Update
 A Epidemiology Newsletter
 FROM THE
 KNOX COUNTY HEALTH DEPARTMENT
 AND THE
 EAST TENNESSEE REGIONAL OFFICE

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THE KNOX COUNTY HEALTH DEPARTMENT
 AND
 EAST TENNESSEE REGIONAL OFFICE
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ANIMALS TESTED FOR RABIES IN EAST TN JANUARY - MARCH 2008



County	Bats	Skunks	Dogs	Cats	Raccoons	Foxes
Anderson	0	0	2	0	0	0
Blount	0	0	2	0	0	0
Campbell	0	0	1	0	0	0
Claiborne	0	0	0	0	0	0
Cocke	1	0	3	0	1	0
Grainger	0	0	1	0	0	0
Hamblen	0	0	0	0	0	0
Jefferson	0	0	0	3	2	0
Knox	3	2	16	13	13	1
Loudon	0	0	0	2	0	0
Monroe	0	0	0	0	0	0
Morgan	1	0	0	0	0	0
Roane	2	0	5	1	0	0
Scott	0	0	0	0	0	0
Sevier	0	1	7	4	1	1
Union	0	0	1	0	0	0
Total	7	3	38	23	17	2

Rabies Positives Reported

County	Bats	Skunks	Dogs	Cats	Raccoons	Foxes
Anderson	1	0	0	0	0	0
Total	1	0	0	0	0	0