

# Specialists say TB case a sign of things to come

By John Donnelly, Globe Staff | June 4, 2007

The unexpected turns in the case of Andrew Speaker, the Atlanta lawyer with extensively drug-resistant tuberculosis, have riveted the country.

Speaker made two trans-Atlantic flights against the counsel of public health officials. A border guard let him into the United States apparently because he appeared healthy. His father-in-law works in the field of tuberculosis research. And Monday, his doctors in Denver reported that two tests of his sputum show no presence of the TB bacteria.

But TB specialists said Monday that the real importance of the case is that it is a warning to all Americans: The United States should brace itself for many more cases of the drug-resistant airborne germ in the months and years ahead.

"This is the tiniest tip of the iceberg," said Dr. Paul Farmer, a Harvard professor who has treated drug-resistant TB in Haiti, Peru, and Siberia. "We need to take excellent care of our own but also acknowledge that we're lucky as a nation: We have little TB, drug resistant or otherwise. We need to think about this much more globally."

Farmer said poor countries need laboratory diagnostic tools, more drugs, better trained doctors who could perform surgery if necessary, and a cadre of community health workers. Those workers visit patients in their homes, which ensures they are taking their drugs properly and protects them from hospital-acquired infections or illnesses.

Senior World Health Organization officials met privately Monday in Geneva to review the lessons of Speaker's case. Dr. Mario Raviglione, director of WHO's Stop TB Department, said in an interview that the TB specialists "found a number of things that failed in the system" that allowed Speaker to travel from country to country in Europe and eventually to the United States.

Speaker, who is under a federal quarantine order while being treated at a Denver hospital, flew to Greece last month for his wedding and honeymoon.

While in Europe, he learned he had an extensively drug-resistant strain TB, known as XDR-TB, and the Centers for Disease Control and Prevention told him not to fly and turn himself into a clinic. Instead, Speaker took a series of steps to avoid the no-fly order, eventually taking a plane from Prague to Canada and then driving into the United States.

Raviglione said Speaker's evasive actions exploited poor communication abilities among international health authorities, airline carriers, and border patrol posts that allowed him to travel from Rome to Prague, and then from Prague to Montreal, before crossing into the United States in a private car.

But most critically, he said, the US case revealed the lack of urgency in fighting drug-resistant tuberculosis, including the most dangerous type, XDR-TB. Since XDR-TB was identified a year ago in South Africa, when 52 of 53 patients died from the disease, health authorities have identified cases in 37 countries, including the United States.

"TB is not just a disease of the poorest people," Raviglione said. "This is a disease that can hit everyone, even reach a lawyer in the United States. It spreads through the air and respects no border. No one should feel safe in this world."

An estimated 424,000 new cases of multiple-drug resistant TB were contracted in 2004 -- the latest available statistics -- up from roughly 273,000 in 2000. Because many patients survive for years after diagnosis, specialists estimate that as many as 2 million people around the world are infected with a form of drug-resistant TB. Of the cases in 2004, an estimated 62 percent were in China, India, and Russia.

While funding for AIDS and malaria have greatly increased in recent years -- the Bush administration last week proposed \$30 billion in additional money to fight AIDS starting in 2009 -- the amount for fighting tuberculosis has lagged well behind. Raviglione said WHO will publish a report in the coming weeks estimating that the cost of controlling XDR-TB alone will be an extra \$1 billion annually. Now, he said, the TB fight needs an additional \$1.5 billion to \$2 billion a year, including funding for XDR-TB.

Senator Edward M. Kennedy, a Massachusetts Democrat, along with two other US senators -- Sherrod Brown, an Ohio Democrat, and Kay Bailey Hutchinson, a Texas Republican -- will introduce legislation Tuesday calling for giving US public health officials the "resources needed to eliminate TB in the US," including funding for new research on anti-TB drugs and vaccines.

*Mycobacterium tuberculosis*, which has been found in 4,000-year-old Egyptian mummies, has been treated with antibiotics since 1944. But the TB bacteria has developed mutant strains when patients didn't use the drugs properly.

Some of those strains eventually developed multiple resistances, and much of the medical world, including the WHO, believed for years that drug-resistant TB was virtually incurable in poor countries.

But successful treatment of patients by Farmer, Dr. Jim Yong Kim, and others at the Boston-based Partners in Health in the late 1990s in the Carabayllo slum outside Lima, Peru, showed that belief was false.

Drug-resistant TB is no longer a death sentence in many poor countries, but the discovery of XDR-TB in South Africa more than a year ago raised new difficulties about treating strains of a disease that respond to fewer and fewer drugs.

"We need to wake up and pay attention to what's happening with TB in other parts of the world," said Dr. Mark L. Rosenberg, the Harvard-educated executive director of the Task Force for Child Development and Survival in Atlanta. "We need to start treating XDR-TB where it is, not just respond to one case of one American who will get the finest treatment."

## **TB patient tests negative, but he is 'culture-positive'**

**By Angela Haupt and Anita Manning, USA TODAY**

The family of Andrew Speaker, the Atlanta lawyer infected with drug-resistant tuberculosis, told ABC's Diane Sawyer on Monday that they do not believe he behaved irresponsibly in flying to Greece to marry, but public health officials stand by their position that he has active TB and should not have boarded a commercial airplane.

The national Centers for Disease Control and Prevention is still tracking down fellow passengers who may have been exposed to TB.

Speaker's family says they were told by local health officials in Atlanta that he would not put others at risk by traveling, although doctors preferred he did not fly.

"We are not people of reckless behavior, nor is Andrew," said his mother, Cheryl Speaker.

Doctors at National Jewish Medical and Research Center in Denver, where Speaker is being treated, said two tests of sputum, mucus coughed up from deep in his lungs, were negative for TB bacteria. If a third test is negative, it would mean he is "relatively non-contagious," spokesman William Alstetter says.

The CDC also reported that Speaker's sputum tests were negative, but it says he is "culture-positive," meaning that when the sputum is put into a culture medium, tuberculosis bacteria grow. That means he has active TB, says Kenneth Castro, director of the Division of Tuberculosis Elimination.

"He is not highly infectious, but the risk is not zero," Castro said Monday. "Published studies done in San Francisco and Vancouver have documented TB transmission by persons whose sputum smear was negative but culture-positive."

The CDC says it is guided by World Health Organization guidelines, which say patients with drug-resistant TB "should not travel until they have been proved to be non-infectious (i.e. culture-negative)."

### **Prognosis good for Speaker**

Doctors are hopeful that Speaker's tuberculosis can be cured because it is not widespread, he is otherwise healthy and young, and his hospital has extensive experience in removing stubborn, drug-resistant infections.

"He has a number of features that make us optimistic about the potential outcome of his treatment," said Dr. Michael Iseman, senior staff physician at National Jewish Medical and Research Center.

Speaker, 31, was found to have multidrug-resistant TB, which can withstand two mainline drugs used to treat tuberculosis. While in Europe last month, tests revealed he had extensively drug-resistant tuberculosis, or XDR-TB, which can withstand more drugs.

Speaker's strain has so far resisted at least 10 of 14 drugs available for treating TB, according to tests performed in Georgia, Iseman said. Surgery to remove infected lung tissue about the size of a tennis ball is one option. The infection's relatively small size increases the chances of success of any surgery.

Dr. Philip C. Hopewell, professor of medicine at the University of California, San Francisco, said it was good news that Speaker's infection occupies only about a sixth of one of his lungs. That and Speaker's resistance to drugs would appear to make him a good candidate for surgery, Hopewell said.

Surgery to eradicate TB is one of National Jewish's specialties, noted Dr. Neil Schluger, a professor of medicine at Columbia University Medical Center.

"In particular, they've had more experience operating on patients with drug-resistant TB than just about any other hospital in the United States," Schluger said.

Surgery is an old approach that used to be more common before better TB drugs appeared in the 1960s. It became needed again after the emergence of drug-resistant strains. National Jewish has worked closely with experienced surgeons at nearby University of Colorado Hospital, who learned the practice in the 1960s.

A study of 205 patients treated for multidrug resistant TB at National Jewish between 1983 and 1998 showed that those who underwent surgery had a 90% cure rate, Iseman said. About 20 of those patients are believed to fall into the newly created XDR category, and doctors are trying to find cure and survival rates for those patients, he said.

Of all 205 patients, 9% died of TB, Iseman said.

Speaker's TB was caught early by chance. It was discovered in January when he had a chest X-ray for a rib injury. Otherwise, Speaker hasn't shown any other symptoms of the disease — coughing, loss of weight or a fever.

Speaker has had two negative tests for the bacteria in his sputum. Results of the third test were expected late Monday or Tuesday, hospital spokesman William Allstetter said in a statement.

If the third test is also negative, Speaker would be considered "relatively non-contagious" and could be allowed brief, escorted trips outside his room wearing a mask, Allstetter said. But such a finding would not mean that Speaker cannot transmit the disease, and the bacteria could still grow in Speaker's lungs and sputum, Allstetter said.

Drug-resistant TB patients who do venture outside are kept far from patients and anyone else in the community, so they pose no risk of infecting others.

### **The traveler's timeline**

Speaker has been undergoing treatment for TB since January, and local health officials say they told him on May 10 he had drug-resistant TB and should not travel. Exactly what he was told about his risk to other travelers is in dispute, but it was not until May 22 that tests showed he has extensively drug-resistant TB, or XDR-TB, which is impervious to most antibiotics.

The CDC then contacted him in his hotel room in Rome and told him about the diagnosis, urging him to sit tight. Instead, he and his wife went to Prague, flew to Montreal and drove into the USA.

His doctors say he is taking medications and will be given a combination of five drugs over a period of months. He also is being evaluated to see whether surgery to remove a lesion on his lung is an option.

Meanwhile, Speaker's fellow trans-Atlantic passengers are being advised to have TB tests now and again for about eight weeks to assure they were not infected.

Among those being tested are 26 business students and two faculty members at the University of South Carolina-Aiken who flew from Atlanta to Paris to visit companies in Slovakia and Austria, university spokeswoman Jennifer Lake says. They returned home May 28.

For one student, Laney Wiggins, 21, of Lexington, S.C., the possibility she could have been exposed to XDR-TB is unnerving.

"It's very difficult to swallow," says Wiggins, who has just completed her junior year. "It's taken a lot of praying and deep breathing to keep myself from panicking. This man willingly took hundreds of lives into his hands. It was careless, reckless, irresponsible and even selfish."

Wiggins learned she was at risk of infection early May 30 when her parents woke her after hearing radio reports of the scare. She took a baseline TB skin test that day at the Lexington County health department, and two days later she learned she had tested negative.

She and other passengers will be retested in a couple of months to make sure they have remained infection-free. The tests probably will continue every two months for a year, a doctor told Wiggins.

### **TB largely dormant**

About one-third of the world's population is infected with TB, according to WHO, but for the majority, TB remains dormant. About 5% to 10% of infected people will become sick during their lifetimes, and in most cases, that doesn't occur until people are elderly or ill with weakened immune systems.

"It's an unfortunate situation, and I'm sure he didn't mean to harm anyone — and hopefully he didn't," Wiggins says. "But his actions impacted all of us, and they will continue to for the next several years."

Wiggins described herself as very healthy and said she is most concerned for the health of her fellow passengers. She noticed nothing unusual during the eight-hour flight: "When you're on a flight of that length, the air gets very dry, and people are going to be coughing and sneezing. But no one was coughing any more than ordinary. I was absolutely, completely shocked when I found out what had happened."

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## **Inquiry Into Role of Tuberculosis Patient's Father-in-Law**

By [LAWRENCE K. ALTMAN](#), New York Times

The [Centers for Disease Control and Prevention](#) is investigating what role, if any, a staff scientist played in the international health scare set off by the odyssey of his son-in-law, who has extremely drug-resistant [tuberculosis](#).

The scientist, Robert Cooksey, is a microbiologist who works with tuberculosis and other organisms at the federal diseases agency in Atlanta. Dr. Cooksey said he had given his daughter's fiancé, Andrew Speaker, "fatherly advice" about traveling to Greece for his wedding and honeymoon in Europe in May.

But yesterday Dr. Cooksey did not directly address the question of what he would have done under the same circumstances. "I wasn't in that situation," Dr. Cooksey said on the

ABC program "Good Morning America," "but I probably would have done the very same thing."

On the same program, Andrew Speaker's father, Ted, said that he, Andrew and others met with Fulton County health officials in Atlanta on May 10, four days before Andrew was planning to leave for Europe. Participants at the meeting were told that Andrew had a form of tuberculosis that was resistant to many drugs and difficult to treat.

At that point, Dr. Cooksey said on television, Andrew's smear tests showed no tuberculosis bacteria "and so, by the guidelines, he was not considered infectious" to others.

But guidelines issued by the [World Health Organization](#) say that "patients with multiple drug resistant tuberculosis should not travel until" no tuberculosis bacteria grow on culture tests performed in a laboratory.

The Fulton County health officials said they "preferred" that Andrew Speaker not travel but did not cite a specific reason. Ted Speaker said that he asked a health official whether he was "just saying this to cover yourself" and that the official replied, "Yes."

Ted Speaker said that in part because of a hearing loss, he taped the interview, without the knowledge of the Fulton County health officials, and that he would make it available at an unspecified time.

Andrew Speaker chose to fly to Europe on May 12, two days ahead of schedule, and flew back to North America during the honeymoon. He is now being treated at National Jewish Medical and Research Center in Denver. Yesterday, two smear tests there confirmed similar tests performed in Atlanta and New York City that he does not appear to be highly infectious to others because doctors and microbiologists saw no evidence of TB bacteria, hospital officials said. Findings from a third smear are pending as are those from cultures, which will take weeks.

The C.D.C. said late Saturday that it was undertaking a number of reviews related to Mr. Speaker's case, including how Dr. Cooksey "was involved in this matter."

Dr. Julie L. Gerberding, the director of the centers, said on Friday that Dr. Cooksey "may have been involved in preparing one of the lab tests to determine the type of bacteria" present in the specimen sent to the C.D.C. by Fulton County and Georgia State health officials.

She said it was not until May 18 that the centers learned the identity of the patient whose specimen was being tested there or that the patient had left the country.

The even more dangerous form was not reported until May 22.

Dr. Cooksey "certainly has not been engaged in the details or the ongoing decisions about how to handle this particular situation," Dr. Gerberding said at a news conference.

Yesterday, the C.D.C. said it did not know whether Mr. Speaker's name was on the specimens that Dr. Cooksey might have worked with or whether the labels were coded.

Dr. Gerberding also said that at several times "he helped us facilitate communication with his son-in-law and the wife," Sarah. Dr. Cooksey's "assistance was actually extremely helpful in getting us in cellphone" contact with Andrew Speaker in Europe, Dr. Gerberding said, "to help us determine how to help him get into a safer health care environment."

On Saturday, officials in Denver gave Mr. Speaker a letter ordering that he "be detained" for treatment "until further laboratory tests indicate that your TB is no longer likely to be contagious." The Denver order rescinded another one issued by the C.D.C. that put Mr. Speaker under a rarely used federal isolation order.

The centers and National Jewish have provided few details about Mr. Speaker's medical course since his TB was accidentally detected when he had a chest X-ray for a rib injury in January. Dr. Cooksey has said that he has never had tuberculosis and could not have infected Mr. Speaker.