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Practices for Preventing Polypharmacy in Multiple Sclerosis

Dr. Cheeley:
Welcome to *NeuroFrontiers* on ReachMD. I'm Dr. Mary Katherine Cheeley, and joining me today is Dr. Ahmed Obeidat and Lauren Beranek to discuss their article, titled "Identification, Management, and Prevention of Polypharmacy in Multiple Sclerosis," which was published in *Practical Neurology* in January 2024. Dr. Obeidat is an Associate Professor of Neurology at the Medical College of Wisconsin.

Dr. Obeidat, welcome to the program.

Dr. Obeidat:
Thank you so much for having me.

Dr. Cheeley:
And Lauren is an MD candidate at the Medical College of Wisconsin. Lauren, thanks for being here.

Ms. Beranek:
It's a pleasure. Thank you.

Dr. Cheeley:
I would like to set the stage with a pretty easy question for you guys. How in your study did you define polypharmacy?

Dr. Obeidat:
Yeah, we define based on the available literature, and it looks like people who are using at least five or more prescriptions for at least 30 days that can be defined as polypharmacy. And we use this in our article to identify that, right, Lauren?

Ms. Beranek:
Yeah, certainly. So there's not necessarily a standard definition like Dr. Obeidat was saying, but in terms of the literature, that's by far the most common definition that's been used, and it's the one that we also used.

Dr. Cheeley:
Lauren, can you talk about the prevalence of polypharmacy in MS and some key data associated with at-risk patient populations?

Ms. Beranek:
Absolutely. So first, I wanted to step it back first and just talk about the general population, and then I'll shift and talk about MS just to help give some perspective. So in North America, the risk of polypharmacy is about 10 to 15 percent in individuals that are aged 40 to 65 based on literature, and then after 65 years old, that bumps up to 30 to 35 percent. The estimated range of polypharmacy within MS, however it ranges quite vastly, and the estimated prevalence is anywhere from 14 to 76 percent, so it's quite a big difference within that sphere. And key data within at-risk patient populations, I think the biggest one that I've seen in my literature review is the use of antidepressants. It's one of the most common medications that's prescribed within polypharmacy in MS, and it's certainly a risk factor and comorbidity that we often see in individuals with MS. I would love to hear if you have anything to add, Dr. Obeidat, about that.

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Dr. Obeidat:
Yeah, as Lauren said, it's very important that we identify polypharmacy because people with MS are at higher risk of polypharmacy just because they already have to take a disease-modifying therapy for multiple sclerosis, and then they have multiple symptoms that if we try to address each symptom with the medicine, then we will run into polypharmacy. And also, if we try to address sometimes side effects of medicines with medicines, then we go into polypharmacy. This is why we wanted this article to be out there for practical considerations for people taking care of people with MS and other diseases to rethink about treating everything with a medicine. Maybe we should look into other things.

Dr. Cheeley:
You're speaking to my pharmacist heart on this one, guys. So I love what you said specifically about treating a side effect of a medicine with another medicine. And I do think that when we talk about psychoactive medicines or when we talk about neuro specifically, there are lots of side effects with those drugs, and so we tend to just add things on instead of, like you said, maybe figure out what the root cause is and can we do something differently with therapy for that. So Dr. Obeidat, can you walk us through some of the biggest challenges that you have in clinic contributing to polypharmacy both at the institutional level and the patient level?

Dr. Obeidat:
This is a great question. And at the patient level, we always like to start with a conversation. So we talk with our patients. We make sure we understand what medicine they're taking. And then we want to understand why they're taking these medications and whether there are any medicines on their list that they feel that maybe it's been there for a while and maybe it's not doing what it's supposed to do, or maybe they're having a side effect from it, or maybe there is some laboratory abnormality related to this medicine that we think we need to rethink that particular medication. So we kind of always start with this.

But sometimes the challenges people tell me, they say, "Well, how would you know that this medicine is not helping me?" And I'm like, "Well, that's a great point that we may not know. So I encourage my patients—I say, "If this medicine, if we don't know if it's working or not for you, let's try to taper it a little bit and see if that symptom that we were treating comes back again or it's not coming back again. If it's not coming back again despite being off the therapy, that's a win-win. Now you're one medicine down." That's one thing important.

And the other challenge that I brought in earlier is sometimes we have medicine resulting in side effects. And sometimes the challenges we face is people sometimes want another medicine. It's an easy solution that may seem easier than maybe doing some other activities or other nonpharmacological therapies. And this is where we run into challenges where the conversation, the dialogue with the patient and their family, is very important because we can address a lot of these challenges.

On an institutional level, I think the institutions are mostly supportive of not having polypharmacy. This is why we work in a multidisciplinary clinic. We have a pharmacist full time in a clinic, and our pharmacist make sure that our patients are looked at every now and then and making sure that the medicine they're taking they don't have drug-drug interaction or polypharmacy per se, but it's very difficult sometimes to find the system to identify those patients. We have to go through charts or they have to come in to see us, and then we'll be, "Oh, your medication list is really long. Let's talk about that." Or "You have some medications that are duplicate to treat the same thing. Why is this happening?" And this is where most of the pharmacists will be looking at those alarming things, interactions, duplicates. But what we don't have in an institution level is an AI type of system or maybe some technology-based system to have an alert for us and say, "Well in the healthcare record, your patient is at risk of polypharmacy, or your patient has polypharmacy from the number of medications they're on." So I think this is a big challenge that we don't have something like this, but maybe should be done in the future.

Dr. Cheeley:
Yeah, I love letting technology work for us. I also think it's interesting to think about polypharmacy as the number of prescriptions versus the number of medicines because we have so many combination therapies these days, thinking about pill burden, how many pills do you have to swallow every day versus how many medicines, like active medications that you're actually taking. And I think that's especially important in MS and especially important in neuro because you have so many "pills" that people have to swallow two and three times a day, which is only one medicine, but they have to remember to take it, and so compliance and polypharmacy, it all is this big continuum and cycle.

Dr. Obeidat:
Agreed. Agreed, yes.

Dr. Cheeley:
For those just tuning in, you're listening to *NeuroFrontiers* on ReachMD. I'm Dr. Mary Katherine Cheeley, and I'm speaking with Dr. Ahmed Obeidat

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and Lauren Beranek about the risks and challenges of polypharmacy in patients with multiple sclerosis.

So let's jump back in. Dr. Obeidat, what medications are involved in polypharmacy in MS? And are there any nonpharmacologic options available? We've touched on this a little bit, but I want to get into the nitty gritty of it, please.

Dr. Obeidat:
This is really a very important topic and something that is very common and we see every day in our clinical practice, and sometimes we don't pay much attention to it. So for multiple sclerosis there is a key treatment that we call disease-modifying therapies—some of them are daily medications, some of them are few times per week, some of them are monthly. Some are pills, some are injections, some are infusions, but those medications are, in a way, for most patients, are necessary to reduce what we call inflammatory disease activity, which means relapses in multiple sclerosis and MRI activity in multiple sclerosis. We don't combine them, so they take one of these classes of therapies.

Now the other things that people would look into will be including those what we call symptomatic therapies or symptomatic medications. And multiple sclerosis has a multitude of symptoms. People can have cognitive difficulties, walking difficulties. They can have overactive bladder or what we call neurogenic bladder. Pain is very common in MS, so neuropathic pain, some people may even have seizures related to multiple sclerosis. So each of those may need a medication sometimes. So by just having multiple symptoms, and if we are going to treat every symptom with a medicine, then we're going to run into polypharmacy in no time.

So for us to avoid this, it's very important to always think, "Can we treat a symptom without prescribing a drug?" For example, if someone has fatigue, can we refer them to aquatic therapy? Can we refer them to cognitive behavior therapy? Can we work on their sleep to try to mitigate that symptom before we jump into a sleeping pill. Always important to encourage patients to do appropriate diet and exercise. Those simple stuff that people can do can sometimes reduce the need for using medications to treat symptoms in MS.

There is one specific medicine class that people use for walking speed in MS, it's called dalfampridine. This is a medicine that people use for walking speed. And many patients are prescribed that medicine, but it work in some patients and doesn't work in some patients, so when I prescribe it, I want to make sure that our patients are really having a benefit from it.

As Lauren mentioned earlier too mental health is very important. Depression is big, anxiety is big, and those medications are utilized very highly in people with MS. So, Lauren, tell our audience about what you think about pharmacological versus nonpharmacological treatment for symptoms in multiple sclerosis.

Ms. Beranek:
Yeah, I think that this whole topic goes a lot further than just the discussion of polypharmacy, too. I think encouraging patients to start taking nonpharmacologic therapies to some of their symptoms also encourages agency on the patient's behalf too, which is also good just for patient well-being, as well as the numbers in terms of polypharmacy, so I 100 percent agree.

Some of the most surprising things that I found when I was doing the literature review was just how many evidence-based nonpharmacologic treatments we do have for very common symptoms of MS. I think when we're learning about topics, especially myself as a medical student, I don't remember learning a lot of the evidence-based nonpharmacologic therapies, and so I wouldn't have known how to counsel a patient on this prior to learning and writing about this article, and so I think that that's really interesting. And this whole concept of the prescribing cascade, which is that phenomenon that Dr. Obeidat was talking about, is so interesting. I've read that when you have a care team in terms of separate physicians treating the same patient that's larger than four physicians, you're at increased risk of this prescribing cascade. And what happens when you have a very fractionated healthcare system is you might have a patient coming to a provider that's unfamiliar with a drug that was prescribed by someone else, and so that's where you get the stacking of medications and the polypharmacy. So I couldn't agree more with this conversation, and I think it's a really important one that we're having.

Dr. Cheeley:
So, Lauren, let's stick with you. How can healthcare infrastructure and culture affect polypharmacy?

Ms. Beranek:
I think one of the biggest things that comes to mind with this question is how much time do we have with patients, for one, and then how are we approaching just the generalized care team too. So there was a study that included four million individuals, and they were finding that when you had shorter appointment visits, you were actually more likely to be prescribed inappropriate antibiotics, as well as opioids and benzodiazepines combined

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and this was within the primary care setting, so keep that in mind, but I think that that's really important as well because in the grand scheme of things, in order to address this problem, we need to have the time to address the problem, so I think there's that.

And then as well, having people on a team that have their own expertise that are able to help, and so talking about it in terms of the multidisciplinary team is really important. And they've actually shown that having multidisciplinary teams within hospitals reduces the probability of readmission by 32 percent and actually increases patients' quality of life, which are both things that are an issue with patients experiencing polypharmacy in MS.

And so I think really taking advantage of our colleagues that might be able to provide more time and more expertise than we have is really important. So physicians, advanced practice clinicians, pharmacists, nurses, physical therapists, behavioral health specialists, and dieticians all would be very, very helpful to addressing this problem because no one person alone can fix this.

Dr. Cheeley:
I totally agree. Thank you so much for laying that out, Lauren. These have been such great discussions and such good points that both of you had made. I want to thank both my guests, Dr. Ahmed Obeidat and Lauren Beranek, for providing their insights on polypharmacy in MS. Dr. Obeidat, Lauren, it was wonderful speaking with you today.

Dr. Obeidat:
Same here. Thank you very much for having us.

Ms. Beranek:
Thank you.

Dr. Cheeley:
For ReachMD, I'm Dr. Mary Katherine Cheeley. To access this and other episodes in our series, visit *NeuroFrontiers* on reachmd.com, where you can Be Part of the Knowledge. Thanks for listening.

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