Dan Rather Reports

Episode Number: 601

Episode Title: Addicted To Antibiotics

Description: Americans are so over-medicated with antibiotics that drugs once used to save lives are no longer effective. Antibiotic resistant bacteria is on the rise. Plus we travel to Norway, a country that makes it difficult to obtain antibiotics.

TEASE:

DAN RATHER (VOICE OVER)

TONIGHT…ANTIBIOTICS… MANKIND’S MOST IMPORTANT MEDICINE, IS NOW LOSING THE WAR AGAINST DEADLY DISEASE.

DR. STUART LEVY, TUFTS UNIVERSITY

Bacteria have seen dinosaurs come and they've seen them go. So we aren't going to destroy the bacterial world. We live in the bacterial world.

RATHER (VOICE OVER)

DOCTORS FEAR OUR OVERUSE OF THESE DRUGS WILL MEAN THE RETURN OF DISEASES WE ONCE THOUGHT WERE CURED…

DR. RITA MANGIONE-SMITH, INVESTIGATOR AT SEATTLE CHILDREN’S HOSPITAL RESEARCH INSTITUTE

I think giving any unnecessary treatment is just wrong. It's a dangerous, dangerous thing to do over the long term.

RATHER (VOICE OVER)

BUT ONE EUROPEAN COUNTRY IS LEADING THE WAY IN RETHINKING SOME OF THE BASIC FOUNDATIONS OF MODERN MEDICINE…

DR. MORTEN LINDBAEK, DOCTOR

We have some very good examples from the Nordic countries, with a clear message to the population and the doctors, "You should stop using this and this antibiotics."

RATHER (VOICE OVER)

WE’LL BRING YOU THE NEWS, TONIGHT ON DAN RATHER REPORTS.

ADDICTED TO ANTIBIOTICS:
RATHER (ON CAMERA)

GOOD EVENING. THERE ARE FEW PLACES IN WHICH WE FEEL MORE VULNERABLE AND SEEK MORE PRIVACY THAN THE DOCTOR’S OFFICE. OUR LEGAL SYSTEM EVEN PUTS DOCTORS IN THE SAME CLASS AS SPOUSES AND MEMBERS OF THE CLERGY. BUT TONIGHT, WE’RE GOING TO TAKE OUR CAMERAS INTO THE EXAMINATION ROOM AND INVESTIGATE ONE OF THE MOST COMMON INTERACTIONS BETWEEN US AND OUR PHYSICIANS. THE STAKES OF WHAT YOU WILL SEE ARE LITERALLY LIFE AND DEATH.

THE ISSUE IS ANTIBIOTICS. WE’VE ALL PROBABLY TAKEN THEM AT SOME POINT IN OUR LIVES, AND GIVEN IT LITTLE THOUGHT. BUT PUBLIC HEALTH PROFESSIONALS SAY OUR DECADES-LONG LOVE AFFAIR WITH THESE DRUGS IS RENDERING THEM USELESS. WHEN ONE DOESN’T WORK, WE ARE GIVEN ANOTHER. BUT SOMETIMES THERE MAY NOT BE ANY MORE TO GIVE.

PAM PIRES, STAPH INFECTION VICTIM

I was so sick, I-- I asked to die. My daughter said that was the worst thing to ever hear was, "Just let me die."

RATHER (VOICE OVER)

PAM PIRES IS A WIFE AND MOTHER OF TWO IN SAN JOSE, CALIFORNIA. WEEKLY FAMILY DINNERS ARE A TRADITION IN THE PIRES HOUSEHOLD, AND TONIGHT PAM GATHERED ALL THE PEOPLE SHE SAID STOOD BY HER WHEN, THREE YEARS AGO, HER LIFE SEEMED TO BE SLIPPING AWAY.

IT ALL STARTED WHEN PAM DECIDED TO UNDERGO WHAT SHE WAS TOLD WOULD BE A RELATIVELY SIMPLE PROCEDURE TO FIX A HERNIATED DISC IN HER BACK. SHE EXPECTED TO SPEND ONLY ONE NIGHT IN THE HOSPITAL RECOVERING. INSTEAD, SHE SPENT THE NEXT YEAR BATTLING TO STAY ALIVE.

PIRES

The shaking is so uncontrollable that my family said that the whole bed would start to move in the operating room. I could-- I just kept holding onto the side of the frame, you know, just begging for somebody to help me. I'd go through 100 back surgeries before I would ever go through-- havin' a staph infection.

RATHER (VOICE OVER)

DURING SURGERY, PAM CONTRACTED ONE OF THE WORLD’S MOST COMMON -- AND POTENTIALLY LETHAL -- BACTERIAL INFECTIONS,
STAPHYLOCOCCUS AUREUS, OTHERWISE KNOWN AS A STAPH INFECTION. STAPH BACTERIA CAN SPREAD LIKE MILDEW IN A DAMP BASEMENT IN ANY HOSPITAL WHEN EQUIPMENT, CLOTHING, OR EVEN HANDS ARE NOT WASHED AND STERILIZED PROPERLY. AND THESE DAYS, THERE’S NO GUARANTEE THAT AN ANTIBIOTIC WILL SAVE YOU.

RATHER

Do you remember how many different antibiotics you were given before they finally found one that worked.

PIRES

I went through five and then the sixth being the Vancomycin. They described it as the big guns.

RATHER

If you had not received that, where would you be today?

PIRES

Dead.

RATHER

Pretty sure of that?

PIRES

I'm positive.

RATHER (VOICE OVER)

EVERY YEAR, MORE THAN 90,000 AMERICANS DIE FROM SIMILAR INFECTIONS THAT ARE RESISTANT TO ANTIBIOTICS. THAT STUNNING FIGURE IS HIGHER THAN THE DEATH TOLL FROM AIDS, CAR ACCIDENTS AND PROSTATE CANCER COMBINED.

DR. STUART LEVY, TUFTS UNIVERSITY

I think we are in crisis mode, because we have bacteria out there that we can’t treat.

RATHER (VOICE OVER)

DR. STUART LEVY IS BOTH A PRACTICING MEDICAL DOCTOR AND A PROFESSOR OF MOLECULAR BIOLOGY AT THE TUFTS UNIVERSITY’S
SCHOOL OF MEDICINE IN BOSTON. HE IS ONE OF THE WORLD’S LEADING EXPERTS ON ANTIBIOTIC RESISTANCE.

RATHER

Is bacteria winning the war with antibiotics?

LEYVY

There isn't a bacterium out there for which we don't see resistance. What I can also say is that the majority also are resistant to more than one drug. Have we lost the battle? Not yet. But if you're the patient who died with a resistant staph infection, that person will say or his family, “That shouldn't have happened.” I agree.

RATHER (VOICE OVER)

DR. LEVY SAYS THE CAUSE OF THE CRISIS IS NOT IN DISPUTE: WE ARE SIMPLY USING TOO MANY ANTIBIOTICS.

LEYVY

Antibiotics are being grossly misused. Antibiotic resistance is mounting at a speed that we cannot control. And why? 'Cause we don't have control over antibiotic use in the country, in the world.

RATHER (VOICE OVER)

BUT HOW CAN WE POSSIBLY CUT DOWN ON THE VERY DRUGS THAT KEEP PEOPLE ALIVE? SURPRISINGLY, THE MAJORITY OF ANTIBIOTICS ARE NOT PRESCRIBED IN HOSPITALS, BUT IN THE GENERAL PRACTITIONERS OFFICE: 90% OF ALL ANTIBIOTICS ARE PRESCRIBED HERE...AND OFTEN WHEN THEY'RE NOT NEEDED. WE KNOW THE ROUTINE WELL. WE TAKE OURSELVES OR OUR CHILD INTO THE GENERAL PRACTITIONERS OFFICE FOR SYMPTOMS THAT HAVE BEEN GOING ON FOR A LITTLE TOO LONG...

DR. RITA MANGIONE-SMITH, INVESTIGATOR AT SEATTLE CHILDREN’S HOSPITAL RESEARCH INSTITUTE

I think a lot of people do feel like antibiotics are the panacea. They really believe, like, to get over this cold or this horrible sore throat or this cough, you know, oh gosh, it's been going on for three days, if I could only get on an antibiotic, I know I'd get better, you know? That's really ingrained in our thinking

RATHER (VOICE OVER)

DR. RITA MANGIONE-SMITH IS AN INVESTIGATOR AT SEATTLE CHILDREN’S HOSPITAL RESEARCH INSTITUTE AND LEADS A WEEKLY
TRAINING SESSION FOR RESIDENT PEDIATRICIANS AT THIS PEDIATRIC CLINIC IN SEATTLE, WASHINGTON. THEY CAN LEARN A LOT FROM HER.

MANGIONE-SMITH

There’s two types of inappropriate prescribing that you need to think about. It’s always wrong when it’s a viral diagnosis, right? So if any of you ever write down, URI; give me an antibiotic.... that’s bad don’t -- don’t do it!

RATHER (VOICE OVER)

SHE FIRST BECAME CONCERNED ABOUT THE OVERUSE OF ANTIBIOTICS AS A RESIDENT HERSELF IN THE 1990s, WHEN SHE REALIZED THAT WHAT SHE SAW OUT IN THE REAL WORLD DIDN’T MATCH WHAT SHE HAD LEARNED IN MEDICAL SCHOOL: DOCTORS MAKING UP TREATMENT PLANS THAT WERE NOT BASED ON THE EVIDENCE IN FRONT OF THEM.

MANGIONE-SMITH

In the 1990s, it was really bad. Okay, there are a couple of studies that were done-- that were published-- in-- the Journal of American Medical Association, in JAMA-- that showed that if you looked at national level data, we were, you know, prescribing antibiotics in greater than 50 percent of outpatient visits for most-- children with colds. And antibiotics do nothing for colds.

RATHER (VOICE OVER)

SO RATHER THAN SHRUG HER SHOULDERS AND ACCEPT WHAT SHE SAW AS STANDARD OPERATING PROCEDURE, SHE DECIDED TO JOIN A RESEARCH PROGRAM AT UCLA AND DEDICATE HER TIME TO FIGURING OUT WHAT WAS REALLY GOING ON...

MANGIONE-SMITH

I really wanted to understand when most doctors, I felt, knew when it was right to prescribe and when it wasn't. Why were they so often doing it when it wasn't indicated? So-- we designed a study where-- for each physician who we enrolled-- we would enroll-- a sample of parents and their children who were coming in for cold symptoms. And we videotaped the visits because, to me, that visit is the black box, right? It's like what actually happens there that, you know, makes a physician end up prescribing when maybe they ought not to.

RATHER (VOICE OVER)

DR. MANGIONE-SMITH ANALYZED THE INTERACTIONS BETWEEN 76 PEDIATRICIANS AND MORE THAN 2,000 PATIENTS. THE RESULTS BECAME
THREE LANDMARK STUDIES THAT SHOW A COMPLICATED MIX OF ASSUMPTIONS AND MISCOMMUNICATION THAT IMPLICATE ALL OF US.

MANGIONE-SMITH

One of our main findings was that when a physician believes a parent wanted an antibiotic, they are significantly more likely to inappropriately prescribe. So, even if they just have no evidence on which to base their decision from their physical exam and the history and everything, if they think that parent wants an antibiotic, they are significantly more likely to give it for a condition where it's not really appropriate.

DR. ROB ROSKIN, PEDIATRICIAN

Parents will say, "Well, can't we just try an antibiotic? Maybe it will help him."

RATHER (VOICE OVER)

DR. ROB ROSKIN HAS BEEN A PEDIATRICIAN AT THIS CLINIC IN SEATTLE, WASHINGTON FOR THE PAST 12 YEARS. HE WAS A PARTICIPANT IN ONE OF DR. MANGIONE-SMITH’S STUDIES AND HAS SINCE ATTENDED HER SEMINARS ON HOW TO PRESCRIBE ANTIBIOTICS MORE RESPONSIBLY....NOT AN EASY TASK IN OUR FAST-PACED WORLD WHERE MANY PEOPLE, HE SAYS, ARE JUST LOOKING FOR THAT QUICK-FIX.

ROSKIN

They may say-- things like-- you know, he's been coughing all night, and we just need to get him something so he can get some sleep. We're going off to Hawaii in two days, and we really want him to be okay for the plane. He's got a big football game on Saturday, and it's really important for him to get there.

RATHER (VOICE OVER)

THE MENTALITY THAT AN ILLNESS IS AN INCONVENIENCE TO BE FIXED WITH A MAGIC BULLET IS JUST PART OF THE AMERICAN WAY, SAYS DR. MANGIONE-SMITH, AND THE UNIQUELY AMERICAN APPROACH TO HEALTH CARE.

MANGIONE-SMITH

We kind of have a very consumerist approach to medicine in this country-- where there's a huge amount of concern, I think, among physicians that their patients have high levels of satisfaction, that they're doing what-- what's called shared decision making and making sure that, you know, the patient who's the customer is happy with the care that they're getting because if they're not, you know, they'll leave your practice and go somewhere else.
ROSKIN

One of my-- partners once had a patient-- say to her that she wanted-- they wanted her-- to be more like a waiter, and give them what they wanted. I think that it's much more common for us to see more of-- what you might characterize as subtle pressure. We have a discussion where clearly there's a-- there's a little bit of an agenda-- going on. So, a parent might say don't you think he needs an antibiotic? Should we try an antibiotic? What if it might be a bacteria? Should we give him something so it doesn't develop into pneumonia, or it doesn't develop into a more common infection?

RATHER (VOICE OVER)

THE MAJORITY OF THE INFECTIONS PRIMARY CARE DOCTORS SEE ARE VIRAL, UPPER RESPIRATORY TRACT INFECTIONS -- FOR WHICH ANTIBIOTICS CAN DO NOTHING. AND YET, A RECENT SEATTLE CHILDREN’S RESEARCH INSTITUTE STUDY SHOWS THAT DOCTORS PRESCRIBE ANTIBIOTICS IN NEARLY 60 PERCENT OF THESE CASES.

ROSKIN

I think the-- the reasons doctors prescribe antibiotics for colds and for viruses hasn't changed a lot over the years. It's still that same idea that maybe there's something there I'm missing. Maybe I'll do it just in case. It's probably not going to hurt. It's much easier to just give it, everyone's happy.

RATHER (VOICE OVER)

AND THAT JUST MAY BE THE CRUX OF THE PROBLEM. DR. MANGIONE-SMITH SAYS THERE IS A PERVERSIVE MISCONCEPTION IN SOCIETY AMONGST BOTH DOCTORS AND PATIENTS THAT BECAUSE ANTIBIOTICS HAVE FEWER NOTICEABLE SIDE-EFFECTS THAN MOST OTHER COMMON DRUGS, THERE’S NO DOWNSIDE TO PRESCRIBING THEM “JUST IN CASE.”

MANGIONE-SMITH

So, when you get-- put on antibiotics frequently-- say once a month, you are, at an individual level, more likely to be harboring resistant organisms in your nose and in your throat and in your whole respiratory tract. That's-- that's just biologically the way it works. The more you're exposed to antibiotics, the smarter your-- your bugs get, and the better they get at-- outsmarting the antibiotics.

RATHER (VOICE OVER)

SO NOT ONLY MAY AN INDIVIDUAL FIND IT HARDER AND HARDER TO TREAT THEIR OWN INFECTIONS, BUT ALSO, EVEN IF THEY ARE CURED OF A SPECIFIC ILLNESS, THE RESISTANT BACTERIA INSIDE THEM CAN SPREAD INTO THE ENVIRONMENT AND MOVE ON TO THE NEXT PERSON WHO MAY
NOT BE ABLE TO FIGHT THEM OFF WITH AN ANTIBIOTIC. THAT’S WHY DOCTORS LIKE STUART LEVY CALL ANTIBIOTICS “SOCIETAL DRUGS.”

LEVY

They're the only medication that comes to mind where your individual use affects the others in society. That's because you're not treating a problem of the person. You're treating the problem caused by an invader of the person, whether it's a virus, a bacterium, a fungus. And every treatment you take creates a sea of bacteria that want to live, and some of them will resist it. And then they will grow up and can move to your neighbors, to your children. So antibiotics are unique. They're not just individual drugs. They are societal drugs.

RATHER

I can hear someone in the audience saying, "Well, how does that happen? I take it. It's inside me. How does that affect you or anybody else in the neighborhood?"

LEVY

The difference is that if you were taking a heart medication, it’s only affecting your heart. There is an example, a study coming out of a dermatology unit in England, where they looked at patients taking antibiotics for acne, clearly not a threatening disease. And they found that the individuals living in the same household, the spouses, the children, were affected by the antibiotic being taken by the acne patient. How? Because the bacteria on their skin converted from being susceptible to being resistant. So you had a whole environmental change due by the individual use of the antibiotic.

RATHER (VOICE OVER)

DR. LEVY HAS SPENT DECADES TRYING TO DEVELOP ANTIBIOTICS THAT CAN STAY ONE STEP AHEAD OF THIS RESISTANCE...A TALL ORDER WHEN YOU’RE COMPETING AGAINST EVOLUTION ITSELF.

LEVY

Bacteria have seen dinosaurs come and they've seen them go. So we aren't going to destroy the bacterial world. We live in the bacterial world. So what happens? Bacteria have abilities to resist antibiotics. And they can do it either by a mutation in themselves or by acquiring resistance from other neighboring bacteria. What the antibiotic does is clear the playing field, gets rid of all the bacteria for which it can kill, and leaves the space open for those that are resistant. It's like over treating your lawn for crabgrass and ending up with dirt.

RATHER (VOICE OVER)
BACTERIA COLONIES DEVELOP RESISTANCE FOR THE SAME REASONS GAZELLES, FOR EXAMPLE, DEVELOPED GREAT SPEED: THE ONES THAT COULD OUTRUN PREDATORS WERE THE ONES TO PASS ON THEIR GENES. WHEN A COLONY OF BACTERIA IS BOMBARDED WITH ANTIBIOTICS, MOST DIE. BUT A FEW SURVIVE... AND THOSE THAT DO PASS ON THEIR RESISTANT GENES TO THEIR DESCENDANTS ... THEIR MILLIONS OF DESCENDANTS. IN THE SEVEN DECADES SINCE THE DISCOVERY OF ANTIBIOTICS WE HAVE YET TO INVENT A MIRACLE DRUG THAT CAN ULTIMATELY OUTSMART BACTERIA.

RATHER (ON CAMERA)

NOW, WHEN WE RETURN, WE’LL LOOK AT WHAT HAPPENED TO THE ORIGINAL ANTIBIOTIC “MIRACLE DRUG,” SO STAY HERE WITH US.

ADICTED TO ANTIBIOTICS ACT 2:

RATHER (VOICE OVER)

WHEN PENICILLIN WAS INTRODUCED TO A MASS MARKET IN THE 1940s, IT SEEMED LIKE A MIRACLE. SUDDENLY ONCE-FATAL INFECTIONS COULD BE CURED WITHIN DAYS. SOME SAY THE DISCOVERY OF PENICILLIN WAS THE MOST IMPORTANT MEDICAL ADVANCE EVER... ADDING SEVERAL YEARS TO HUMAN LIFE EXPECTANCY. FOR DECADES, THERE WAS A PERCEPTION THAT ANTIBIOTICS COULD CURE ANYTHING. AND SO THEY WERE USED FOR EVERYTHING.

BUT IT TOOK ONLY A FEW YEARS AFTER PENICILLIN’S DISCOVERY FOR RESISTANCE TO DEVELOP, AND TODAY, RESISTANCE IS SO HIGH, THAT PENICILLIN IS USELESS IN THE U.S. AGAINST NEARLY FIFTY PERCENT OF INFECTIONS THAT THE DRUG USED TO BE ABLE TO TREAT JUST TWENTY YEARS AGO. AND AS DR. LEVY FROM TUFTS UNIVERSITY MEDICAL CENTER EXPLAINED, THIS SAME STORY IS BEGINNING TO PLAY OUT WITH EVERY SINGLE SUBSEQUENT ANTIBIOTIC THAT’S COME TO MARKET.

RATHER

You spent a great deal, if not virtually the entirety of your career studying this. Do you get frustrated; do you want to just sort of grab us by the lapels and say, "Listen, pay attention to this?"

LEVY

If people can realize that overuse of antibiotics, demanding them of their physician, storing them in medicine cabinets to take wither-nither, one pill at a time, are causes of resistance. I interviewed a woman who kept ampicillin in a little pill box throughout, in
her pocketbook. And any sniffle, any little thing, she'd pop an ampicillin tablet. I mean, it sounds crazy, but people would rather treat themselves with some kind of treatment than have their car be seen by anything other than a mechanic. I would think you'd take a little bit better care of yourself.

RATHER (VOICE OVER)

PATIENT DEMAND AND DOCTOR ACQUIESCENCE IN A FUNDAMENTALLY CONSUMER-BASED CULTURE SEEMS TO BE THE DRIVING FORCE FOR OVER-PRESCRIPTION OF ANTIBIOTICS, ESPECIALLY WHEN THEY ARE NOT INDICATED, BUT AS DR. MANGIONE E-SMITH EXPLAINS, NEW EVIDENCE IN HER STUDY MAY ALSO BE POINTING TO A COMPLETELY NEW DIRECTION.

MANGIONE-SMITH

We found in our study, a parent came in saying, yes, I think my parent-- my child needs an antibiotic, and they came out saying, no I didn't get an antibiotic, but we also asked their satisfaction level with that visit, and if the doctor had communicated well, if their expectation about communication had been met like telling them the name of their child's illness, the cause of their child's illness, what they could do to make their child feel better, if those things happen, they were significantly more satisfied. Even more satisfied than parents where that didn't happen and got an antibiotic. So, communication was far more important. In terms of having a satisfied consumer of healthcare than making sure they walk out with something.

ROSKIN

So tell me what’s been going on?

PATIENT

I’ve had a runny nose…

RATHER (VOICE OVER)

ANOTHER, PERHAPS MORE SERIOUS CONTRIBUTOR TO BACTERIAL RESISTANCE IS OCCURRING WHEN A PATIENT HAS AN ILLNESS THAT ACTUALLY WARRANTS ANTIBIOTIC TREATMENT. DR. ROSKIN SEES PATIENTS LIKE THIS MOTHER AND SON EVERY DAY…THEIR INTERACTION IS A CLASSIC EXAMPLE OF THE GREY ZONE OF ANTIBIOTIC USE … OR MISUSE. WHEN, ACCORDING TO DR. MANGIONE-SMITH PRESCRIBING THE WRONG DRUG CAN HAVE CONSEQUENCES FOR ALL OF US.

ROSKIN

There are times when antibiotics are good for things and -- like strep throat and I think that this is one of those times. So -- well for sinus, Amoxicillin is a really good one…
AMOXICILLIN IS AN EXAMPLE OF WHAT IS CALLED A FIRST-LINE, RELATIVELY NARROW SPECTRUM ANTIBIOTIC. NARROW SPECTRUM ARE ANTIBIOTICS THAT WILL ONLY WORK ON A VERY SPECIFIC KIND OF INFECTION. PENICILLIN IS THE MOST CLASSIC EXAMPLE. BROAD SPECTRUM ON THE OTHER HAND, ARE ANTIBIOTICS THAT WORK ON MANY DIFFERENT KINDS OF BACTERIA, MANY DIFFERENT KINDS OF INFECTIONS. THEY ALSO DESTROY BACTERIA THAT AREN’T NECESSARILY PART OF THE INFECTION, MAKING THEM MUCH MORE LIKELY TO CREATE RESISTANCE.

MANGIONE-SMITH

The other trend we're seeing that's-- that's a little scary is-- when antibiotics are given, we're seeing a trend towards using much more broad spectrum antibiotics rather than, you know, narrow antibiotics that would do the job. Sinusitis-- is-- an infection that we commonly will treatment with antibiotics even though there are-- a good percentage of those cases if left alone, they would go away on their own over time. But there's no reason to use a broad spectrum drug to start out. Amoxicillin works for the great majority of those infections, and if they start with something broader spectrum, I'd say it's pretty hard to defend doing that.

RATHER (VOICE OVER)

BUT DOCTORS SAY THEY SOMETIMES MUST MAKE COMPROMISES WHEN PATIENTS ARRIVE WITH A SPECIFIC ANTIBIOTIC IN MIND...

MOTHER

The one that he responds the best to is the one that they’re on for five days. And they take five pills, what does that -- it starts with a “Z” I think.

ROSKIN

The Azithromax?

MOTHER

Is that an option for us?

MANGIONE-SMITH

One drug that's been scary to watch, though, is a drug called Azithromycin, they call them Z-packs. And it was a drug that was super popular when it first came out because it was once a day, it tasted good, your child only had to take it for five days rather than ten
days-- and it got used-- overused tremendously, and in many cases where Amoxicillin would have been a perfectly good choice, Azithromycin was used. And those particular drugs develop resistance much more quickly. And now, today, if you asked me would you use a Azithromycin to treat anything, I'd say that'd be a waste of time, okay? I'm sure that the drug company that sells that drug would not be happy to hear me say that, but you know, it's not very effective for most infections anymore.

ROSKIN

In general that’s not what we use initially most of the time because it often doesn’t treat sinus infections as well....let’s see...he has had that before...

MOTHER

When was the last time he had amoxicillin and did it cure it? I can’t remember one of my children -- amoxicillin just isn’t effective.

ROSKIN

It did, and it was in about 2008. And at that time it did work.

MOTHER

And was it for -- what -- what was it -- what was wrong with him?

ROSKIN

Sinus.

MOTHER

It’s up to you.

ROSKIN

Azithromycin works for him; I think that’s okay…

MOTHER

It really seems to be the medicine....

ROSKIN

I think that’s fine.

MOTHER

You think so? Okay…
ROSKIN

Yeah.

RATHER (VOICE OVER)

DR. ROSKIN TOLD US THAT THE PATIENT’S MOTHER DID INDEED REQUEST AN ANTIBIOTIC BEFORE THE EXAMINATION; SHE ASKED FOR A BROADER SPECTRUM TREATMENT THAN DR. ROSKIN ORIGINALLY THOUGHT BEST TO PRESCRIBE; AND HE GAVE IT TO HER. IN THIS PARTICULAR CASE, DR. ROSKIN SAYS HE FELT NO HARM WOULD BE DONE BY ACCOMMODATING HER REQUEST … BUT IT’S ALL PART OF THE DELICATE BALANCING ACT DOCTORS PLAY EVERY DAY BETWEEN TREATING ILLNESSES AND KEEPING PATIENTS HAPPY.

MOTHER

Thank you Dr. Roskin.

ROSKIN

Okay, hope you feel better, Okay? Take all your medicine, okay?

MANGIONE-SMITH

I think giving any unnecessary treatment is just wrong. You can say, oh, well, what's the harm? There's always the chance for harm, whether that's harm at the individual level, that I'm gonna create resistance within this person so that when they really need an antibiotic, it's not gonna work. Or whether it's being conscious from the public health standpoint. It's a dangerous, dangerous thing to do over the long term. That's the problem, the consequences aren't immediate.

RATHER (VOICE OVER)

THE DOCTOR’S OFFICE IS NOT THE ONLY PLACE WHERE WE ARE TEMPTED TO OVER-TREAT “JUST TO BE SAFE.” AMERICANS ARE BEING BOMBARDED ON A DAILY BASIS WITH PRODUCTS CONTAINING ANTIBACTERIAL AGENTS. SOAPS, DISHWASHING DETERGENTS, HAND LOTIONS - SAY THE WORD “GERM” AND MOST OF US WILL BUY JUST ABOUT ANYTHING WE THINK WILL OFFER US AND OUR FAMILIES PROTECTION. LITTLE DO WE KNOW THAT THESE PRODUCTS SELECT FOR RESISTANT BACTERIA JUST LIKE ANTIBIOTICS. ACCORDING TO THE CENTERS FOR DISEASE CONTROL, THERE ARE NOW OVER 700 SUCH PRODUCTS AVAILABLE …ONE CAN EVEN PURCHASE A MATTRESS OR ENTIRE BATHROOMS AND BEDROOMS OUTFITTED WITH PRODUCTS CONTAINING TRICLOSAN, A COMMON ANTIBACTERIAL AGENT.

WITH THE STAKES SO HIGH AND THE FEAR OF SUPERBUGS ON THE RISE,
THE TRAGIC IRONY IS THAT THERE’S NO EVIDENCE THAT THESE PRODUCTS ACTUALLY PROTECT US ANY MORE THAN WHAT THE CDC RECOMMENDS: GOOD OLD SOAP AND WATER.

MANGIONE-SMITH

All you have to do is watch a patient infected with an-- a resistant organism in the hospital, and that will, I think, bring home how scary the consequences are. When you run, you know, lab tests on the bacteria that they're growing, and every one comes up resistant, that's scary. And some people will say, oh, is that really a problem because can't we always just design a new antibiotic? It seems like there's always something new coming out that-- that we can use. The amount of time it takes to, you know, go from an idea for a new drug to it actually being out on the market is several years, in the-- in the neighborhood of ten years before it's F.D.A. approved for use. And the resistance we're seeing built up-- against antibiotics by the bacteria that cause the infections is-- is progressing at a much quicker rate than that. So, that's what's scary, you know, are we gonna start having superbugs that it doesn't matter what we throw at them, it-- it won't work.

RATHER (VOICE OVER)

AND THAT BRINGS US BACK TO PAM PIRES … HER STAPH INFECTION IS CURRENTLY IN REMISSION, BUT SHE SAYS SHE LIVES IN CONSTANT FEAR THAT IF IT EVER FLAIRS UP AGAIN, THERE WON’T BE ANY ANTIBIOTIC TO SAVE HER.

PIRES

I had no choice but to be on the vancomycin 'cause it saved my life. But, yet, I still don't know what happens if this infection comes back.

RATHER

And you need it again.

PIRES

And it don't work the next time.

RATHER (ON CAMERA)

COMING UP NEXT … WE’LL TAKE YOU TO A COUNTRY THAT HAS TAKEN A RADICAL APPROACH TO ANTIBIOTICS, WITH INCREDIBLE RESULTS. THAT PART OF THE STORY WHEN WE COME BACK.

ADICTED TO ANTIBIOTICS ACT 3:
RATHER (VOICE OVER)

NORWAY IS RENOWNED FOR ITS PURE NATURAL BEAUTY...FROM ITS SNOW-CAPPED PEAKS... TO ITS CRYSTAL CLEAR WATER...AND THE PEOPLE WHO LIVE IN THIS PRISTINE WONDERLAND CONSIDER THEMSELVES AMONG THE LUCKY FEW...

YEAR AFTER YEAR, THE UNITED NATIONS HAS RANKED NORWAY AS THE WORLD’S BEST PLACE TO LIVE. AMONG MANY FACTORS MEASURED IS THEIR WEALTH, THEIR EDUCATION, AND THEIR MEDICAL SYSTEM THAT ALLOWS THEM TO LIVE LONG, HEALTHY LIVES.

BUT WHAT MAY BE MOST REMARKABLE ABOUT THEIR LONGEVITY IS NOT WHAT THEY DO TAKE TO STAY HEALTHY, BUT RATHER, WHAT THEY DON’T TAKE.....ANTIBIOTICS.

DR. DAG BERILD HEADS THE INFECTIOUS DISEASE UNIT AT OSLO UNIVERSITY HOSPITAL AND IS WORLD RENOWNED FOR PIONEERING A NEW APPROACH TO ANTIBIOTIC USE. HE LITERALLY WROTE THE BOOK OF ANTIBIOTIC USE IN NORWAY … FOUND IN THE POCKETS OF DOCTORS THROUGHOUT THE COUNTRY. ITS PURPOSE IS TO MAKE SURE THAT ANTIBIOTICS ARE USED CORRECTLY AND WITH GREAT CAUTION.

DR. DAG BERILD, OSLO UNIVERSITY HOSPITAL

The Little Red Book it's a kind of cookbook with guidelines for antibiotic use. If you have a urinary tract infection, a meningitis or a pneumonia, you can just-- read here. And you can see what antibiotic you should use, and it's based on the pattern of resistant in the hospital.

RATHER (VOICE OVER)

WHEREAS IN THE UNITED STATES, THE DECISION OF WHEN AND HOW TO USE ANTIBIOTICS IS LEFT MOSTLY UP TO INDIVIDUAL DOCTORS WITH FEW GUIDELINES; THAT IS NOT THE CASE IN NORWAY.

BERILD

The younger doctors, and even the surgeons, they comply very good with this-- book. We have done some studies and-- it's 95 percent compliance with the book.

RATHER (VOICE OVER)

IN REAL-WORLD TERMS, THAT’S MAKING A HUGE DIFFERENCE. SUPERBUG ENEMY NUMBER ONE IN MOST OF THE WORLD IS METHICILLIN RESISTANT STAPHYLOCOCCUS AUREUS -- AN ANTIBIOTIC RESISTANT
STAPH INFECTION KNOWN AS “MIRSA.” IN THE UNITED STATES IT’S AN EPIDEMIC THAT KILLS NEARLY 20,000 PEOPLE EVERY YEAR. YET IN NORWAY, WHERE HOSPITALS ARE MUCH MORE VIGILANT ABOUT PREVENTING THE SPREAD OF INFECTIONS, JUST TWO PEOPLE DIED OF THE INFECTION IN 2009 AND BOTH WERE ELDERLY VICTIMS WHO ACQUIRED THE DISEASE ABROAD.

BERILD

There are a lot of documentation that shows that in countries where you use more antibiotics, you have much, much more resistance than in-- in countries where you don't use so much antibiotics.

RATHER (VOICE OVER)

SO NORWEGIANS NOT ONLY HAVE THE LOWEST RATE OF ANTIBIOTIC RESISTANT INFECTIONS IN THE WORLD, BUT THEY ALSO USE FEWER ANTIBIOTICS THAN NEARLY ANYONE ELSE. DOCTORS HERE BOAST THAT THEY USE ABOUT ONE THIRD OF THE ANTIBIOTICS EACH YEAR AS AMERICANS DO...

PHARMACIST

We don’t have that many types of antibiotics in Norway. We have penicillin, we have amoxicillin…

RATHER (VOICE OVER)

AND NORWEGIAN PHARMACIES ARE STOCKED WITH DRUGS WE HAVEN’T USED WIDELY FOR YEARS.

BERILD

Half of the antibiotic use in Norway is penicillin, the old, good-- penicillin. Because we don't have resistance. We can treat the serious infections, with penicillin in Norway and it’s even very cheap.

RATHER (VOICE OVER)

SO HOW HAVE THEY MANAGED TO ACHIEVE A FEAT THAT SEEMS NOTHING SHORT OF A MIRACLE IN MOST OF THE MODERN WORLD?

DR. MORTEN LINDBAEK, DOCTOR

We don't have any-- research or clues that actually we are less sick than the other people. I think there are cultural differences here.
RATHER (VOICE OVER)

DR. MORTEN LINDBAEK HAS A PRIMARY CARE PRACTICE HERE IN SOUTHERN NORWAY AND ALSO HEADS ONE OF THE WORLD’S ONLY RESEARCH FACILITIES DEDICATED TO STUDYING THE USE OF ANTIBIOTICS IN PRIMARY CARE.

HE SEES THE USUAL INFECTIONS -- STREP THROAT ... EAR ACHEs ... PNEUMONIA ... BUT THE NORWEGIAN APPROACH TO ANTIBIOTIC TREATMENT CHALLENGES MUCH OF THE CONVENTIONAL WISDOM WE FIND IN THE UNITED STATES. ON THE DAY WE VISITED, SIRI WIBSTAD CAME TO SEE DR. LINDBAEK FOR AN EXTREME SINUS INFECTION...

SIRI WIBSTAD, PATIENT

I have felt ill the last one and a half week. My head is aching, I nearly can’t hear. I have pain around my eyes and I am coughing.

RATHER (VOICE OVER)

AFTER A WEEK AND A HALF OF SUFFERING, MOST AMERICANS WOULD EXPECT TO RECEIVE ANTIBIOTICS, AND MANY DOCTORS WOULD OBLIGE. BUT SIRI RECEIVED NO MEDICINE. INSTEAD SHE WAS TOLD SHE WOULD HEAL WITH REST AND PATIENCE...

LINDBAEK

In Scandinavia, we tend to think that nature will resolve this by itself. And we should give the nature the time to resolve it and perhaps be away from school or work another day.

WIBSTAD

I’m satisfied, yes. I don’t want to use antibiotics if I can avoid it.

GUNNAR SIMONSEN, NORWEGIAN SURVEILLANCE SYSTEM FOR ANTIMICROBIAL RESISTANCE

Many Norwegians will not like to take drugs unless strictly necessary. That's not a kind of an official policy. That's how we were brought up.

RATHER (VOICE OVER)

GUNNAR SIMONSEN OVERSEES THE NORWEGIAN SURVEILLANCE SYSTEM FOR ANTIMICROBIAL RESISTANCE. IN THE 1990S, DOCTORS AROUND THE WORLD STARTED TO RAISE THE ALARM THAT THE ERA OF ANTIBIOTICS
MAY BE COMING TO AN END. THE NORWEGIANS DECIDED TO TAKE ACTION BEFORE IT WAS TOO LATE.

SIMONSEN

All issues of antibiotic resistance are related to two main driving factors. And the one is that-- amount of antibiotics prescribed and the kind of antibiotic prescribed. And the other main factor is infection control. And I think-- we have worked very hard on both of those lines.

RATHER (VOICE OVER)

THE NORWEGIAN GOVERNMENT IMMEDIATELY PUT INTO EFFECT STRICT SCREENING AND SURVEILLANCE PROCEDURES: EVERY PATIENT WITH RISK FACTORS -- LIKE HAVING SPENT TIME ABROAD -- IS SCREENED FOR MRSA WHEN THEY ENTER HOSPITALS AND NURSING HOMES, AND ARE ISOLATED IF THEY TEST POSITIVE. IN ADDITION, EVERY PRESCRIPTION WRITTEN FOR BOTH INPATIENT AND OUTPATIENT CARE IS ENTERED INTO A NATIONAL DATABASE. THE GOVERNMENT KEEPS CLOSE TABS ON DOCTORS BY SCRUTINIZING THESE PRESCRIPTIONS, AS WELL AS RECORDING AND ANALYZING EVERY SINGLE INFECTION THAT SHOWS UP IN A HOSPITAL.

BUT SINCE MOST ANTIBIOTICS ARE PRESCRIBED IN PRIMARY CARE, POLICY MAKERS AND PHYSICIANS ALIKE KNEW THIS WAS THE PLACE TO LOOK TO CUT DOWN ON USE.... AND KEEP RESISTANCE LOW.

NORWAY WASN’T THE ONLY PLACE THAT GOT THE MESSAGE.

PUBLIC SERVICE AD - HEDGEHOG SNEEZING

Got a cold? Antibiotics don’t fight the viruses that cause cold and flu. Fluids and plenty of rest do. Follow your doctor’s advice.

RATHER (VOICE OVER)

THIS PUBLIC SERVICE ANNOUNCEMENT WAS CREATED BY THE ECDC -- THE EUROPEAN VERSION OF THE US CENTERS FOR DISEASE CONTROL -- TO EDUCATE THE PUBLIC FURTHER ABOUT LIMITING USE OF ANTIBIOTICS, ESPECIALLY IN CASES OF VIRAL INFECTIONS.

MOST COUNTRIES IN EUROPE HAVEN’T GONE MUCH FURTHER THAN THIS P.R. CAMPAIGN. BUT IN NORWAY, DOCTORS AND PATIENTS TAKE THE MESSAGE VERY SERIOUSLY. THEY EVEN REFRAIN FROM USING ANTIBIOTICS TO TREAT INFECTIONS THAT WOULD RESPOND TO THE MEDICINE. DR. SIMONSEN SAYS THAT FOR MANY BACTERIAL INFECTIONS, ANTIBIOTICS BARELY SPEED UP THE HEALING PROCESS...
SIMONSEN

Obviously, the flu, you have no benefit, and common cold, you have no benefit. But even a throat infection or a urinary tract infection or a sinusitis, they have questionable effect of antibiotics unless you have a-- particularly severe case or you have a recurrent disease. So, for the huge volume of antibiotics, you may have some very minor-- effect of maybe a half day reduction, statistically. So, what you really question is the use of these very precious drugs.

RATHER (VOICE OVER)

DESPITE ALL OF THE PROGRESS IN EDUCATION, PHYSICIANS HERE, LIKE ANYWHERE ELSE, DO FEEL PRESSURE TO PRESCRIBE AT TIMES... ESPECIALLY FROM PARENTS WHO JUST WANT TO KNOW THEIR CHILD WILL BE OKAY, AND IN CERTAIN CASES ARE TOO NERVOUS OR FEEL LIKE THEY’VE WASTED THEIR TIME IF THEY LEAVE THE DOCTOR’S OFFICE WITHOUT A PRESCRIPTION. IN THESE CASES, NORWEGIAN PEDIATRICIANS TAKE A NOVEL APPROACH...

LINDBAEK

He had an ear infection where he had had fever and definitely some pain and there was a perforation of the ear drum and there was definitely some puss coming out, but he was generally in good condition so we decided to wait and see for three days.

RATHER (VOICE OVER)

THEY’RE CALLED “WAIT AND SEE PRESCRIPTIONS” AND THEY ARE USED ALL THE TIME IN SCANDINAVIA. WHEN THEY ARE NOT SURE IF AN ANTIBIOTIC IS REALLY NECESSARY, DOCTORS CAN GIVE A PRESCRIPTION WHICH DOES NOT BECOME VALID FOR THREE DAYS. THIS CAN BE VERY USEFUL IN CASES OF COMMON INFECTIONS LIKE EAR INFECTIONS.

LINDBAEK

Of those patients, who we are not sure needs an -- antibiotic and get a wait and see prescription, that at least half of them, they get well within three days. And perhaps even more of them-- could be better without antibiotics.

RATHER (VOICE OVER)

OF COURSE SERIOUS INFECTIONS, EVEN IN NORWAY, REQUIRE ANTIBIOTICS. IN THESE CASES, DOCTORS ARE CAREFUL TO PRESCRIBE THE MOST TARGETED DRUGS AVAILABLE INSTEAD OF IMMEDIATELY JUMPING TO BROADER SPECTRUMS LIKE CIPRO OR Z PAK THAT CAN MORE EASILY LEAD TO RESISTANCE.
SIMONSEN

You have these newer drugs which will have different properties than the original penicillin. And for the patient, that may be very-- suitable, because it's more comfortable to take-- drugs a few times or shorter courses. But ecologically, that may also be a part of the problem. Because then you'll have drugs which will last for longer times out in environment and which will have an influence on many different kinds of bacteria.

RATHER (VOICE OVER)

IN NORWAY, ANTIBIOTICS, AND THE RESISTANCE THEY BREED, ARE VIEWED AS ENVIRONMENTAL CONCERNS. AND THAT’S WHY THE COUNTRY IS AS WORRIED ABOUT WHAT’S TAKING PLACE DOWN ON THE FARM AS WHAT GOES ON IN THE DOCTOR’S OFFICE.

SIMONSEN

What's important from the bacterial point of view is not whether the drug was prescribed for a man or a pig. It's simply the amount of antibiotics-- which are kind of spread into the environment.

RATHER (VOICE OVER)

AT MOST BIG AMERICAN SWINE FARMS, THE ANIMALS ARE GIVEN ANTIBIOTICS IN THEIR FEED BOTH AS A PREVENTATIVE MEASURE AND TO HELP THEM GROW FASTER. IN THE UNITED STATES NEARLY 70 PERCENT OF THE TOTAL AMOUNT OF ANTIBIOTICS SOLD IN THE COUNTRY ARE GIVEN TO HEALTHY ANIMALS ON INDUSTRIAL FARMS....

BUT THERE IS AMPLE EVIDENCE THAT WHEN ANIMALS TAKE ANTIBIOTICS DAILY, IT CAN LEAD TO THE DEVELOPMENT OF DANGEROUS DRUG-RESISTANT BACTERIA THAT CAN SPREAD TO PEOPLE. SO IN THE EARLY 1990S, NORWEGIANS MADE A DECISION TO SHARPLY REDUCE ANTIBIOTIC USE ON ANIMAL FARMS.

SIMONSEN

Obviously if you use drugs for-- the animal herds and the human is then infected through consumption of-- an infected meat or-- or-- or contaminated meat. The bacteria causing the infection-- in human will be-- resistant, based on what the animal was exposed to.

RATHER (VOICE OVER)

ON NORWEGIAN FARMS, ANIMALS ARE GIVEN JUST A TINY FRACTION OF THE ANTIBIOTICS THAT ARE USED BY FARMERS IN OTHER EUROPEAN COUNTRIES, LET ALONE IN THE UNITED STATES.
GRANTED, THE LIVESTOCK INDUSTRY HERE IS SMALL... BUT NORWAY’S FARMED FISH INDUSTRY, ON THE OTHER HAND, IS ONE OF THE LARGEST IN THE WORLD ... AND HERE THEY HAVE PROVEN THAT IT’S POSSIBLE TO RAISE MILLIONS OF FISH AT A TIME, WITHOUT ANTIBIOTICS.

ANDERS PEDERSEN, FJORDLAKS DIRECTOR

These are what we in Norway call the rainbow trout. It’s a cross breeding with a Danish trout and a salmon from the pacific.

RATHER (VOICE OVER)


PEDERSEN

Today, there’s no dead fish in the fish farms. It’s very healthy, it’s very clean. Earlier we have to take up a lot of dead fish, but today, its history.

RATHER (VOICE OVER)

YOU MAY BE SHOCKED TO SEE HOW MUCH ANTIBIOTICS THOSE “DEAD FISH” HAD BEEN FED. IN THIS DOCUMENTARY FROM 1988, A VETERINARIAN SAYS FISH FARMERS WERE DUMPING INTO THE OCEAN ENOUGH ANTIBIOTICS TO MEDICATE THOUSANDS OF PEOPLE AT A TIME.

VETERINARIAN (TRANSLATED FROM NORWEGIAN)

I have measured up a small dosage of this substance which equals one course of treatment for a human being. In this barrel there is enough medication to treat around 3500 persons.

INTERVIEWER (TRANSLATED FROM NORWEGIAN)

And that all went to the fish farms?

VETERINARIAN (TRANSLATED FROM NORWEGIAN)

Yes, it all went to fish farms in the course of a week

INTERVIEWER (TRANSLATED FROM NORWEGIAN)
How do you feel about that?

VETERINARIAN (TRANSLATED FROM NORWEGIAN)

From an ecological point of view I find it very alarming, because we don’t really know very much about the consequences of what we are doing.

RATHER (VOICE OVER)

THANKS IN PART TO REPORTS LIKE THIS, NORWEGIAN FISH FARMERS THEMSELVES FELT AN URGENCY TO REDUCE ANTIBIOTIC CONSUMPTION. BETWEEN THE YEARS, 1994 AND 2008, THEY DECREASED ANTIBIOTIC USE BY AN INCREDIBLE 97%. AND STILL, DURING THAT SAME PERIOD, FISH PRODUCTION INCREASED TEN FOLD! THEY WERE ABLE TO NEARLY ELIMINATE FISH DISEASES BY USING NEWLY DEVELOPED VACCINES IN PLACE OF ANTIBIOTICS …NOW ALL FISH ON THE FARMS ARE VACCINATED.

PEDERSEN

We have no sickness anymore because we vaccinate all the fish. And the vaccine has been better and better for every year.

RATHER (VOICE OVER)

IT’S ALL PART OF THE ACTION PLAN THAT NORWEGIANS SAY HAS KEPT THEM AT THE FOREFRONT OF THE FIGHT AGAINST DRUG RESISTANT BACTERIA. DR. MORTON LINDBAEK SAYS MANY OF THE LESSONS HERE CAN, AND MUST, BE APPLIED AROUND THE WORLD. AND IT’S NOT TOO LATE. SOMETHING CAN BE DONE.

LINDBAEK

This is not-- fast-going train which is running faster and faster and nothing can stop it, because that’s not true. I have a lot of American colleagues who are very eager to try and change the use in US and more toward the northern, European style.

RATHER (ON CAMERA)

AS INCREASES IN FOREIGN TRAVEL BRING ALL OF US CLOSER TOGETHER, THE THREAT FROM THE SPREAD OF SUPERBUGS IS VERY REAL. WHEN WE RETURN, MORE OF OUR DISCUSSION WITH DR. STUART LEVY OF TUFTS UNIVERSITY SCHOOL OF MEDICINE ABOUT THE FUTURE OF ANTIBIOTICS AND WHAT KEEPS HIM UP AT NIGHT.

ADDEDICTED TO ANTIBIOTICS ACT 4:
WELCOME BACK. AS WE’VE HEARD TONIGHT, AMERICANS ARE DYING EVERY DAY FROM BACTERIAL INFECTIONS WITH NO CURE … AND THERE ARE, TO QUOTE THE COMMISSIONER OF THE FOOD AND DRUG ADMINISTRATION, “DISTRESSINGLY” FEW NEW ANTIBIOTICS COMING TO MARKET TO ADDRESS THIS CRISIS.

CONSIDER THIS STATISTIC: FROM 2003 TO 2007, THE FDA APPROVED ONLY FIVE NEW ANTIBIOTICS. OVER A FOUR YEAR PERIOD TWO DECADES EARLIER, SIXTEEN NEW ANTIBIOTICS CAME TO MARKET. DR. STUART LEVY OF TUFTS UNIVERSITY SAYS MANY OF THE LARGE PHARMACEUTICAL COMPANIES ARE NO LONGER EVEN IN THE BUSINESS OF TRYING TO DISCOVER THESE LIFESAVING DRUGS …

Why are so few new antibiotics coming to market?

The economics doesn't make it.

For the big pharmaceutical companies.

The making, the development of a new antibiotic will certainly bring a revenue into the company, but nowhere near the revenue that comes from a cholesterol-lowering agent or a heart ailment drug or a kidney medicine, which you're going to be taking for the rest of your life.

To say nothing of Viagra--

And saying nothing about -- yeah, the so-called pleasure drugs.
So if I'm a head of a big pharmaceutical firm, I say, "Look, the money is in these other things. The money-- the big money for us, the big profit for us and our shareholders is not -- it's in this. It's not in antibiotics."

LEVY

Correct. And I think the frustration and lack of understanding is if there is a real need, and everyone will say, this is an area of need, why aren't the companies just jumping in and finding it? It's difficult, not as easy it was. And the return is not there. So how do we deal with that? The Alliance for Prudent Use of Antibiotics, the Infectious Disease Society of America, other groups are asking the government to give incentives to large pharma and say, "We'll extend your patent life. Come back in. We'll reduce the taxes. We'll do this. We'll do that. Come back in."

RATHER

To get them to prioritize--

LEVY

Prioritize and say, "We may not be a lipid-lowering agent. But it's worth it to us now to develop new antibiotics."

RATHER

Is there any new superbug out there like MRSA that you're worried about?

LEVY

Yes. And these are not just one but a group in the same family that are able to resist all the common antibiotics, including the penicillin’s. They also have enzymes that destroy penicillin’s and the related cephalosporins, so that you're at limit to what you can treat. So we're going back to using a drug that is 50 years old, that is somewhat toxic. Colistin which is lifesaving in its situation, but resistance is mounting to it. So we have a real problem.

RATHER

Are we, in the main as a general proposition, an island in this problem of resistance to antibiotics? Or is it international? Is it truly, a global problem?

LEVY

It is probably the most important global problem, secondary only maybe to AIDS. But it's a challenge there. The World Health Organization has named it one of the three most important public health problems facing the world.
And they are?

LEVY

They would be AIDS, tuberculosis and antibiotic resistance. So we are part of a global problem and we need a global solution. Bacteria move. A million people cross national boundaries every day. They’re carrying bacteria. I always come back to the fact that we can always do more. We should do more. And-- and I hear patients who have lost limbs because of a toxigenic staph infection. I see patients dying here from that. It shouldn't be in this country, Dan. It should not be. We should have the resources, the knowledge, the ability, make new antibiotics, improve our use of antibiotics, improve our surveillance of antibiotics, help with new diagnostics. Okay, it's a lot. But what it is, it's not just for infectious diseases. But it's also for success in cancer, for success in transplants, because infections complicate those new technologies.

RATHER

Well, that leads to the question. What is it going to take to at least start curbing resistance and saving lives? What's it gonna take?

LEVY

First, we have to know what the resistance is in which organisms, in which part of the country. We have to fund and support a national surveillance system on antibiotic resistance. It doesn't exist. Why have we dropped the ball? 'Cause I don't think they've been seen. They've-- everyone says, "They're life-saving. They're miracle drugs." But then give them more attention, especially when people who are in the field and those are reciting this all the time. This is a big, huge problem.

RATHER (ON CAMERA)

AND THAT'S OUR REPORT FOR TONIGHT. FROM NEW YORK, FOR HDNET, DAN RATHER REPORTING. GOODNIGHT.