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Editor's notes: Woodward, Stillwater, Tahlequah, McAlester note

System links hospitals with labs, health agency

STATPack is a secure, Web-based network linking St. Mary's and, when the system is fully installed, nine other labs in various parts of the state with Oklahoma State Department of Health.

By Jeff Mullin
CNHI News Service

ENID, Okla. — Recently, a medical technician at St. Mary's Regional Medical Center was running tests on the blood of a patient when something unusual cropped up.

"We saw a malarial parasite on a patient," said Barton Adair, St. Mary's laboratory director.

The patient, who had been in Africa and apparently contracted the disease there, needed treatment, but St. Mary's lab personnel were uncertain which of four malaria-causing organisms they were seeing. The treatment given would depend on which type of malaria they were confronting.

Thanks to a piece of technology just installed at the hospital, they were able to get their answer in minutes, instead of hours.

"It actually worked already within the first week," said Dr. Joe Snodgrass, pathologist and medical director of the St. Mary's lab.

STATPack, which stands for Secure Telecommunications Application Terminal Package, was installed at St. Mary's just days before the malaria case presented.

STATPack is a secure, Web-based network linking St. Mary's and, when the system is fully installed, nine other labs in various parts of the state with Oklahoma State Department of Health.

The system, purchased with funds from Health Resources and Services Administration, an arm of U.S.

Department of Health and Human Services, was designed to help make clinical labs in Oklahoma better able to identify bioterrorism materials.

The system involves a camera attached to a microscope and a digital Web cam mounted on a sealed Plexiglas box connected to a computer, which are linked directly to the state Health Department. The system will allow a microbiologist at St. Mary's to send still photos or live video of suspicious samples to the state Health Department's experts.

"We can say, 'We don't really think it is, but we think this kind of looks suspicious to us, what do you guys think?'" said Adair.

When the system is completely up and running, said John Murray, director of training at the state Health Department's public health laboratory, there will be labs connected by STATPack in every part of the state. Other labs in the system will be at Woodward Regional Hospital and in Clinton, Stillwater, Tahlequah, Tulsa, Idabel, McAlester, Durant and Lawton. Murray said the goal is to have the entire system up and running by early 2007. All communication between labs via STATPack first goes through the state Health Department.

"We were lucky enough to be one of the first labs around the state to get this," said Adair.

When the local lab technician identified the malarial parasite, a rarity in Northwest Oklahoma, the Enid hospital was able to use STATPack to capture an image of the sample and send it to the state Health Department for identification.

"We're going to have the ability regionally, around the state, to have the assistance of the state Health Department to identify organisms early on if something doesn't make sense," said Snodgrass.

Before STATPack, all suspicious samples had to be sent to the state Health Department by courier, and a response could take hours. No longer.

"Within 20 minutes they will call me back if it was an emergency and I was very suspicious," said Kellie Metcalf, microbiology supervisor for the St. Mary's lab.

A state Health Department medical technician will be available 24 hours a day, seven days a week, via beeper and laptop computer, to analyze samples sent from STATPack locations.

STATPack enables labs around the state to send pictures of suspicious samples to the state Health Department, not the samples themselves, thus lessening the risk of spreading a potentially deadly bioterror agent. After seeing a sample via STATPack, however, Adair said, the state Health Department still could request a physical sample be sent to its lab.

"Before they wouldn't have a clue what was coming in their door," said Adair. "Now they can be ready for it as soon as the courier hits the door."

The system is designed to send samples of bacteria and parasites, not viruses like West Nile or the H5N1 virus that causes the so-called bird flu. Snodgrass said the system will someday have the capability to transmit pictures of tissue sections for diagnoses of viruses. Many potential bioterrorism agents such as anthrax, cholera and botulism are bacterial.

STATPack was developed by faculty and students at University of Nebraska-Omaha. Oklahoma is the second state in the nation to install the STATPack system.

"It is an advantage for the state of Oklahoma and the community, I think, to have quick response times," said Snodgrass.

Jeff Mullin writes for Enid (Okla.) News & Eagle.

Photos



Kellie Metcalf, microbiology supervisor at St. Mary's Regional Medical Center's laboratory, analyzes bacteria through a microscope. A secure, Web-based network now links St. Mary's to the state Health Department, allowing officials to address dangerous disease and bioterrorism concerns immediately. Andy Carpenean/Enid News & Eagle