

**TRANSCRIPT****FRONTLINE: The Trouble with Antibiotics****Tracing *E. coli* Infections Back to the Food Supply****Video 1 - Infections Rise**

**DAVID E. HOFFMAN, Correspondent:** [voice-over] Flagstaff's hospital has seen a rise in urinary tract infections that are increasingly resistant to antibiotics.

**ELIZABETH DuPREEZ, Pharm.D., Infectious Disease Pharmacist:** OK, we have the lady in room 12. She came in two days ago with the *E. coli* in her urine.

**DAVID E. HOFFMAN:** [on camera] Right.

**ELIZABETH DuPREEZ:** Well, it came back this morning as being a resistant organism, so we had changed from zosyn to a carbapenem.

**DAVID E. HOFFMAN:** [voice-over] These infections strike an estimated eight million Americans every year. Like in Flagstaff, doctors around the country are struggling to treat them.

**ELIZABETH DuPREEZ:** Looks like it's only preliminary, but looks like it's a gram-negative rod.

We're seeing a lot more patients that were previously normally healthy have to be admitted because they've gone through multiple outpatient courses of antibiotics, they haven't improved, and at the point that they come in, that bacteria has gone into their bloodstream. And that requires immediate hospitalization.

You don't have a normally healthy 30-year-old woman come in, who's never been in a hospital, with a resistant urinary tract infection that's moved to her blood. Where did she get that organism from?

**DAVID E. HOFFMAN:** This problem caught the attention of a genetic researcher who had a theory about where some of these infections could be coming from.

**LANCE PRICE, Ph.D., Microbiologist, T-Gen Research Institute:** So this is the meat section, and this is where our team spent a good part of their year last year, buying two packages of every brand of chicken, turkey and pork.

**WOMAN:** No expiration.

**LANCE PRICE:** This is chicken. I want to get some organics, so I'll get two of these organics.

**DAVID E. HOFFMAN:** Lance Price started sampling the meat supply in Flagstaff in 2012, trying to figure out if resistant bacteria from farms is ending up on the meat we buy.

**LANCE PRICE:** We started this study because we had this hypothesis, this theory that food could serve as a source of E. coli that then went on to cause urinary tract infections.

Could I get two pounds of the ground turkey? But could I get it in two separate packages?

**DAVID E. HOFFMAN:** Price isn't concerned with the trace amounts of antibiotics that could be in meat. He's looking for antibiotic-resistant bacteria that could be on the meat and cause dangerous infections if they end up on our hands or our kitchen counters, or if the meat isn't cooked enough.

**LANCE PRICE:** We're producing nine billion food animals, and by using antibiotics in food animal production, we're creating drug-resistant pathogens that can then go on to cause drug-resistant infections in you and me.

**WOMAN:** These guys expire on the 6th.

**LANCE PRICE:** The problem with urinary tract infections is that if you get a bladder infection with E. coli and it's antibiotic-resistant, and the doctor goes to treat you and that treatment fails because the bacteria is resistant, then it can get in the kidneys. And once it has—once it's in your kidneys, it has access to your blood, right, and so then you can get what we call sepsis, which kills 40,000 Americans each year.

OK, thanks a lot.

We're going to put it into a broth. We're going to put it in the incubator and we're going to see if we can grow E.coli from it.

**DAVID E. HOFFMAN:** What Price wanted to know is whether the meat aisles of Flagstaff's supermarkets were the source of some of the dangerous urinary tract infections that were showing up in the local hospital. His study would take several years.