Part I: Poverty and the rise of MDR TB in Peru

Narrator: In Lima, Peru, 29-year-old Raquel wonders why she is still suffering from tuberculosis. For years she's been taking antibiotics, but she remains highly infectious and her lungs are weak and battered.

Raquel: None of my friends know that I have TB because I'm afraid that they will say, "Just go away." I feel that if I am rejected, I won't be able to bear the pain, so I would rather not see them.

Narrator: Raquel is used to rejection. Her husband left to avoid getting sick. Now, she and her son Bruno must depend on her elderly mother, and their future looks bleak.

Nearby, Julia Giuseppe has also battled TB for years. Tests reveal her children are infected as well, but they haven't developed active disease.

In fact, one-third of the world's population now carries the TB bacillus in their body. Like a time bomb waiting to go off.

Howard Markel: Ten percent of those people, about 200 million, before they die will develop the active form of tuberculosis. The fact is, there are more people now infected with tuberculosis than at any other time in human history.

Narrator: Fueling the rise of TB are the millions of people now infected with HIV/AIDS, whose weakened immune systems make them vulnerable. But that's not the only reason the disease plagues countries like Peru.

In Lima, TB thrives in shanty towns like Carabaya, where tiny shacks cling to any patch of unclaimed rocky hillside.

Within impoverished families crammed into tight quarters, it's the perfect breeding ground for TB bacteria that pass through the air from victim to victim.

Because the bacteria are constantly evolving, patients like Julia must take multiple drugs for months. And following the regimen is critical.

As the drugs start killing the germs, many people begin to feel better and stop taking their pills. But a few germs are naturally resistant to the antibiotics. They survive, quickly multiply, and become majority. Now if patients restart their medicine, these resistant bacteria become tougher to kill.

Because this was happening in Peru, in 1991 the government set up a program called DOT, for Directly Observed Therapy. The premise is, if nurses make sure patients swallow all their antibiotics every day for six months, they will always be cured. And this was the fortunate outcome for most TB victims...but not all.

In Carabaya, the crosses of people dying from TB began creeping up the mountainside as steadily as the squatter settlement itself.

Part II: Everyone Around Her is at Risk

In 1995, the situation puzzles two doctors, Paul Farmer and Jim Kim, working in Carabaya through their nonprofit group Partners In Health.

Jim Kim: Peru had the best TB program in the world and yet we were finding patient after patient after patient still suffering from tuberculosis, and we felt certain that there was a big problem here.

Narrator: To find out why patients in a model program are not getting better, Kim and Farmer sent Peruvian colleague Jaime Bayona into the clinics to investigate.

Jaime Bayona: I asked the nurses if they knew of people that were sick with TB, that went every day to the health center to take pills but were never healed. And the answer was, "Yeah, we have a lot of cases like that."
Narrator: Since medical records are confidential, Jamie reads the files upside down searching for the tell-tale R's indicating patients whose TB is resistant to their medicines.

Paul Farmer: I was shocked, because the usual way of explaining drug resistance is, "Well, the patients aren't taking their meds," and these patients have been compliant and we had written documentation of their therapy.

Jim Kim: We then started asking some hard questions, and we asked the physicians, "What's going on with these patients? Don't you think they have drug resistance?" And the answer was a pretty stock one, "No, there's no problem with drug resistance. DOT is curing everybody. It's not an issue. It's not an issue. It's not an issue."

Narrator: Kim and Farmer are skeptical, but to prove otherwise they will need lab tests.

In 1995, they send the bacterial samples from several Carabaya patients to a state lab in Massachusetts. The results are chilling. Most samples are resistant not to one, but to all five antibiotics normally used to treat TB.

As Kim and Farmer suspected, it was not the patients that were the problem, but dangerous strains of multi-drug-resistant, or MDR, TB.

That is why Raquel is not getting better. The DOT drugs are useless against her highly-resistant TB.

Now, more than ever, she fears infecting her son Bruno, but all she can do is try not to breathe on him.

Raquel: My son wants to play with me and kiss me. He does not understand what's going on. He thinks that I am mean, that I don't love him, but I always tell him that I am sick, that I can infect him. He says, "It doesn't matter. You can. It doesn't matter if you are contagious."

Narrator: Although she fears spreading the disease, there are days when Raquel has to go to the market. Everyone around her is at risk.

Jim Kim: It's really a crisis. It's not as if these patients were active and they are being put in a sanitoria. They weren't being removed from the community. They were right there, sick with an infectious disease in a big, crowded city.

Narrator: If the epidemic isn't stopped, it will spread beyond the city or even the continent. Worse, these deadly strains could easily become untreatable.

Jim Kim: The notion that you're sitting on an airplane, even if you're in first class, and become infected with a disease that can kill you and that modern medicine could do nothing about is very frightening.

Narrator: Kim and Farmer believe the MDR TB patients can be cured, but they will have to convince Peru to provide entirely new drugs and more aggressive treatment.

Jim Kim: And we went to the authorities and said, "We'd like to start treating these patients." And at first they said, "You will not treat these patients." And we said, "Not treat the patients?" We just couldn't understand why.

In fact, it was much worse than that. They said, "If you start treating the patients, we'll look at your papers and we'll kick you out of the country."

Narrator: The problem is, the few drugs that cure MDR TB are highly toxic and cause dangerous side effects. Rarely used, they are so expensive the Peruvian government can't afford them.

Cesar Bonilla: The price of treating MDR patients was so high, it was impossible for us. It was not only an economic problem, the treatment was too complex and difficult to manage. We couldn't justify the investment.

Narrator: Even the World Health Organization agrees. In the 1990s, the official policy around the globe is to treat those with curable TB and let MDR victims die.
Jim Kim: And we thought, "But that's not public health. That's sort of like public death." And I said to Paul, "It's really important that we do this because if we show that we can treat drug-resistant TB, we would make the case that these complex health problems for poor people are things that we're just going to have to deal with." You've got to treat people with MDR TB to prevent it from spreading to others.

Narrator: With the authorities ignoring the growing threat, in 1996 Partners in Health sets out to cure a small group of patients on its own.

Paul Farmer: These are people who have already been told, "There's nothing that can be done for you," and it was really sort of their last chance -- not "sort of." Why qualify it? This was really the last chance for people who are sick with these highly-resistant strains.

Narrator: But each drug-resistant patient will need between 15- and $20,000 worth of medicine. Until they can raise the money, Farmer and Kim adopt a Robin Hood approach, borrowing the antibiotics from their hospital in Boston.

With lives on the line and time running out, Kim packs a suitcase and hopes he won't be stopped by customs.

Jim Kim: There's a lot of red tape in moving medications around anywhere, and across international borders there's a lot more.

Paul Farmer: We couldn't figure out a better way to do it than just to carry the drugs by hand.

Jim Kim: People who looked Peruvian always got stopped and had their bags checked. I could pass myself off as a Japanese tourist, and generally they treated us a little bit better.

Narrator: But can Partners in Health keep medicines flowing to patients this way? And will victims actually get better? It's a huge gamble. The only thing sure is, time is running out and the epidemic is spreading.

Part III: Facing TB Head-On.

Narrator: Back in Peru, the dire need for new antibiotics is starkly apparent. Despite the growing epidemic, not a single new TB drug has been developed in 30 years.

Working on a shoestring budget, Paul Farmer and Jim Kim are still trying to cure their small group of patients with drug-resistant TB. With medicines brought in from Boston, they've designed cocktails of rare drugs that each patient must take for two entire years. It's a daunting challenge.

Paul Farmer: When you're sick with tuberculosis caused by a strain like this, a very resistant strain, you have one shot, and it should be very aggressive. Lots of drugs, high doses, never miss a dose because, you know, the microbe can hang out and then resurface later.

Narrator: To manage the side effects and make sure every pill is swallowed, Partners in Health hires and trains workers from the community. But many fear visiting highly-contagious patients in their homes.

Jim Kim: They asked us questions like, "Well, you're asking us to take care of these patients, and we're scared. Aren't you scared?" And I'll never forget, the answer that Paul gave was, "Yeah, I'm scared. Everyone is scared. But, look, it's in the community and the only way to deal with this is to take it head-on."

Narrator: One nurse willing to take the risk is Lorena Mestaza. Although it's dangerous, she chooses not to wear a protective mask so patients like Raquel won't feel stigmatized.

Lorena Mestaza: It's not that the masks are physically uncomfortable, but it's like speaking to patients through a window. I want to be close to them, so the mask is like a barrier.

Narrator: For Lorena, winning a patient's trust is crucial,
especially when she must convince them to take medicines that cause horrible side effects.

One of Lorena's toughest cases is Antonio. As he struggled to work his way through school, he became infected. At age 21, he weighs only 66 pounds.

For 12 months, Lorena has been treating Antonio with six different drugs.

>> Antonio: The pills are hurting me. It's getting worse.
>> Lorena Mestaza: Antonio is having a lot of stomach problems because of the drugs. He struggles with nausea as well as fatigue, depression, and joint pains.

>> Jim Kim: Those early months were the most difficult because here we were giving treatment that no one's heard of, with drugs that no one's heard of. And while they were getting better in some ways, they were also really sick with side effects. So we had go and stand by them and convince them, "Please, you need to continue taking your medicines because if you don't, you're going to die."

>> Narrator: As Partners in Health urges patients to stick to the treatment, they still don't know if the two-year experiment will actually work.

>> Paul Farmer: I think that we all had doubts. Privately we're thinking, "Oh, my God, this is so hard," to get the medicines, to get the patients to think about their nutritional issues, the side effects -- but it was a nightmare. Every day we had doubts.

Part IV: Reason to Endure

>> Narrator: For one patient, the signs are not good. Despite new drugs, X-rays reveal that TB still consumes Raquel's lungs.

>> Raquel: There is no improvement in my condition. I don't know why. Maybe I'm too resistant. I've been told to stop taking my medications because they no longer have any effect on me. I don't know what drugs I'm going to receive next.

>> Narrator: It turns out that Raquel is carrying a strain of bacteria resistant to virtually all TB drugs. But she appears to be in the minority.

Tests confirm that Antonio is no longer infectious. If he can endure his antibiotics for a few more months, he will be totally cured.

Julia is also disease-free after battling TB for years.

As more positive results pour in, Partners in Health's huge gamble pays off. From a group of patients considered incurable, 85 percent are disease-free. No one had believed they could do it. Now, foundations and companies begin to donate drugs legitimately.

Partners' dramatic success would have a global impact. Instead of letting multi-drug resistant patients die, the World Health Organization now recommends a treatment plan modeled on Peru.

Unfortunately, worldwide funding for such programs has fallen short. Of the estimated half million victims with multi-drug-resistant TB, only a fraction is being treated correctly. As a result, the disease is spreading.

>> Howard Markel: Multi-drug-resistant tuberculosis is dangerous, scary, and a huge public health threat. So that if we don't take the steps for all of us to work together and the wealthier nations helping the poorer nations, all of us are going to become ill.

>> Narrator: For Jim Kim, it makes economic sense to act quickly.

>> Jim Kim: If you don't treat it now and if you don't spend the money now, you're going to spend much, much more money later.

>> Narrator: And this is true for all infectious diseases.

>> Paul Farmer: MDR TB is part of the larger problem of crisis of drug resistance. And just go down the list of the big killers -- malaria,
AIDS, tuberculosis, bacterial infections -- that takes lives in hospitals, drug resistance is already a huge problem. All of our best drugs could be obsolete with each of these diseases.

>> Jim Kim: We should be thinking ahead.

>> Narrator: The specter of totally drug-resistant infections now haunts the world. With no antibiotics to save her Raquel passed away. Her son Bruno has also tested positive for TB.

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