

## **Health officials study E. coli cases**

The Union Democrat

By ERIN MAYES

The discovery of five cases of E. coli in children ranging from 8 months to 17 years has kept the Calaveras County Public Health Department very busy this month.

For each child infected with the bacteria, communicable disease control nurse Jane Loeffler has conducted contact investigations. She's spoken with the infected children or their parents to determine where they've been, what they've eaten and who they've been around. She's looked into anything that could lead to a source of infection.

"We have a big binder in the health department. It's called 'big blue,'" said Public Health Officer Dr. Dean Kelaita, who has held that position since 2000. "In this, we have protocols on how to approach all of these diseases we might encounter."

The first and most important step is to find out if there's a common link, such as one place to which each infected child went to or a certain food each ate.

"If it's a food-borne outbreak or illness (such as E. coli) ... if there's a source in the community that the person had gotten that from -- that would mean other people are at risk, too," said Kelaita.

So far, no common community source has been discovered and it's unknown if the bacteria found in three young Angels Camp children in early May is related to that discovered in two Murphys teens Monday.

To find out, a state lab in Richmond will analyze genetic material taken from all five children to "see if the fingerprint of the DNA is identical," Kelaita said. "If it is, it might point to a single source."

The doctor said he suspects the two outbreaks are unrelated but will know more in about three weeks after results come back from the lab.

Examples of community sources can be taken from past outbreaks in nearby Amador County, he said.

In one instance, a well in a trailer park was contaminated and many people became ill.

Another time, the skins on a batch of cantaloupes were contaminated with E. coli. When those skins were cut with knives, the bacteria was dragged into the meat of the fruit.

And several years ago, four children infected with E. coli in Calaveras County were believed to have been infected after visiting the livestock area at the county fair.

"When it comes to livestock, the way that is transmitted is through poor hand hygiene," Kelaita said. The bacteria can be passed in the manure of young calves and other cattle, according to the National Center for Infectious Diseases.

The two Murphys boys diagnosed most recently with the infection were known to have shown animals at the May 13-16 Calaveras County Fair. The incubation period of E. coli is from three to five days.

There are no plans to test cattle or swab the livestock areas at the fairgrounds, Kelaita said.

"I talked to a doctor at the state involved with communicable disease investigations," he said. "His recommendation was that it was not warranted. If we assume that the livestock, to a certain degree, can carry E. coli ... then to go out to the livestock pens and start swabbing the railing or the grounds, that really wouldn't change what we knew. We make the assumption that it's there."

The two most recently diagnosed are brothers, ages 14 and 17, who attend Avery Middle School and Bret Harte High School. Each school has distributed informational fliers for students to take home.

But, Kelaita assured, "the chances of other students being exposed is very low. Casual contact in a high school setting is not a high risk exposure."

A few "symptomatic people who have been loosely connected" to the two boys are being tested right now to see if they are infected, he said.

He said he knows of only a few people being tested and that they were in contact with the household itself.

In the case earlier this month, as many as 25 families of children who had been in contact with the three infected children through day care and a church playgroup were notified their children were at risk.

Initially only two children -- 4-year old Nicholas Kristoff and his 8-month-old sister Abigail -- were shown to have contracted the bacteria. Soon after, another 3-year-old girl who received care from the Kristoff children's mother, Staci Kristoff, tested positive.

No other children have tested positive for E. coli.

Patients can suffer severe diarrhea and abdominal cramps but can sometimes have no symptoms. Usually little or no fever is present and the illness resolves itself in five to 10 days.

Nicholas was the only patient to suffer a severe reaction and was taken to Oakland Children's Hospital on May 5. He developed Hemolytic Uremic Syndrome, a rare side effect that occurs in between 2 and 7 percent of those infected. His kidneys shut down and he was put on dialysis. Soon after, fluid collected in his lungs and he was put on a respirator.

The dialysis tube was removed from his abdomen last Thursday and his kidneys have shown improvement. The respirator was removed Saturday and, his parents said, he's even started to smile, although he is having withdrawals from many weeks of heavy medication.

Doctors said Nicholas could be home in one to two weeks.

Meanwhile, the Public Health Department has notified all area physicians of the E. coli infections and to be on the lookout for patients with symptoms characteristic of the illness.

Physicians are required to notify the department immediately if they have patients who test positive for E. coli

Kelaita encouraged county residents to continue with preventive measures such as washing their hands thoroughly, particularly if they've been near livestock, and cooking ground meat completely.