



Season 7, Episode 5

Medication Overload

[Teaser Clip]

Prof. Caraco:

I got a letter just recently from a colleague of mine, who really, the patient who is taking 20 medications and the patient has a rash, and the question at the end of the letter of the medical letter was, what can I add?

[End Teaser]

[Intro music]

Maayan Hoffman:

Hello and welcome to Hadassah on Call, New Frontiers in Medicine. I'm your host, Maayan Hoffman. In today's world, it feels like almost everyone is on some kind of medication. Or several, I'm not. I've always been cautious about taking too many pills. And I'm careful about it with my kids too. But as we age, our medicine cabinets tend to fill up and doctors often prescribe more for blood pressure, cholesterol, sleep, pain, anxiety, the list goes on.

The problem is when all of these medications start to mix, the result can be dangerous. What was once meant to heal can actually start to harm. In this episode of Hadassah On Call, New Frontiers in Medicine. I talked to Professor Yossi Caraco, director of Clinical Pharmacology at Hadassah Medical Center about polypharmacy, the growing and under-recognized problem of overmedication, especially among older adults.

We'll discuss what happens when too many drugs interact in the body, how families can spot warning signs of over medication. And why better communication between doctors and between patients and pharmacists can literally save lives. We'll also ask whether

Maayan Hoffman:

lifestyle changes like better nutrition, exercise, or sleep might help reduce our dependency on pills altogether. If you've ever looked at a loved one's medication list and thought, is all this really necessary? This is the episode you'll want to hear. So welcome, Professor Caraco.

Prof. Yosef Caraco:

Thank you for having me.

Maayan Hoffman:

Of course. I want to get started by just asking you what exactly is polypharmacy and why is it such an important issue for older adults?

Prof. Yosef Caraco:

Okay, thank you. This is actually a very important issue, because, as you probably know, the fraction of elderly people is rising. For example, nowadays it's about people age 65 and older are about 12 to 13%, and we expect that in about 25 years from now, it would be almost 25%. That means that one out of every four patients will be older than 65.

Not to say patients, but these patients are older than 80. And when I do rounds in the Department of Medicine where I work, it's not that unusual to see patients at the age of 90 and even a hundred. So, we have to treat this fraction of our patient population in a bit of a different way. So, coming to your question regarding polypharmacy, scientifically it means that the patient is getting more than five medications. And this is a bit strange because our patient, once they get to this age that I was referring to, all of them are getting more than five medications. In the Department of Medicine, and I just looked at it before I came to the interview, the average number of drugs being taking for the average patient is about eight.

Maayan Hoffman:

Wow.

Prof. Yosef Caraco:

So. It's there all the time, but the phrase of the terminology polypharmacy is a bit misleading. And I tell you why. In general, my belief is that if you can treat symptoms, a disease without medication it's much better.

Maayan Hoffman:

Yeah.

Prof. Yosef Caraco:

Because you know drugs that they are either biological drug or they are chemical drugs. It's a foreign thing that you put into your body. And if you can take and, and there's always

Prof. Yosef Caraco:

side effects, always. Even if you take paracetamol, acetaminophen, whatever. You might experience adverse effects. So if you can take care of the symptoms of a

disease without taking medication, for example, by changing your lifestyle or any other thing that's preferred on the other end, if you have a disease of a symptom that you cannot take care of by, lifestyle modification, et cetera, use the drug, the proper drug.

So, when you say polypharmacy, you mean actually there is a criticism, you're taking too many drugs, and I think the right terminology should be optimized therapy. Meaning if you have a disease that needs to be treated, it is important to get the treatment. But if you're just taking medication for no reason, that's that not wise. Because you're going to pay for that. Uh, and that's in, I can add some more details, but I think this is the general philosophy that I've been using in my daily life when I, you know, treat patients.

Maayan Hoffman:

But over medication is certainly an issue. I'm wondering at what point is taking too many medications actually doing harm or causing risk as opposed to doing good? How do you know?

Prof. Yosef Caraco:

Well, it's not an easy task, you need to do what is called a medication review.

Maayan Hoffman:

okay?

Prof. Yosef Caraco:

Which means I have to take the details of the disease or the symptoms you are reporting or you're suffering from, and then to take the list of the drugs that you've been prescribed and to see whether each of those symptoms or diseases is being treated properly.

And if by any chance, you're getting medications that you actually don't need. So sometimes when you do that, all of a sudden you see the name of a drug and you're asking the patient, okay, I see that you take Drug X. Can you tell me why you are taking it? And, and not, not too, you know. So, the patient would say, well, someone gave it to me many years ago, and so to do what we call a medication review. At the end of the medication review, you'll find the following, uh findings, typical findings.

A, the patient might take a medication it doesn't really need because there is no disease that is being treated by this medication. The patient might take two different drugs with different names to the same medication, the same drug. Because, you know, we have, we have this generic industry and all of a sudden there is the same chemical entity is being called by different names. So, okay. One of them is obviously

Prof. Yosef Caraco:

not needed. You may find the other thing that, that actually the patient has a disease that is not being treated.

So, you may ask him, you may recommend him to use an additional drug. So, the question is try and compare the list of medications to the list of diseases and try to be able to make sure that every disease is being treated and there is no drug that has no purpose actually.

Maayan Hoffman:

If you enjoyed this episode, be sure to check out our previous conversation with with Dr. Neville Berkman, head of the pulmonary Institute at the Hadassah Medical Organization. He breaks down what pneumonia is, how doctors diagnose it and how it is treated today.

Dr. Neville Berkman: So yes, I actually looked for that and didn't find it. The numbers in the states are somewhere around 7 million cases per year. Of which they are about 750,000 people that are hospitalized, about 1.5 million go to the emergency room, about 750,000 are hospitalized and the death from pneumonia depends on the age of the patient and the specifics, whether it's community grade pneumonia, where patients are healthy, the death rate is very low, it's less than 1%. In people who are admitted to hospital, but not to intensive care, the percentage that will die of pneumonia is somewhere around 10%, people who are in intensive care who are certainly on ventilators, the chances of dying about 50%. So overall it's still because it's such a common disease as the worldwide figures are somewhere around 400 million cases of pneumonia a year. Because it's such a common disease. It's still a very common cause of death.

Maayan Hoffman:

In that episode, we also tackle common myths about cold weather, lifestyle risk factors such as smoking and nutrition, the early warning signs that should prompt a visit to the doctor and why antibiotics are often prescribed even with a specific cause has not identified.

And now back to our discussion with Professor Yoseph Caraco, director of the clinical pharmacology unit in the department of medicine.

Maayan Hoffman:

And what about the idea though of drugs may be counteracting or having adverse effects on one another? Today, you don't always see only one doctor to do what you're describing. This medication evaluation. So if different doctors are prescribing different drugs, is there a risk that they might hurt each other or cancel out an effect?

Prof. Yosef Caraco:

That's a very important issue. You know in older times, the patient might have a GP (general physician), one physician who might treat him for all the symptoms and diseases he is suffering from.

Nowadays, everyone goes to a specialist, and the specialist would treat the special organ he knows how to treat, and he would give the patient the medication recommendations for medications that he, that refers to the complaint that the patient, makes to this, the physician, and it really piles up.

Maayan Hoffman:

Mm-hmm.

Prof. Yosef Caraco:

So, we need someone to make, some kind of, of an order to see to actual do we really, because for example, cardiologists may give you a drug that the internist may give the same drug, but they don't really talk with each other. Yeah. So we need someone who really would do this medication review and would, uh, consider whether all of these medications are really needed and also if a medication is not needed to do what we call deprescribing. And there is enough scientific evidence to suggest that if you delete or you, uh, omit a drug that the patient has been given and, but you do it with, uh, uh, really wisely, meaning that you have really considered it, uh, and you think this is safe, usually the patient would feel better and is likely, likely to feel better and to have less symptoms.

Maayan Hoffman:

Is there a way that you can improve communication between all these different specialists and doctors?

Prof. Yosef Caraco:

Good question. Not very easy answer. But the thing, what happens is that each of those physicians or specialists are doing their job and they're doing a proper job. I think it is the job of the primary physician, what you would call family physician or sometimes the internist to stop once.

Let's say once a year, once every half year. And, okay, let's stop because you come to me because of, um, some kind of a problem of symptoms. Let's see whether you really need all these medications that maybe I'm not the one who prescribed them, but let's see, let's do the medication review process. And this is really, based on scientific evidence, if you do it properly and if you do it enough times, you end up getting to the position of optimized therapy. Mm-hmm. So, but it is important. But when you say polypharmacy and you ask a patient, or he has heard about it, polypharmacy doctor, does that mean that I'm getting too many medications? And this is really risky because you would say, okay, you know. This yellow tablet. I mean, it's, maybe I won't take it

Prof. Yosef Caraco:

because I'm taking too many medications, and I heard in news that polypharmacy is really dangerous for you.

Maayan Hoffman:

Right ...

Prof. Yosef Caraco:

So, this needs to be wise and, and to able to come to the conclusion which medications you really need, which you don't need. And, and you have also to realize that even though elderly patients. Uh, make about today, right? Nowadays, about 13% of the population, they make about the fraction in the population who are considered to be with polypharmacy is more than 70%. So we need to take care of the elderly patients right now.

They are taking many medications. In many cases, interaction with different medications might cause additional problems.

Maayan Hoffman:

Right ...

Prof. Yosef Caraco:

And this is what is called sometimes the cascade of prescription.

And let me give you an example. I got a letter just recently from a colleague of mine who really, uh, the patient who taking 20 medications and the patient has a rash and they question at the end of the letter, the medical letter, was, what can I add? And, and so, so because you take one medication, it's doing its job, but it's either is a side effects of the drug. So you, you give another medication to, to do the side effects and then this drug has got its own side effects, et cetera, et cetera, et.

Maayan Hoffman:

And one of those drugs is maybe causing the rash.

Prof. Yosef Caraco:

That's correct. So my advice at the time was to stop many of these medications and obviously the rash disappeared. But you have to be, you have to be careful when you do that. I mean, you know, uh, because it's just stopping medication because you're taking too many medications. It's not the proper way to, uh, uh, to do it.

Maayan Hoffman:

So, first of all, we should find a specialist or a primary care doctor to really make those decisions for you. And certainly, the patient should not be making those decisions on his or her own.

Prof. Yosef Caraco:

That's right.

Maayan Hoffman:

Now, what role do over the counter drugs or supplements play in polypharmacy? Are patients sometimes unknowingly actually adding to their own medication list in becoming, making more risk because they're choosing some of these over-the-counter vitamins even, or other drugs?

Prof. Yosef Caraco:

I agree with you and, and you have to add to this over the counter. Uh, this is obviously adding additional medications.

That's because these are medications. But let's think about the situation when the patient comes into the doctor's office, he's got symptoms. If the doctor would tell him, listen, this is because of this and this, it'll go away. In about 80% of the time, the patient is not satisfied.

You know, I came to the doctor, I had this symptom that is really bothering me. I have this pain, I have this ache, whatever, and I came out of the office with even one medication, nothing. I'm still with the pain. I need something. So in many cases. The patient for obvious reason he wants a remedy and he wants to get out from the office of the doctor with, with the, probably a drug therapy or something that would help him to ease up his symptoms.

So it is our job to select the right drug for the right patient, and at times when it is not necessary to tell the patient, listen, I understand. I sympathize with your pain and your symptoms. This is really obvious. But listen, it's going to disappear. It is going to go away. There is no point in giving, adding a drug to you. And we always use the concept of risk benefit, and this is very important. Every physician should do that.

What does it mean?

It means that I add a medication when the risk involved in terms of side effects, et cetera, is greater than the expected, beneficial effect. And you should do it. You should exercise it every day and every day. This is the key point.

Maayan Hoffman:

Can you give me some examples of common drug combinations that are maybe dangerous that you see a lot in older adults?

Prof. Yosef Caraco:

Well, you see, uh, elderly patients because of physiological, uh, alteration changes that they undergo, especially in terms of kidney function. You know, kidney function deteriorates physiologically when you grow older.

Maayan Hoffman:

right?

Prof. Yosef Caraco:

So, you have to be very careful when you use drugs that are eliminated by the kidney. And if you don't take this into account, you are going to run into toxicity. So, so you have to think about it all the time. Another example is that elderly patients are more likely to suffer from diseases or symptoms or I guess, circumstances where they are more likely to experience bleeding. If you use, many of these elderly patients use antiplatelets or anticoagulants that are usually making the blood thinner. But when you prescribe a drug from this class of medications, you have to take into account that your patient might bleed. And so this is coming back to the issue of risk versus benefit. So, the, I mean, the, the drug is, is, is obviously indicated in your condition, but what are your own personal medical details that might make this drug more dangerous for you. So, you have to do it as personalized.

Maayan Hoffman:

And I was reading that there can be signs of over medication or of polypharmacy, for example, cognition. It can affect your cognition, your balance, your overall physical health. Maybe even make you more frail. Is that accurate? And what would that look like so that somebody could identify that maybe the issue is over medication?

Prof. Yosef Caraco:

I think, I think, you know, it would be too simple to say that specific symptoms or specific name or number of drugs is, is a sign of polypharmacy.

Of course, if you're taking many medications, as I said, the solution is to do medication review. Go to the primary physician, doctor, I'm taking this and this medications, I've been taking it for a long period of time. Please let me know that I am on the right track. This is really things that they need to take for my own help.

Maayan Hoffman:

What about the role of the pharmacist though? You know, usually I would say older patients, they're living in a neighborhood. They probably go to the pharmacy to collect the different medications that they're being prescribed. Could the pharmacist play a key role here in actually looking at the list of medications and helping the patient potentially to do that review as well and maybe raising the red flags?

Prof. Yosef Caraco:

I think they do.

Maayan Hoffman:

Okay.

Prof. Yosef Caraco:

We need to consider the following details. To give a recommendation or consultation in a proper way the pharmacy is not the place to do it. It's not private, it's, it's, I mean the pharmacist is busy with the other things, et cetera. This is not the solution, but there is now a, a, um, uh, what we call a clinical pharmacist.

Maayan Hoffman:

Mm-hmm.

Prof. Yosef Caraco:

Now we are in the hospital and also in the HMOs around in Israel and many HMOs. They've got clinical pharmacists. Their job is actually to sit with the patient privately and to consult and to give them medication to, and to do sort of medication review. So yes, clinical pharmacists, clinical pharmacists can really help you get to the concept of optimized therapy.

Maayan Hoffman:

Last year, Hadassah achieved another historic first: performing Israel's first total artificial heart transplant.

Marking a new era in cardiac care, a medical team at Hadassah hospitals saved the life of a 63-year-old patient by replacing his entire heart with a special artificial one made of titanium, combined with biological animal tissues and advanced sensors. How amazing is that?

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And now back to our discussion with Professor Yoseph Caraco, director of the clinical pharmacology unit in the department of medicine.

Maayan Hoffman:

Now, you started out the conversation by talking about how you would prefer not to prescribe a drug if there were certain lifestyle changes or other, you know, improvements that one could make before having to take that drug to solve whatever challenge, medical challenge they're having.

Maayan Hoffman:

Can you go over some lifestyle interventions, nutrition, exercise, stress reduction that could be used maybe in lieu of medication?

Prof. Yosef Caraco:

Well, it's a very general question and it really should be personalized. I mean, you know. I must tell you also that sometimes, for example, I give you the example of pain.

Prof. Yosef Caraco:

Pain is one of the most frequent symptoms that cause the patient to come to his doctor. And because we have this feeling of side effects of pain medications. Of addiction or, or whatever. Interference with the cognition, et cetera, especially in the elderly population. We sometimes refrain from prescribing our patients' medications that really, they need and whoever has had pain in his life bothering pain, not just pain for, you know, for a short period of time. If we prevent, if, if we avoid prescribing patient or patient because of the fear of side effects, this is wrong.

So, on the one hand, let's see if we can, for example, if you've got pain because of your, you know, osteoarthritis, like, you know, all this degenerative joint disease. Activity. You have to be active. You have to be, I mean, we, we obviously don't like sedentary lifestyle, so be active. Try to walk as much as you can. This is much better than using all this anti, you know, to the painkiller. That has a lot of side effects. But when it comes to the point where this is not helping, please do not refrain from prescribing your elderly patient a drug that can really ease his symptoms.

Maayan Hoffman:

But as you said, it's once you realize that exercise or the activity is not helping, are there any particular, um, dilemmas, like anxiety maybe, or a sleep, just sleep disorders, things of that nature where you feel that sometimes doctors jump the gun just to have a quick effect that could actually be solved by lifestyle?

Prof. Yosef Caraco:

Yeah. You see, anxiety is very good, or depression, anxiety are very good examples. The most, uh, easy way, let's prescribe a medication. But if you try to talk to the patient and to see, can we discuss it, I mean, you know, in a very wise way, because there is a good relationship and you've got a good relationship with your patient, you find out that the, the reason for the anxiety is a certain issue in his life and you might recommending change something in the way you like. Sometimes it's a very small thing and it's much better than using medications that are going to, you know, to influence many other activities.

Maayan Hoffman:

Well, and especially if something is like anxiety, I guess if you got on that medication, you might not get off of it and it'll become one of those, like you said on the list of, well, someone prescribed it 10 years ago and maybe you'll just continue to take it.

Prof. Yosef Caraco:

Of course, like medication, you know, sleeping medication.

Maayan Hoffman:

Right.

Prof. Yosef Caraco:

You know, elderly patients, they have these difficulties in getting enough sleep. There are many reasons for that, but in many cases it's, for example, pain. But if we can ease up the pain, instead of by, by either lifestyle modification or using, you know, medications that might help you to have, uh, the pain not that severe, it's much better than using sleeping medication that you are going to have. I mean, the, the effect is very short. You're going to wake up in the morning still feeling, feeling sleepy, et cetera. So, the key issue is to talk to your patient.

Try to understand what is really causing the problem he's complaining about. Even if it's not insomnia, it's not getting enough sleep, and try to figure out whether you can solve it properly. Not without, without really just, uh, you know, pouring, uh, another medication. Another medication, which is really, uh, obviously not helpful.

Maayan Hoffman:

Now let's jump to technology. Are there any new digital tools that can be used to help track your medications or ensure that no dangerous interactions happen?

Prof. Yosef Caraco:

Well, the technology that I would recommend is a good physician, really, a physician that you trust, and you can talk to him and tell him whatever, because all this, there are some applications, et cetera. I feel they are okay if you can use them and not the patient, but especially the physician. But there is no other way except for talking to your patient, having the list of the drugs, having the list of the diseases and talk to them about it in details. You have to realize that especially in Israel, you know, the average time a patient spends in the office, of a general practitioner in the community is between seven to 10 minutes.

And this includes, uh, you know conversation talking about the symptoms and sometimes it's not enough.

Maayan Hoffman:

Yeah.

Prof. Yosef Caraco:

So, if you have, I mean, if you encounter this situation, why don't you tell your patient, listen, we haven't been able to talk about everything. Why don't you come to me again tomorrow, next week, et cetera, and we'll have some time to talk about other things,

Prof. Yosef Caraco:

including the medications that you're taking, uh, in, very, or in another, uh, uh, to have some time to talk it in detail.

Maayan Hoffman:

And you said that 70% of these older patients are taking multiple drugs. People are living longer and longer, eighties, nineties, a hundred. You said seeing them in the hospital, do we think that this is gonna become an even more acute problem? The polypharmacy?

Prof. Yosef Caraco:

Well, you are thinking about it as a problem. We have to see the other side of it. Well, drug has got inherent side effects and the, and the risk of drug interaction is, is of course, proportional to the number of drugs you are taking, obviously. But think have in mind the fact that maybe people are getting older and surviving more and more because of these medications.

Maayan Hoffman:

Good point.

Prof. Yosef Caraco:

So, we need, we need to make sure that we don't think about the medications as our enemies. You need to find the right drug for the right patient, and then that's okay.

Maayan Hoffman:

Are you working on any research about polypharmacy right now?

Prof. Yosef Caraco:

Yeah, so, so about 10 or 15 years ago we established what we call the Drug Information Center for the Elderly.

Maayan Hoffman:

Mm-hmm.

Prof. Yosef Caraco: And I was fortunate enough to get the support from someone who was very, very generous. And we have established this service, which was first of all, you didn't have to pay for it, so, and people were calling us from all over the country, and there were at least a couple of pharmacists who were sitting there and listening to the questions. And they would do an intake of all the medications and all the diseases, et cetera. This would end up by writing a letter of recommendation, which would include also an answer to the question they asked, but also, we use that opportunity to do what we call the medication review ...

Maayan Hoffman:

right?

Prof. Yosef Caraco:

And, and I think this is, this is our goal to get as many people as possible, especially elderly people, uh, to get their medication review done, uh, on a periodic basis, uh, or once a year, at least once a year. So, this is something, and while we did that, we found out the numbers that I told you. So, we found, for example, about 10 to 15% of the patients are getting medications they don't need.

Maayan Hoffman:

Wow.

Prof. Yosef Caraco:

Because, when you ask the patient, why are you taking this and this? He said, I don't know. So, what we did, we have tried to use the patient to be the owner of the own medications. So, it's not that I'm taking the yellow tablet for this and this, but I know why I am, I am getting it, who gave it to me, et cetera, et cetera. And once the patient is more involved, the risk of what you call polypharmacy or getting medications that you don't need is really getting, as you know, uh, smaller and smaller.

Maayan Hoffman:

Now, Professor Caraco, obviously you're doing this work here at Hadassah. Tell me a little bit about what makes it unique to be in your role in this medical center and in Jerusalem.

Prof. Yosef Caraco:

Right, so you see, you can see my, uh, white hair. That means that I have an experience and I'm trying to use my experience to teach the young generation.

And this is one of the goals that I'm very proud of, because you are trying to be a role model. In what way? When you do rounds in the department and, and you see all the students around you and all the, and this is very unique to Hadassah to have these rounds, uh, as I and I, as I was, uh, uh, one of those as a student here, and then as a physician and as a senior physician, et cetera.

So, you see all this crowd around you. So you use the opportunity, the interaction with the patient to make sure that everyone understand that medications are important. Because they help the patient to feel better and the easy symptoms. But on the other side, they have the key. They really have some, uh, uh, uh, risk of getting, you know, side effects, et cetera.

Prof. Yosef Caraco:

And whenever we use a drug, we always think about the risk benefit ratio. And we need, is this drug really needed? If it's needed. Okay. If it's not, don't be shy. Do what we call de-prescribing.

Maayan Hoffman:

Amazing. Well, professor Caraco, thank you so much for sharing this information today.

Prof. Yosef Caraco:

Thank you for having me.

Maayan Hoffman:

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