

# Tuberculosis Outbreak

*A public health story from...*  
Joplin City Health Department

*A tuberculosis outbreak requires immediate investigation and intervention.*

**L**uck was on their side when Maggie, a Joplin City Health Department (HD) registered nurse, identified an active case of tuberculosis (TB). Maggie was evaluating a student from Missouri Southern State University (MSSU) for a positive tuberculin skin test (TST), a test used to

determine if an individual is infected with the tuberculosis bacteria. While Maggie was describing the symptoms —prolonged cough, weight loss, fever, night sweats, and fatigue—a friend of the student mentioned he had those symptoms. A sputum sample was collected from the second student to determine if he had infectious tuberculosis. The results were positive. To prevent further transmission of the disease, steps were put into motion to isolate the student at the state's only inpatient unit for infectious TB patients, Missouri Rehabilitation Center in Mt. Vernon.

"The first thing we did was ask for the case's class schedule," said Dan Pekarek, administrator of Joplin City HD. Joplin City HD, in conjunction with the Department of Health and Senior Services, worked closely with MSSU to identify more than 324 contacts including friends, classmates and teachers. Three TB testing clinics were held at MSSU. Of those tested, 29 had a positive TST, indicating that they had been infected with the bacteria which causes tuberculosis.

By state law, Missouri universities are not required to provide testing for TB. The health department is currently working with MSSU on establishing a policy to improve the detection and treatment of both active and latent TB for university students. This policy would include a screening questionnaire to identify those students at high risk for TB infection, followed by a TB skin test, medical evaluation and treatment.

International students from TB-endemic countries are actively recruited to increase the cultural diversity on campuses. In Missouri, 2006 data shows 8 out of 50 foreign-born TB cases were in college students. Students came from various countries around the world including Nigeria, Ethiopia, China, South Korea, Japan and India. "The majority of international students do not have health insurance, putting a strain state and on local resources," said Dan.

"Twelve months later we are just wrapping up this case. Identification, testing and treatment of the infected contacts can take up to a year to complete," said Dan.

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*"The most basic  
function...is preventing  
the spread of disease."*

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