Transcript: Discovery Healthier: Episode 5

Duane Blaauw, Stephanie Shellac, Roshini Moodley Naidoo

November 2019

Speaker	Start time	Dialogue	End time
Azania	0:00	Welcome to Discover Healthier, everything you need to know about health, brought to you by Discovery Health. I'm Azania Moussaka. You can join the conversation as we explore some of the most pressing matters in the healthcare environment today. A wide variety of topics and specialist guests will empower you to care for your health now and in the future. Imagine going back to a world where penicillin and antibiotics didn't exist. Scary, right? Well, the World Health Organization has declared antibiotics resistance as one of the biggest threats in global health today. Well, flu season is a big culprit for the incorrect use of antibiotics and so, in this episode, we look at what you should do when you have the flu. We also hear from experts what anti-microbial resistance is, and why taking note of it is vital for human health.	1:00
Azania	1:00	First up, I wanted to find out more about the studies and initiatives in South Africa that investigate and raise awareness of the over prescription and overuse of antibiotics. The WITS study sent undercover patients into primary health settings to probe antibiotics prescription. Well, I spoke to Dr. Duane Blaauw, who is a senior researcher at the Centre for Health Policy at WITS University about what they found.	1:32
Azania	1:32	So, Dr. Duane Blaauw, you conducted one of the first studies to properly document the extent of antibiotic prescribing. What inspired it? Why did you need to take this route to take this endeavour?	1:44
Duane	1:44	So, we were interested in the problem of the development of antimicrobial resistance. And as you know, it's considered to be a big problem in South Africa. Then there are a number of strategies that have been developed to address	2:19

		the problem in South Africa, but quite a lot of the focus is on what's happening in hospitals. So, what we were trying to look at actually was trying to evaluate how much unnecessary use of antibiotics there is in primary care. So that's the sort of visits to public sector clinics and to private GPs. So that was what we were trying to document in the study that we did.	
Azania	2:19	And the methodology that you selected was quite an interesting one, tell me about it, and why you opted to do it this way.	2:26
Duane	2:26	So, we used a method, which is called standardized patients, which is where we train a field worker to act like a patient. So, they present themselves to a GP or a public sector clinic, as if they were a normal patient. It's a method that's being used in many places. It's seen as one of the best ways of evaluating what's happening in primary care. So, what we do is we train the patient to present a standardized case, so they always present exactly the same story, so we know what's essentially wrong with him and then we can evaluate what the doctor or the nurse does, and we know then what should have happened for this particular case. So, that's why they're called standardized patients and they're a good way of evaluating what's happening in a primary care consultation. It's better than other methods that have been used; for example, you could observe doctors, you could stand in the corner and see what they do. But the problem with that is then they might change what they… their behaviour, because they know you watching. Another method that has been used to evaluate consultations, for example, is to talk to the patient afterwards to say what happened in this consultation and you ask them "What did the doctor ask you? What did the doctor do?". The difficulty with that is that you never quite know what was wrong with the patient in the first place. You don't know what should have happened because you're not exactly sure what the complaint is. So, a standardized patient allows us to standardize all of that we train these fields workers to always present a consistent story and	4:09

		then we can evaluate what happened. We do do it with the permission of the doctors or the nurses, we tell them some months in advance begin to send the undercover patients to see you. And, so, they give permission for that, but they don't know the exact details of the case. And they don't know exactly when somebody is coming.	
Azania	4:09	So, in this case, the standardized patient was presenting with respiratory tract infections	4:14
Duane	4:14	Well, they were presenting with the history. Okay, so our case was a typical case of what happens after a cold is you then develop this persistent cough. So that was the case we presented; somebody who's starting to recover from the cold but they still have a cough. A week later, we had very young, completely healthy people that we used, so there was nothing to find on examination, so they didn't actually have an infection of course, they just had the story of having a cough and that was what we used to see, in such a case, how many people would be given an antibiotic or not.	4:50
Azania	4:50	So, what did you find?	4:51
Duane	4:51	So, I should first of all say, international guidelines and national guidelines would recommend that such a case, somebody who is recovering from a cold and is have a hand as a cough, it's most likely to be viral. So, you shouldn't be given an antibiotic and both international recommendations and the local recommendations and experts would say it's such a patient shouldn't be shouldn't get an antibiotic	5:12
Azania	5:12	And antibiotics treat bacteria.	5:14
Duane	5:14	Yes. So ,they don't, they're not useful for viruses. So, most of these cases of upper respiratory tract infections are viruses. So, the antibiotics don't really work, don't work at all. And the problem is unnecessary use of antibiotics contributes to the development of resistance. So that's why we're interested in this particular problem. So, in our study, we found we were actually we did it in one metropolitan area in South Africa, and we	6:04

		compared the private sector to the public sector. And we found in the public sector that 78% of all the visits we did, the patients were given at least one antibiotic and in the private sector, the number was 67%. So that's from comparing to zero, when nobody should have got antibiotic. It's quite a large amount of unnecessary antibiotic that seems to be happening in primary care.	
Azania	6:04	Do we know why? Is it patients insisting they be given an antibiotic? Is it the practitioner, the clinician, making this decision?	6:11
Duane	6:11	So, in the general literature on what drives unnecessary antibiotic prescribing and primary care, because it's a worldwide problem happening, you know, and the thing is that quite a lot of antibiotics are given in primary care. It happens, seems to happen quite a lot. Of course, antibiotics are also given in hospital, but quite a lot of patients going to see their GP or the public sector clinic get given an antibiotic. So, it's happening quite frequently. What drives that behaviour is, you know, sometimes patients need antibiotics. That's the difficulty with antibiotics. You know, sometimes patients actually need to be given, they have certain types of conditions. So, the presenting story is important and some people need antibiotics and they should get them when appropriate. So, what we were looking at is a type of case which shouldn't be given antibiotics and then they were… and that's driven both to some extent, both by… on the patient side and by the provider side by the doctor or the nurse, different factors. In our actual study, though, we controlled for the patient side of things because our standardized patients never asked for antibiotics. So, we know it wasn't the patient asking for antibiotics. So, despite the fact that they didn't ask for antibiotics, still, you know, 67% in the private sector and 78% in the public sector, were given an antibiotic. And in fact, what we did was, we tried to test that idea. And we actually sent a second standardized patient, who actually said I don't want antibiotics unless they're necessary. So, we try to influence the behaviour of the provider, by signalling an idea, because in the when people have asked doctors or providers, why they give antibiotics, they say it's… the patient asks for them all. They think the patient wants it, right. So, what we were trying to do was take away that idea that the patient… Even if the patient didn't say they wanted it, the doctor still might think or the nurse might think that they wanted it, you know, and sort of expectation that they want an antibiotic.	8:43

		That's why they've come to see them. So, what we tried to do in the study was remove that idea by actually telling the standardized patient to speak to the doctor or the nurse to say, “Actually, I don't want antibiotics unless you think they're absolutely necessary”. So, that decreased antibiotic, unnecessary antibiotic prescribing by an amount about 20%, both in the public and the private sector. So, that signalling does decrease unnecessary antibiotic prescribing, but still over 50% of our patients, even when they said they didn't want an antibiotic method was necessary, were given one. So that means the doctor thinks and still necessary. Yeah.	
Azania	8:43	So, it does mean that the patient has to advocate for themselves. They have to be empowered to be able to inquire with their clinician about why. But what does all of this unnecessary prescribing of antibiotics lead to? You touched on a little bit earlier on the antimicrobial resistance that it brings about. So, is it because we're not finishing the course? Or is it a combination of both too much antibiotics and just simply not finishing the course?	9:10
Duane	9:10	Well, in this case, the antibiotics don't do anything. It's not only just about not finishing the course. What happens is, when you take antibiotics unnecessarily, so you don't need antibiotics, you create pressures for the general antibiotics that live in our respiratory tract, for example, they then create a selection pressure to select general bacteria that are resistant. So, even though it's just happening, that you [are] taking these antibiotics unnecessarily and so the widespread use of antibiotics is what drives the selection of resistant antibiotics. And then what happens is, those gets spread to other people and then you create resistant antibiotic resistant bacteria. It is a sort of complex phenomenon around the exposure to unnecessary antibiotics. And then that creates the development of resistance.	10:04
Azania	10:04	What are the risks that it poses to our ability to treat bacteria in the future, because we do know about superbugs. You talked about previous studies having looked at hospitals, particularly the prevalence in hospitals. So how does this contribute to the overall problem?	10:20
Duane	10:20	So, I mean, I think we think that because antibiotics are so widely used, and so unnecessarily used in primary care, that is one of the things driving the development of resistance.	11:40

		The problem is, when you have these resistant bacteria, as I said, the difficulty with antibiotics is that you need them sometimes. So, the problem is if we have this development of antibiotic resistance, when you need an antibiotic, it might not work. So, some of our very common infections that require antibiotics, things like pneumonia or urinary tract infections, or gastrointestinal infections, which are fairly common primary care, yes and more serious conditions like TB. For All of those, the bacteria in South Africa and in you know, all around the world, but particularly in South Africa, we have very high. If we measure it, we have very high rates of resistance for common in common bacteria for common antibiotics, which means we no longer really have the drugs we need to treat these common infections with the easier and the cheaper drugs. So that means we have to move towards more expensive, more difficult longer courses of antibiotics. And sometimes we you know, when we get to the development of superbugs, that means we don't really have any antibiotics in the sort of range of antibiotics that are available. We don't have any that are going to work. So that makes the treatment of those very difficult and very expensive.	
Azania	11:40	Why do we call them superbugs?	11:41
Duane	11:41	Well, they're called superbugs because they're resistant to many, many different antibiotics. So, you know, we have different classes of antibiotics and they act against the different types of bacteria. But normally, for each type of bacteria, we have, you know, a range of three or four or five different types of antibiotics that work and so you get to resistance to the one then hopefully the second will work. And then the third one if you get… So, these superbugs are bugs that are quite serious bugs. In other words, you know, that can cause people to die, but also the resistance to many of these different classes of antibiotics, which means we really have very, very few options left to treat them. And you can… if you develop an infection with one of these bugs, it's very difficult to get rid of it.	12:23
Azania	12:23	So, as an academic and as an expert in health policy, what should we start thinking about in that as far as policy is concerned and addressing antimicrobial resistance?	12:34

Duane	12:34	I mean, I think that there are a whole range of areas in which the misuse of antibiotics is important. So, health is one and of course there's also the agricultural industry… so both of those need to be looked at. I don't know too much about farming, but that's, that is a priority because they are so easy to use and widespread use of antibiotics there, but in terms of the sort of medical focus, we need try and address the unnecessary antibiotic use in order to try and keep and preserve antibiotics as long as possible. And that really is a combination of both changes on both the patient behaviour and in terms of the provider behaviour. So, in other studies, it does seem that patients sometimes expect antibiotics. And you know, in our case, we were looking at somebody who has a cough, and that's quite a common presentation. And patients, some of those types of patients, do go to the doctor expecting an antibiotic and think that the antibiotic is going to work what's going to make them feel better quicker. So that is education on the patient's side about the risks of unnecessary antibiotic use and also understanding that sometimes, for example, with upper respiratory tract infections, it just takes some time for you to recover from this episode and antibiotics don't necessarily help and they may make the problem worse at a sort of global or societal level. But we also showed in our study that it's not just the patient, it's also the doctor. So, we need interventions both in the public and the private sector to really get nurses and doctors to feel more confident to actually not be able to not always prescribe antibiotics. So, it's not just about them thinking that it's the patient's fault, but also, they need to be able to know that this patient is going to come back to them if they get sick, or that in such a particular case, it doesn't really help to give an antibiotic, so that requires a bit more education, a bit more training and getting them some confidence that in terms of the behaviour… prescribing behaviour	14:45
Azania	14:45	My next guest is Stephanie Shellac, Professor of Pharmacology at Sefako Makgatho Health Sciences University. She also has a special interest in the overconsumption of antibiotics. She shares some important messages for everyone out there. So, Professor Shellac, let's go back. How did resistance start? How did it develop?	15:11
Stephanie	15:11	Okay. So, when it comes to antimicrobials, even	16:21

		Flemming in 1937 when he developed.. when he found penicillin and even when they discovered or used, sulphonamide in the early 1900s, they then said that every time that you use antimicrobials, they will be selective pressure and then we cultivate resistance. However, even earlier to that, in a recent paper that was published in Nature in 2011, they found resistant strains to antimicrobials in I samples that dated back 30,000 years ago. So, resistance has been with us, microorganisms that harbours resistance to the current antimicrobials that we've had that we currently have many, many years ago. I think what's most important is to know that every time that we use antibiotics, which is medicine that we use towards bacterial or antivirals, or medicines for TB and… and then also medicines for parasitic infections like malaria, we can actually select for resistance.	
Azania	16:21	That's so fascinating. Have we seen an acceleration through this resistance in recent years?	16:25
Stephanie	16:25	Yes, we have, because we've seen that antimicrobial resistance has vastly outpaced development of antimicrobials and the investment that we have in the development of antimicrobials, as highlighted in the annual report. I mean, only we spent 38 billion US dollars in developing new medicines. However, only 5% of that has gone into the development of antimicrobials. And recently, it's also become technically more difficult to develop antimicrobials.	16:59
Azania	16:59	Why is that? That we reached a ceiling as far as I know how is concerned?	17:03
Stephanie	17:03	Yeah. So, it is …we find new antimicrobials for the same organisms but we don't have brand new lines. So, we will have the same class of antibiotics with slightly different molecules. But we haven't found new classes of antibiotics for the resistant patterns that we are seeing.	17:22
Azania	17:22	So as a result, even insights from the Jim O'Neill	17:28

		report, what would you like to see them?	
Stephanie	17:28	So, I think I'd like to see public engagement and public awareness. I'd like the public to know that we really have a public crisis. And if you look at it from a macro level in South Africa, we have great engagement from the Department of Health. They actually recently or in 2014, actually already, they appointed… the Minister of Health appointed a ministerial appointed committee of healthcare workers and multidisciplinary team from the veterinarian Council, from the Department of Education, pharmacists, nurses, doctors on board to try and see how we can really work together as a country to try and look at antimicrobial resistance as a challenge that we are currently facing. And then from the O'Neill report, he also highlighted patient engagement and at a micro level, we need to also include the public. So, that means micro level relationships between the healthcare worker and the public. I mean, think about it. When you go to your pharmacist, what information do you get, and there should be public pressure, just as much as we have public pressure for antibiotics to get it over the counter, there should be public pressure towards the pharmacist or towards the doctor to ask, do you think I really need antibiotics? And if I take it, how should I take it? At the moment, we keep our antibiotics and if we have a little bit left, we might share it with our children. Or in some instances, as I've mentioned, we also have the veterinarians on board, we can share it with our animals.	19:07
Azania	19:07	That is astounding. So clearly, our understanding of what is permissible in our use of antibiotics is quite lacking. Are these studies been conducted to help us understand what the general public sentiment and attitude is towards antibiotics?	19:23
Stephanie	19:23	Yeah. So currently from our university, we are running social media studies. So, in the social media studies, we are employing software, and we're trying to understand what is happening in South Africa. So, we are looking at Facebook, we are looking at Twitter. And we're looking at the dialogue that is in South Africa, in the South African minds. And we've coded it and what we are seeing currently with one of our postgrads is that South Africans are coding red, there is a fear factor, people don't understand it… and from a previous study that we did last year, we trained	21:36

		actors and we sent them into pharmacies and we gave them two scenarios. One was they presented with a urinary tract infection. The other scenario was they presented with an upper respiratory tract infection in rural areas. And they found in 60 to 70% of the cases, they could get antibiotics from the pharmacist. And when we asked or when we probed these studies, we found that in general in South Africa, it's such a beautiful country, but we also have 11 different languages. We found that maybe our language is wrong, because people were asking for antibiotics in some of our other studies because they thought that antibiotics or antimicrobials will clear your body, it will clean your blood. So, maybe just to come back to your question. Yes, we have social media studies and we've recently embarked on a taxi study, to try and you know, speak to general public in South Africa. What are the Local indigenous words that we have in languages such as Xhosa, Zulu, Sotho… what do people understand. And what we are really finding now is that we don't have enough languages or enough words to translate for understanding, and also the answers that we are getting is patients… or I don't want to talk about patients, but the public think that an antibiotic will actually clean your blood, but you have resistance. It's not the micro-organisms on your body that's resistant, it's your body; I am resistant, right? I'm resistant to this antibody.	
Azania	21:36	So, we've located this resistance in the in the wrong place. So, what should a simple message then read like to explain this concept better?	21:45

Stephanie	21:45	I think even before I answer that, I want to say that we got it wrong. We got our languaging wrong and healthcare workers have made it too difficult to understand and even internationally they talk about a litmus test. So, where they go in to different taxis in France and in England, I've also done this and I would ask the taxi driver. So how do you treat stroke? And then if they could answer them, they know that they got the messaging wrong. And even in these studies, when they asked them in France, so you know, what's resistance, no one knew. So, I think the general message that we should say is that one must remember that you actually have more bacterial, parasitic, and fungal cells on your body than what you have almost human cells. And these microorganisms are actually there to help you. It's only when we have some of these microorganisms that are translocated to areas where they should not be, for example, if you have gut bacteria that goes into your lungs, and you know, that can really become pathogenic. And those organisms, if you expose them to antibiotics over and over and over again, they are the ones that eventually the pathogenic organisms then become resistant to antibiotics.	23:01
Azania	23:01	That is a perfect explanation. It’s a perfect explanation. So, in other words, we also need to then shift from a place of fear to a place of empowerment with the right knowledge.	23:14
Stephanie	23:14	Yes. And I think that’s where South Africa is really doing well. You know, we can easily become all doom and gloom. We have the Department of Education on this ministerial appointed committee. And I would like to see that we start training younger children, you know, elsewhere in Amsterdam, and even in other African countries, they've nearly eradicated some of the very resistant Staphylococcus aureus infections by training children to wash their hands. You know, and if you teach your children to wash your hands after you’ve been to the toilet, or you know and sing Happy Birthday, those are simple measures that we can put in place. It's not expensive to actually reduce the burden on our country's health care.	23:55

Azania	23:55	You're a champion for something that's called antibiotic guardians in South Africa. So, what is it and how can ordinary people become guardians?	24:04
Stephanie	24:04	So, the Antibiotic Guardian is on the Department of Health's website, there's a link that you know, you can just share. And what this does is once you click on this link, we have different sections. You know, the Federation of Infectious Diseases of South Africa has started this initiative. And what it says is, it says either as a healthcare worker or as an educator or as a member of the public. And interestingly enough, we also have a space for farmers because of the one health approach. So, then what you eventually say is you pledge to say I pledge to use antibiotics only when indicated for an infection. So, for example, if you're a farmer, we have a term that we call metaphylaxis. So that is where we administer antibiotics to all animals, you know, as a preventative measure to prevent infection. So, there are different statements for different parts of the public, right. For example, if you are a member of the press I'd like your page will be a page to use antibiotics only when indicated. If I'm prescribed antibiotics, I will take them exactly as prescribed. If I'm someone that care for a child, I will ensure that they take it as prescribed. I will wash my hands before or after preparing meals, and I will protect the environment from pollution. And I pledge to, if you have animals, if you are a farmer, for example, to keep them healthy, listen to this: through good nutrition and husbandry, relevant vaccination, deworming and having regular veterinarian health checks, and then you can even print off a nice certificate. And then you can share that on social media, hashtag antibiotic guardian. And instead of seeing all of this red on social media, we will see green which is what we love with all the antibiotic guardians, so that would be great.	25:50
Azania	25:50	That would be great. Now speaking of farmers, what role does agricultural practices… What do those practices... the role that they play in antimicrobial resistance?	26:03
Stephanie	26:03	So, there's a big interrelationship of anti-microbial resistance between human health, animal health and environmental care. We can actually share resistant, and we have shade some of the worst resistant strains, for example, MCR One, that we obtained through chickens through poultry, because it's a gene that we shade from our	28:08

		animals. So, the farmers have actually also started through their associations to set up certain parameters in South Africa to ensure that they will only use antibiotics when necessary. They won't necessarily use it for metaphylaxis and other measures is they've started with surveillance programs. They're actually testing in some instances for the number of antibiotics in their meat products… and in future as part of the O'Niell report as well. We also want to see that maybe going forward, if we don't use antibiotics, or if we don't have antibiotics, we could lose meat producing animals and that could also lead to starvation. So, there are initiatives in other countries that are called Meat Free Mondays to try and prevent the pressure on… on meat. But the veterinarian and the paraveterinarians have actually started with anti-microbial surveillance programs. They're tasting water. They're starting to test water for not only bacteria, but recent initiatives they've asked to test for antimicrobials in the water or resistant strains. And they're trying to have prudent use guidelines in animal health. When do you really need to do it? We want to ask the public not to go to the veterinarian and ask the… maybe the person who's working in the shop for some over the counter antibiotics and just give it to their cat or the dog if they think they are how, they are sick or they own antibiotics. And better control of… you mentioned earlier, of antimicrobials that crosses the border without us actually monitoring it. So, there are lots of awareness campaigns also going on in our veterinarian colleagues and in our environmental health colleagues tasting water, as well as for resistance.	
Azania	28:08	Periodically in South Africa, we've heard about superbugs, the presence of superbugs at certain institutions, particularly in some hospitals. What is the state of superbugs in this country?	
Stephanie	28:19	At the moment, as we are sitting here, we have a CRE outbreak, Carbapenem-resistant Enterobacteriaceae in at least three large public sector hospitals. And we have large fungal outbreaks in our private sector hospitals. So, we do see these outbreaks. And as we are having this podcast, it's happening in our sister institutions. So, the best methods that we can employ there is having massive infection control, awareness	29:42

		campaigns, you know, really cleaning out the units trying to look at that antibiotics, the surveillance programs that we have there, that we have been using and generally trying to create awareness even amongst healthcare workers to only use antibiotics for infections that really require antibiotics. And just coming back to the O'Niell report, one of the biggest aspects in his report that he highlighted was that we need to have better diagnostic skills. And that's a flip side, there's two sides of that coin because you need a clinician with great skills. But we also need to have the NHI, that's now recently been released or plan has been released. The NHI also calls for better surveillance and better point of care diagnostic kits at primary health care clinics.	
Azania	29:42	So, what does that entail and how common are the screenings, that if I get to a hospital, a finger prick or some kind of simple examination can determine what I'm resisting, whether or not there is resistance and whether or not there is… I'm coming in with a particular bacteria…	30:00
Stephanie	30:00	What we are looking for is not even for you to go to a hospital… the NHI wants you to first go to a clinic, which is where we should start. And when you go to a clinic what we need, what we currently don't have, is we don't even have point of care diagnostic kits to tell if you are suffering from a bacterial infection, a parasitic infection, a fungal infection. So, we rely on those healthcare workers in the clinics to try and make a diagnosis with what they have, their clinical skills. In the O'Neill report he is saying but we should have point of care devices there… be more process. So instead of just you know trying to really kill the small little bag with a big if you want to call it… arsenal, because you know, that's what we're doing at the moment. We should try and treat it for what it is. And then, if we can't treat the patient there, they scale up. So, South African health key we have too many patients in large hospitals where we are trying with NHI to try to turn it around and bring them back to the clinics, but with better diagnostic skills, and before we take these patients then into our larger hospitals, what we ideally want is to isolate them.	3:35

		Because if you have a very resistant bug, we need to actually protect the other patients from carrying over what you have. And that's where infection prevention and infection control and simple measures like washing your hands, or if you go and visit a family member, they are these little spray cans, please use them. And make sure that you know… don't underestimate the value of proper infection control	
Azania	31:35	The screen that you're talking about has to do with identifying exactly what the ailment is and what I'm suffering from. So, there isn't necessarily screening for an incoming patient or someone walking into a facility to see what they are bringing or carrying, would they, so to speak.	31:53
Stephanie	31:53	That's what we want. That's the goal. That's the ideal. Yes, and we have it in some facilities. But it doesn't always happen. And we admit patients transferring in especially from a district hospital to a large public sector hospital, and sometimes the laboratories are overworked. And we can pick up, you know, we've got good NHRS, got good capabilities in terms of isolating what we have if we've got a CRE, what type of resistant strain we have. But we don't always do that in time to prevent reinfection have a whole ICU… of a whole medical ward. And I think we talked about antibiotic resistance, whereas in South Africa, I need to highlight this to the public as well. We also have TB resistance, and we've got HIV resistance. And we published two big papers about in the last two years, where we've actually shown that our usage data of antimicrobials is different to other countries internationally, because we also use antibiotics to prevent infections in a patient that HIV positive. So, we use antibiotics a little differently to what they are using in Europe and what they are doing in America. And that's why South Africans and Africa need to find their own solutions.	33:20
Azania	33:20	I also thought to get the perspective of Roshini Moodley Naidoo, Discovery Health's Head of Strategic Risk Management on antibiotics use and what we should do when flu season comes along, especially when there's a high risk of	33:46

		complications. So, Roshini, how do we, as a society, erode the efficacy of our antibiotics?	
Roshini	33:36	There are two ways that we erode just how effectively our antibiotics work and that's through either the overuse of antibiotics, that means we're using too many antibiotics, or the misuse of antibiotics, and by that, I mean, we might be using antibiotics incorrectly, in that an infection might be present in a patient that might not necessitate the need for an antibiotic, such as the flu. And we then as doctors or nurses prescribe an antibiotic, so both of those, either using antibiotics too often or using antibiotics where they might not be needed, renderer antibiotics ineffective.	34:34
Azania	34:34	Right. And when we think of some of the more common occasions or opportunities where antibiotics are prescribed, the flu certainly comes to mind, particularly within flu season. And as far as research indicates that there is unnecessary prescription of antibiotics for viral infections, even though they intended for bacterial infections. Do you find that this is one of the big drivers?	34:59
Roshini	34:59	Absolutely. That's… that's entirely correct. The flu, from being quite innocuous or innocent type of illness, that usually runs a natural course by itself without much medical intervention, is actually turning out to be more sinister in the current landscape, and that's largely due to the misuse of antibiotics. Flu is caused by viral infections, and antibiotics do not treat viral infections. Antibiotics are used to treat bacterial infections. So, when a provider of care prescribes an antibiotic for flu, there's harm being done in this bigger picture of what's now recognized as a global threat. And that's of antibiotic resistance.	35:51
Azania	33:51	So, how do I address this issue with the doctor?	35:54
Roshini	33:54	So, there's an interesting study, Azania, that was conducted in South Africa by Wits University In collaboration with the London School of Economics. It was what's referred to as a mystery shopping exercise. And by that, patients who were not ill, these were patients who are part of a study,	39:44

		visited doctors. And in that study these patients, as I say, again, we're not ill. But in between two thirds and 80% of the cases, antibiotics were prescribed, then that's clearly you know, that's a cause for concern. That's a moment to hit the pause button and say, Look, you know, doctors, this is a problematic pattern of antibiotic prescribing in the context of antibiotic resistance. It's not an easy problem to solve this. A few insights that have come out of that study, as well as other studies point to a few different factors as to why doctors prescribe antibiotics the way they do. Probably the commonest reason is a gap in clinical knowledge. So, doctors give reasons of being worried about what the clinical pattern is looking like in the patient that they see. Or they're feeling disempowered, because they might not have the blood result available at the time they see the patient. Or they might have gaps in what evidence based medicine might be saying about how an acute bronchitis or how a flu might be treated. So, closing that kind of information gap, creating a community of expert… scientific experts in the country, to close that clinical information gap, to give doctors the knowledge and the information that they need, the most current knowledge, is critically important. There's another intervention as well, that can help doctors and that's better diagnostics. So, in some parts of the world, doctors use throat swabs for identifying whether the organism or the microbe or the germ in a patient's throat and that's often the side of flu infections. That's one of the commonest sides of with it infection starts. So, they put in the swab and then 20 minutes later, they can identify whether this is a bacterial or a viral infection with quite a high degree of probability. So, having those kinds of diagnostics available to the doctor can also be very empowering. And then the third reason, and this one is also a complicated one. But the doctor's view here of overprescribing of antibiotics is an assumption that doctors hold that patients expect antibiotics. Now, it's a bit difficult to understand, you know, just the accuracy of that assumption. But it is entirely true that doctors do hold this view, whether patients are actually, you know, have that expectation or not, as I say is a little more complicated to understand. But certainly,	

		you know, we hear the anecdotal cases of a mom with a child with a fever in the office and the paediatrician on a Friday and being very anxious about leaving without an antibiotic being prescribed. So, to some extent, antibiotics seem to have become a type of crutch for the patients who have these, you know, common symptoms of flu during flu season. And then that too needs to be, you know, needs to be addressed. If patients walk into the doctor and say, Look, Doctor, I do not want an antibiotic. The same study that I cited earlier shows that there's a 20% less chance in those cases of a doctor prescribing an antibiotic. So, consumer education, patient education and family education, about the threat of antibiotics resistance, as well as common conditions like the common cold and not needing an antibiotic, are very important.	
Azania	39:44	So, what can we do because clearly preventative steps are the best that we can take. So perhaps there is no need for an antibiotic. Do we start by doing our best to prevent the flu?	39:54
Roshini	39:54	Yes, there are probably two ways of thinking about that. Prevention is absolutely critical and prevention is multifaceted. So simply, you know leading a healthy lifestyle, eating well, taking care of your exercise patterns, make certain that you're you know, having a balanced diet, as especially as you go into the flu season, taking your multivitamins, all of those are important. But there is also scientific help here in the form of the flu vaccine. The flu vaccine has been proven over and over again, in studies around the world, is a very effective way of preventing the flu. It does not prevent the flu in 100% of cases of flu, but it certainly does reduce the prevalence of flu, and it reduces the seriousness of flu. We can talk as well about what happens when you get the flu and how you can take steps to prevent the flu from spreading because that also is an effective mechanism to address flu. But I don't want to take away from just the importance of the single intervention which is the flu vaccine.	40:58

Azania	40:58	I see that Discovery Health will pay for the cost of one seasonal flu vaccine from the screening and prevention benefit for members who are high risk from developing the flu and of course, complications as you've mentioned, and this comes from the available day to day benefits for members who are not considered to be at high risk. So, tell me about those that are high risk, how do I know that I am high risk,	41:22
Roshini	41:22	Right. So, the rationale for this being available out of the risk bucket of funding for high risk patients is because high risk patients are vulnerable, their immune systems are, especially over the winter months, at a higher risk of flu than perhaps people who are healthy. So, high risk patients or patients who have chronic conditions, so those are largely cardiac or metabolic conditions. Cardiac failure, for example, is a high-risk condition. Diabetes is another, age is also a high-risk factor. So, the vaccine is available for those under 65. Pregnant women are also high risk of a severe flu, should they contract the flu. So, the vaccine is also available for expectant mothers. If you're not certain a doctor, your GP could advise you about that. Or you could, on the Discovery website, look this up and find out whether your condition qualifies. We also send out a communication to all members who are at high risk at the beginning of the flu season. So, members at the beginning of flu season, which is usually towards the end of March, beginning of April will get a personalized message. Those are sent out through email, as well as through SMS's to members advising, that due to their high-risk condition, another one is asthma which is very common in children, that either the member or a child is eligible for the flu vaccine and nudging or prompting the member to have that vaccine as early in the season as possible.	43:02
Azania	43:02	And I know you said with claim tracker stats, what do we know about the flu within the membership base of Discovery Health? And how has the engagement to end flu vaccine improved over the years?	43:13

Roshini	43:13	This is sadly not a good story. If there's any comfort with the trends around the world, show that flu vaccine uptake, even in the high-risk population is not high. Our rates average around 17 or 18%. of the high-risk population. It's difficult for us to comment on the healthy population, because as you mentioned, those claims are funded out of the day to day benefits, and their members might not submit their claim. So that's not always easy to understand. But this is at a national level in South Africa in the private sector, our rates generally average under 20%, which is again, not positive at all. We have seen in the last year, a small uptick in the flu vaccine previously where we averaging around 15%. And now we are between 17 and 18%. But that's nowhere where we need to be.	44:07
Azania	44:07	So perhaps it's around awareness about Discovery Health's screening and prevention benefits.	44:11
Roshini	44:11	It is about screening. It absolutely is… is about awareness of the screening benefits. But even for you know, there's another complexity here. There is a movement around the world referred to as the anti-vaccine movement and that movement, and people who regard themselves as anti-vaxers, even though they are in the minority, they can be influential, and they sometimes cite papers and you know, cite bits of research that cause alarm and cause concern. That is an influential factor in how people adjudicate the importance of the flu vaccine. But, again, I must reiterate given this is such an important topic, that every bit of scientific evidence that we have as a scientific global community, including, you know, umbrella organizations like the World Health Organization, advocate for the flu vaccine on the basis that this is a safe vaccine with proven effectiveness.	45:13
Azania	45:13	What is Discovery Health doing to preserve antibiotics? And why does it matter so much to Discovery Health?	45:20
Roshini	45:20	It's very important Discovery Health, but you know, the cost of medicines are rising in South Africa, as well as around the world. So, there's clearly a cost imperative, and also, you know, more and more novel medicines, so very specialized medicines are	47:03

		becoming available. So, when you think about medicines that should actually not be used, and saving on that cost, because it's all one finite pocket of expenditure, and using those funds to support the funding of illnesses that needs some of these specialized medicines, then the cost imperative becomes even more meaningful. But at a society level, this is beyond Discovery Health. This is about the citizens of our country, South Africa, and this is really about the global citizenship. The World Health Organization has labelled antibiotic resistance as a global threat to humanity. So, in that is a world of no antibiotics being effective in perhaps 50 years, and that's a very dangerous world to be in, when the commonest of infections no longer can be treated successfully. We go back to a world when penicillin did not exist, and that is not a word that would be a good word for our public health. So, there's also the society imperative to be protective of our medicines and protective of our antibiotics. And then just at an individual level, antibiotics have their side effects as well. Beyond you know, what we talking about which is this important topic of antibiotic resistance, so, even at an individual level, taking antibiotics when they are not needed, has quality implications on people's biological systems.	
Azania	47:03	So, what is Discovery Health doing to preserve our antibiotics? And why is it so important to you?	47:08
Roshini	47:08	So, there's quite a bit of work that's underway at Discovery Health. I'll speak about awareness, which is probably one of the more important aspects of a multifaceted solution. In the doctor environment, as well as in the member or in the consumer space, we run a campaign called Smart Health Choices, and Smart Health Choices is about enabling doctors and patients to come together in a partnership and have informed decisions about health care, specifically in the context of antibiotic resistance. We create content, we create information, or we share knowledge with doctors and patients about questions to be asked and questions to be addressed during a visit to the doctor, for example, during flu season, so those questions or those guides are available on our	49:04

		Discovery Health website. We have a guide called 'Visiting Your Doctor' and we encourage all members to have a look at that guide and use that guide to prepare before visiting a doctor. And then on the other side of that healthcare equation, we support doctors with information about being empowered in helping patients get to the right decisions about their condition. So, using some of the consultation to educate about antibiotics, appreciating of course the doctors have limited time as well. But patients take their information, they are guided and they are educated and they're informed by doctors. So, it is worthwhile for doctors to take the time, wherever possible to enlighten or to inform members as well, of some of the perils of overusing or misusing their antibiotics. That all comes together under this banner of patient and doctor awareness.	
Azania	49:04	Our experts all agree that we can do something as individuals. For instance, only take antibiotics when really necessary, and speak to your doctor about it. Make sure you wash your hands regularly with soap while singing the Happy Birthday song, twice by the way, to make sure that long is long enough. And also help creates awareness so that we protect the effectiveness of the antibiotics we already have. Thank you for listening to this episode of Discover Healthier, brought to you by Discovery Health. Join the conversation on social media with the hashtag discover healthier and tag @discovery_SA. You can subscribe to our podcast channel, Discovery South Africa, on your favourite podcast app or visit discovery.co.za to listen to our shows.	49:54