After the Fact | Antibiotic Resistance: When Drugs Don't Work Anymore

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TRANSCRIPT

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Dan LeDuc, host: Welcome to "After the Fact," a podcast that tells the stories about the numbers shaping our world. We can take antibiotics for granted today—after all, most of us have taken these prescription drugs for strep throat or a sinus infection. And they have made possible what are now common medical procedures like joint replacement surgery and are even used in cancer chemotherapy. But what happens when these drugs stop working?

It sounds like a plot from a Hollywood thriller—but the threat is real. I'm Dan LeDuc for The Pew Charitable Trusts, and in this episode we are focusing on the problem of antibiotic resistance. Bacteria evolve over time and often develop the ability to fight off antibiotics, becoming superbugs that multiply and can't be treated by the drugs we now have at our disposal. This is happening right now. The Centers for Disease Control and Prevention estimates that 2 million Americans each year fall ill with antibiotic-resistant infections, and 23,000 of them die.

To fight superbugs, we need new antibiotics. That brings us to our main data point for this episode: 30 years. It's been more than 30 years since a new type of antibiotic has been brought to market. That means nearly every antibiotic in use today is based on a discovery made more than three decades ago. More needs to be done to encourage development of new antibiotics. But there's more to the problem of antibiotic resistance than a dearth of new drugs. The overprescribing of the antibiotics we already have has compounded the problem too. One in 3 antibiotic prescriptions written in doctor's offices, emergency rooms, and clinics are actually considered medically unnecessary. These drugs don't work against viral infections like the common cold, pneumonia, or bronchitis. And through the overuse of antibiotics, superbugs evolve even faster.

Chris and Joyce Romm sadly know these facts from personal experience. Their son, Carl, an Army veteran, was 27 when he lost his life to a strain of an antibiotic resistant bacteria in 2010. Since then, the Romms have been spreading the word about this growing public health threat,

talking with lawmakers in Washington and to scientists. And recently they spoke with Pew's Laura Margison.

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Laura Margison, The Pew Charitable Trusts: If you could share your story about your son, Carl Romm, and just share a little more about him.

Chris Romm: Carl was born on April 9, 1983, and he was an absolutely perfect baby. And he was a strapping, muscular, perfect child. And he grew into an absolutely charming, wonderful, strong young man.

Joyce Romm: Very kind heart, very kind heart. He would do things, like he came home from leave and didn't let us know that he was coming. And there was a doorbell rang, and I went to the front door. And he had his back to the door, and when he turned around, he had brought roses home for me—that's my favorite flower. And those are the things that he would do. He was not only a son, but he was a friend, and he was fun, yeah.

Laura Margison: He sounds like an incredibly kind and warmhearted and special person. And so thank you for sharing that. And perhaps you could talk a little bit about what happened.

Chris Romm: Carl was never wholly well after he left the Army. He had suffered an injury while in the Army, and it required, eventually, the partial amputation of his right trigger finger. But he came home, and he was home for a few months and developed recurrent bouts of what we thought were flu, pneumonia. He would go to the hospital, and he was diagnosed with the flu or bronchitis or something along those lines. And then the day came—and the day happened to be our anniversary. It was the 2nd of July, 2010. We were at a baseball game in Reno, and Carl called us. He was at the hospital, and he was being admitted. And we had asked him over and over to go to the hospital and get checked out. Like any normal 27-year-old, it's the last thing he wanted to do, obviously. And he called us and told us that he was being admitted. He didn't tell us that he was being admitted to the ICU.

Joyce Romm: No.

Chris Romm: And he was admitted to the hospital with—at that time, we didn't know exactly what was going on with him, other than they told us that he was septic. So he had a raging bloodstream infection of some type. And they took cultures, and they eventually diagnosed him with *Staph aureus*. That's where it all started. And he would get a little bit better, but during that particular time in the hospital, he developed blood clots. His lungs were full of pulmonary embolisms.

Joyce Romm: Almost white, there were so many in his lungs, yeah.

Chris Romm: And there were so many hospital visits that it's somewhat difficult to separate them, one from the other. I would have to sit down with clinical notes to differentiate them to be 100 percent accurate. But it continued on. He got better. Things were under control, and he was released from the hospital, I think, five days later. And he was relatively well, came home. And that night, Joyce came to get me. He was in the living room, sitting in my leather chair, shaking uncontrollably.

Joyce Romm: Freezing cold, freezing cold. He had a hat on. He had a jacket on. He had a blanket around him, and he was just shaking.

Chris Romm: Middle of summer. And I had to talk him into going back to the hospital, because I think we all have an inner sense that we know that something bad is going on.

Joyce Romm: We couldn't take care of him like that.

Chris Romm: They did cultures immediately, and he was readmitted to the hospital with—we didn't know exactly what was going on—except for he did have, again, *Staph aureus*. Rampant blood clots had redoubled throughout his body. He had a deep-vein thrombosis in his legs. He had pain all over his body. His joints were swollen.

Joyce Romm: A surgeon, one of the doctors, came up to us and said, "He needs surgery." And this is in Reno, at the time. And he said, "However, if I do it, I won't be able to get him off the heart-and-lung machine." It was at that point, we decided that they would send him to Stanford University Hospital.

Chris Romm: He was transported by air ambulance from Reno to Stanford. So they had to arrange for an air ambulance. He was in ICU. They had to intubate him. And you're standing there watching, both of us, this terrified 27-year-old kid who's trying to be strong for his mother and absolutely did not want to be intubated. But they had to intubate him to transport him. And he was terrified, obviously, that he wouldn't—because they have to sedate you—that he wouldn't wake up. And we actually—we drove like crazy people—

Joyce Romm: We drove.

Chris Romm: And we beat him to Stanford, from Reno.

Laura Margison: Oh my goodness.

Chris Romm: And we came to find out later on that his heart was so damaged, his tricuspid valve was so damaged, that the rest of his heart was starting to fail because he had bacterial endocarditis. We still don't know exactly how this occurred. And that you never find out, as a parent—you want a definitive answer. Where did this come from? What caused this? And—

Joyce Romm: No one could give us an answer.

Chris Romm: Nobody. Everybody had their ideas, but there were no definitive—and to this day, there are no definitive answers. They were not sure, when he got to Stanford, that they would be able to successfully treat him. They needed to stabilize him, and that took them, I believe it was six days—

Joyce Romm: Six days, yeah.

Chris Romm: For him to get strong enough, with ever-increasing types and dosages of antibiotics. The laundry list of antibiotics—literally, they threw the entire arsenal at him and stabilized him. And he was able to have open-heart surgery. And so he sailed through the surgery. And I had promised him—wrongly or rightly—that I would take care of him, that we would take care of him, that he would be OK. Just trust me. And at the end of the day, I couldn't fulfill that.

Joyce Romm: Chris picked him up, drove him back to Reno. And he spent a couple of days home.

Laura Margison: That's nice.

Chris Romm: And I brought him home. Joyce was waiting at home, and I think everything was okay until, again, Joyce woke me up in the middle of the night.

Joyce Romm: Yeah. Carl had called for me. And he was right back to shivering and not being able to get warm. And so it was back to the hospital.

Chris Romm: And the doctors kept telling us that they have to try and get him off of antibiotics to give his body a chance to cleanse itself—

Joyce Romm: To do its job, yeah.

Chris Romm: To try and allow his immune system to pick back up.

Joyce Romm: And it just never happened.

Chris Romm: And it didn't happen. And on his last trip to the hospital, he was there a long—I think he was there two weeks, and they threw every—

Joyce Romm: Everything.

Chris Romm: Everything they possibly could at him.

Joyce Romm: Carl called the night before, just to say goodnight. And he was going to get discharged in the morning. And we said, goodnight, see you in the morning.

Chris Romm: They felt that he was well enough to take him off of all the cardiac monitoring. And they put him on just a medical floor, which is perfectly normal, natural. And that's what you do in a hospital. In the morning, at 7:15 in the morning, I'd stopped in to say good morning to him. And we were hopefully going to bring him home that day, and he wasn't in his bed. And there's water running in the bathroom. So I figured that he was in the bathroom, and he was taking a shower, and they were going to let him out later that day. And the water kept running and kept running. And I didn't realize it till after the fact, but there was no shower in there. It was only the sink. He was on the floor in the bathroom, and it was obvious to me that he was already gone.

Laura Margison: He sounds like he was such a strong fighter.

Joyce Romm: He was.

Chris Romm: He was. This really started on July the 2nd, on our anniversary. And he died on September the 2nd.

Joyce Romm: Had his heart surgery on August 2nd. I was telling you earlier, the number two, I don't like anymore.

Laura Margison: I can see why.

Joyce Romm: Yeah, because within that span of time, we lost him.

Laura Margison: I'm so sorry.

Chris Romm: And it has—I looked at—my number one mission in life was trying to protect Joyce and keep her sane, and keep—I knew that I had to keep us together, because things like this can either tear you—

Joyce Romm: Tear you apart.

Chris Romm: Tear you totally apart.

Joyce Romm: Or bring you together.

Laura Margison: We have continued to power through it, and—

Joyce Romm: It's not the same.

Chris Romm: It never will be the same.

Joyce Romm: It never will be the same. It's different, but we're still here.

Chris Romm: And all the while, I'm thinking about how this happens. And why I thought about it at the time is still beyond me. How many other people does this happen to? And how much worse it could be.

Laura Margison: The way you're sitting here, sharing this experience, I can see how strong, how a single unit that you are, and how, I think, looking forward, by sharing this you really are—you have the potential, as well, to educate others through Carl's—the experience that he went through. In terms of antibiotic resistance, was that something you were even familiar with?

Joyce Romm: No.

Chris Romm: I had—

Joyce Romm: I thought they had a cure for everything. Naively, I thought whatever he gets, they have something for him. And they'll just keep doing whatever they have to do to keep the puzzle together. But Chris was more educated in that area than I was, because he grew up in a hospital.

Chris Romm: I grew up—my mother taught nursing, and she opened a hospital. So I had a little deeper understanding of the medical world. The depth of knowledge that I've learned about antibiotics and antibiotic resistance—I always knew about the problems of overprescribing and resistance. I didn't realize until Carl became ill how devastating and overwhelming the problem really is, and how it's getting worse by the day.

Joyce Romm: After we lost Carl, very good friends of ours lost their daughter in much the same way, except that she didn't go through months of dealing with it. She actually got sick and died the same day. The mother watched—one of the things that this has done for me—well, I'm sure Chris can speak for himself—but for me, is that I have that empathy now. I can go to a mother and hold her. And I know what she's feeling. And I find that a gift as well, to be able to do that. So we know other families that have lost children in the same—didn't have the drug for it, didn't have the ability to save them.

Laura Margison: Could you describe, then, has that opened doors in relationships with other people who have faced similar challenges or who might have been on the other side of it, trying to help families through this?

Joyce Romm: Mainly, we're here to just keep Carl's memory alive, and, for him and for others like him, that won't have to go through it again, to bring the knowledge to people that there's not enough antibiotics. And it's important that we do the research to get them.

Chris Romm: It's all too common, and it is—for me, I have been able to find something that I know—that Joyce and I can have a meaningful impact in, going forward. Because people truly don't realize the train that is coming at us. And every medical professional that we speak with tells us that they firmly believe that Mother Nature, in the form of bacteria or some rogue virus, is coming at us like a freight train, and we are ill-prepared. You have to let people know how valuable every single human life is. And most people—most of us—until something tragic happens, bury our heads in the sand. It happens to somebody else.

Joyce Romm: Mm-hmm, "Doesn't happen to me," yeah.

Chris Romm: It is you. We are you, and this is coming. In some way, shape, or form, it can happen to all of us. And if we can do something to help another family any place in the world, if we could find a way to help in any way so that somebody else doesn't suffer—

Laura Margison: So with that in mind, one study with the CDC found that 1 in 3 outpatient prescriptions for antibiotics are completely unnecessary. What would you want patients and doctors to consider when they demand or prescribe antibiotics that aren't necessary? Do you know what people can do in their everyday lives to help combat antibiotic resistance?

Chris Romm: If there's not a proven requirement for antibiotics, if you have not definitively been diagnosed with an infection that requires an antibiotic—

Joyce Romm: Don't take it.

Chris Romm: Don't ask a doctor for a prescription for an antibiotic for a sore throat. And many doctors are so overwhelmed. And our family physician tells us this all the time. People—they expect her to write a prescription because they have a cough or the flu. And people have this mindset that they will get over it but if only they have an antibiotic.

Joyce Romm: Think before you ask for an antibiotic. Think why you think you need that. And two, be strong enough to ask your physician, "Why are you giving me this? And is there another way?" Just knowledge.

Laura Margison: Knowledge is power.

Joyce Romm: Knowledge is power.

Laura Margison: That's right. I thank you for sharing your story.

Chris Romm: Thank you for giving a voice to the loss of our child.

[Music]

Dan LeDuc: If Carl Romm was alive today, he'd be 34 years old. That's about how long it's been since a new type of antibiotic has been brought to the public.

For The Pew Charitable Trusts, I'm Dan LeDuc. And this is "After the Fact."