Chattanooga-Hamilton County Health Department

EPIDEMIOLOGY NEWSLETTER FEBRUARY 2011

Tuberculosis Elimination Program

MARCH 24TH IS WORLD TB DAY

On this date in 1882, Dr. Robert Koch shared his discovery of M. tuberculosis with the world. In the 129 years since, curative TB medicines have been discovered and drug resistance has developed; TB rates have declined in some parts of the world and TB/HIV epidemics have emerged elsewhere; some people spend their lives trying to eliminate TB and some people don't think it exists anymore.

It is estimated that one third of the earth's population is infected with TB. About 9 million people go on to develop active TB annually. And TB is one of the world's leading causes of death. World TB Day is not about celebration, but reflection. How can TB be eliminated? A united effort is required to seek out those at higher risk for TB and link them to appropriate clinical and educational services. The theme for World TB Day is "TB Elimination: Together We Can!" While the CDC and WHO have always stressed partnerships among public and private entities, this year the focus is on strengthening old ties and building new alliances.

Higher risk groups:

- people who are foreign born
- homeless
- contacts to active cases
- incarcerated
- immunosuppressed
- diabetics
- end stage renal disease patients
- the medically underserved
- substance abusers
- people with TB symptoms

The Chattanooga-Hamilton County TB Program provides clinical services for the diagnosis and treatment of LTBI (latent TB infection) and active TB disease. These free services include TB skin testing, x-rays, nursing services, sputum tests, appointments for exam and consultation by Infectious Disease specialist Stephen Hawkins, M.D., and TB medicines with associated lab work. The clinic partners with many organizations that work with high risk clientele such as the Bridge Refugee Services, CADAS, dialysis clinics, Chattanooga CARES, Hamilton County Jail, CCA, the Homeless Health Care Center and many private providers who see high risk patients. These organizations recognize the risk of TB for their clientele and act appropriately to screen and refer as needed.

Education is another component in the fight against TB. Patients who understand their diagnosis are more likely to complete their treatment. The TB Program offers written materials, videos and presentations to patients, to the community and to health care providers. Materials are language appropriate. Interpreters are available for Hispanic clients at the Health Department. Language Line is used to access interpreters for other languages as needed. Staff members are available for health fairs, in-services or presentations. Often when performing a contact investigation, staff will first make a general presentation about tuberculosis at the source case's place of employment, church, etc. without releasing confidential information. This can assure people appropriate measures are in place for their protection. Staff partner with infection control practitioners to supply statistics to aid in their Respiratory Infection control plans, to receive reports of suspected or confirmed TB, and to receive patients into outpatient care. After receiving a referral of a hospitalized patient, a clinic nurse will visit them in the hospital for education and counseling. A home visit is also done.

The TB program offers training to other health care providers. UT College of Medicine, UTC and Southern Adventist University send medical students, residents and nursing students to the TB Clinic to learn about TB, the diagnosis, treatment regimens and available clinical services. Health care providers who understand the progression of TB disease and appropriate TB diagnostic tests are more likely to diagnose and cure tuberculosis in a timely manner. TB Clinic staff members are available to teach TB skin testing and interpretation.

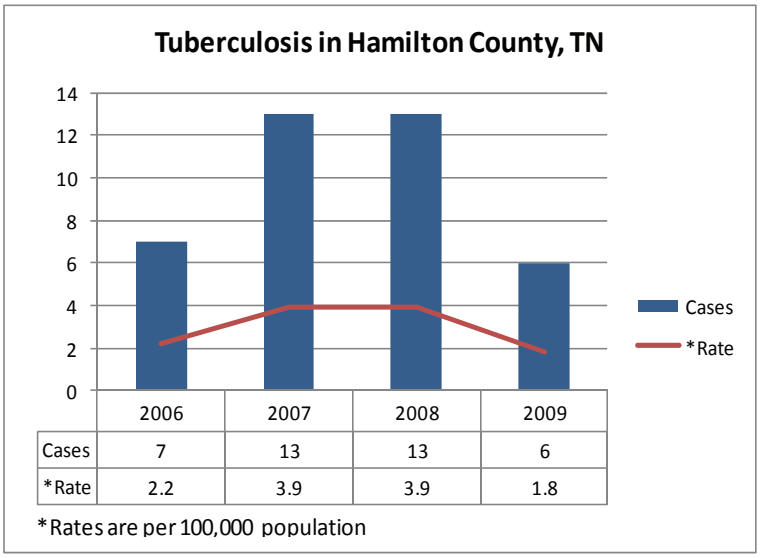
Building and strengthening alliances within the community will help to fight TB by improving public access to TB services. This access, particularly for high risk populations, will enable screening and preventive treatment strategies to stop the progress to active, contagious TB disease. Organizations need to evaluate who they serve. Are they high risk, do they need to be screened for TB? Complacency will not serve to eliminate TB. Low case rates in one jurisdiction can change overnight. TB may be only one airline flight away. This World TB Day, or any day, reflect on how to better access TB services, education, and training. Call the Chattanooga-Hamilton County TB Clinic at 423-209-8030.

TB IN OUR COMMUNITY

In 2009, the local tuberculosis rate in Hamilton County was 1.8 per 100,000 population. This rate compared to the 2008 rate of 3.9 represents an important local improvement. In Tennessee the tuberculosis rate in 2009 was 3.2 per 100,000 and the national rate was 3.8. A Healthy People 2010 and continuing 2020 objective is to reduce the U.S. tuberculosis rate to 1.0 per 100,000. Hamilton County's TB Elimination Program is working toward that goal locally. The global plan by WHO and its partners to ultimately eradicate tuberculosis, starts with the 2015 goal of reducing TB prevalence and mortality by half compared to 1990 levels, and eliminating the disease by 2050.

Figures 1 and 2 below show Tuberculosis trends from 2006 to 2009. Figure 1 details number of cases and the corresponding rates of illness in Hamilton County, while Figure 2 allows for comparison of Hamilton County disease rates with those of the state of Tennessee and nation as a whole. While all rates decreased in 2009, Hamilton County rates in particular declined significantly. This decline is an important indication of TB program improvement including rigorous testing and contact investigations. With continuing work to test, identify and investigate potential TB infections, the goal of eliminating the disease by 2050 is possible.

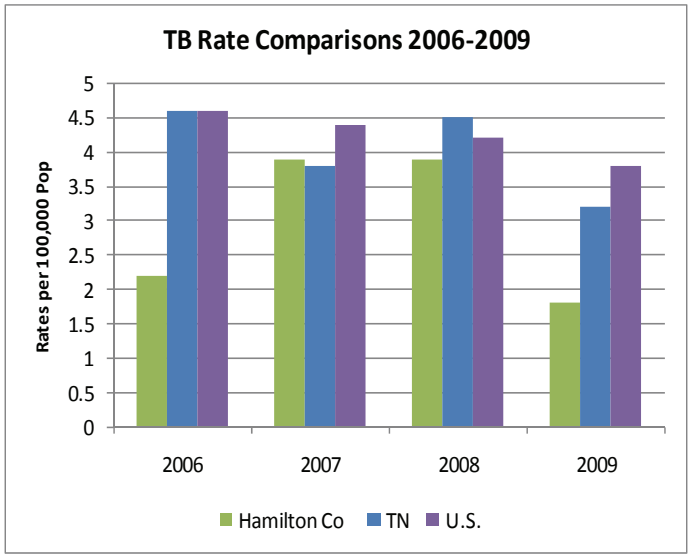
Figure 1



	2006	2007	2008	2009
Cases	7	13	13	6
*Rate	2.2	3.9	3.9	1.8

*Rates are per 100,000 population

Figure 2



WHO SHOULD BE TESTED FOR TB?

A person should be tested if they:

- have spent time with a known or suspected active TB case,
- have HIV or any other condition that weakens the immune system,
- have TB symptoms,
- move to the US from a country where TB is endemic or has a high prevalence (i.e. Africa, Asia, Eastern Europe, Russia, and most countries and Latin America and the Caribbean), or
- live in one or more settings where TB disease is more common (e.g. homeless shelters, prison or jail, a nursing home or a migrant farm camp).

Many persons born outside the United States have been vaccinated in their countries of origin with BCG, which may cause a positive reaction to TB skin test -PPD; a TBST is not contraindicated in those individuals; however, it could complicate decisions about treatment. The size of the reaction does not predict if such reaction is caused by LTBI or previous vaccination. TB blood tests (Quantiferon) are not affected by previous BCG vaccination and are not expected to give false positive results.

Update:

Tennessee Reportable Disease List

Important changes and reminders for reportable diseases and events in 2011 include the following:

- Influenza-associated deaths which are pregnancy associated (up to 6 weeks post-partum) are newly reportable
- H1N1 influenza is now considered a seasonal flu strain and should not be reported as "Novel Influenza"
- Rocky Mountain Spotted Fever is reportable as "Spotted Fever Rickettsiosis"
- Outbreaks of **any** type are reportable

The updated list can be found at:

http://health.hamiltontn.org/docs/Epidemiology/Reportable%20List%201-2011.pdf

Counts of Reportable Diseases: 2010	
Hamilton County Diseases Reported	**2010**
Bacterial meningitis, other	3
Brucellosis	0
Campylobacteriosis	31
Chagas Disease	1
Creutzfeldt –Jakob Disease	0
Cryptosporidiosis	4
Dengue Fever	0
Ehrlichiosis/Anaplasmosis	3
Giardiasis	3
Group A Streptococcus, invasive	13
Group B Streptococcus, invasive	17
Guillain-Barre syndrome	7
Haemophilus influenzae, invasive	5
Hepatitis B, acute	2
Hepatitis C, acute	0
Legionellosis	8
Listeriosis	1
Lyme disease	6
MRSA (S.aureus, methicillin resistant), invasive	91
Malaria	0
Mumps	0
Neisseria meningitidis, invasive	2
Pertussis	3
Q Fever	0
Salmonellosis	47
Shiga toxin-producing Escherichia coli (STEC)	1
Shigellosis	3
Spotted Fever Rickettsiosis	30
Streptococcus pneumoniae, invasive disease (IPD)	66
Toxic-shock Syndrome, Staphylococcal	0
Typhoid fever (Salmonella typhi)	1
Vibriosis (non-cholera Vibrio species infections)	1
VRE (Vancomycin-Resistant Enterococcus), invasive	6
Yersiniosis	0
Restaurant Complaints Investigated	79
Outbreak Investigations	7

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