

Transcript Details

This is a transcript of an educational program. Details about the program and additional media formats for the program are accessible by visiting: <https://reachmd.com/programs/neurofrontiers/innovations-in-bladder-monitoring-for-ms-advancing-remote-evaluation-tools/32803/>

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Innovations in Bladder Monitoring for MS: Advancing Remote Evaluation Tools

Announcer:

You're listening to *NeuroFrontiers* on ReachMD. On this episode, we'll learn about how we may be able to use wearable devices to monitor incomplete bladder emptying in multiple sclerosis patients with Dr. Riley Bove. Not only is Dr. Bove a practicing neurologist and clinician scientist in the UCSF Weill Institute for Neurosciences, but she also presented a session on this exact topic at the 2025 Consortium of Multiple Sclerosis Centers Annual Meeting. Let's hear from her now.

Dr. Bove:

We've known for a long time that people with MS have difficulties with their neurogenic bladder, and that can mean either having urgency, frequency, overactive bladder, and incontinence, or it can also mean retention, not fully voiding and risk of infections. And because of the myriad symptoms that people with MS have, often their bladder symptoms are not handled first, second, or third, and so there's really a big gap in understanding how best to evaluate bladder difficulties and how best to treat them. So being able to more accurately and comprehensively evaluate bladder difficulties in remote home settings would really allow us to kind of push forward with the moderating studies and the treatment studies that we need to serve people with MS.

So I'd like to state here that I'm representing the work of my close collaborator and colleague, Dr. Valerie Block. Dr. Block has really been working to adapt and understand how the existing tools that we have—the commercially available bladder monitoring tools—can be used to study function in people with MS. At some point, there will probably need to be some engineering to adapt those tools better from either the engineering or analysis standpoint for people with MS, but her first step is just to understand how far we can go with commercially available tools.

And what's really fascinating is we think of many symptoms in MS as fluctuating over the course of the day or day-to-day, and yet, when we evaluate bladder function in the clinic, it's a one-time snapshot of function. And so one of the things that Dr. Block has been finding when she's been monitoring people over several weeks or months is that bladder function, just like other symptoms in MS, really varies day-to-day, and so if you're looking at the post-void residual measure—how much urine is left in the bladder after someone voids—that post-void residual varies from void to void. So from one bathroom episode to the next, people may retain different amounts of urine, and I think that's something that we didn't even know from in-clinic assessments.

So these are the kinds of things that these commercial devices are allowing us to query. We're also able to look at how many times someone empties their bladder over the course of the day, and so that would be a cool measure to use if we want to use medications that reduce bladder frequency without wanting to promote retention of the urine. So these measures have a lot of potential clinical implications.

Announcer:

That was Dr. Riley Bove talking about her session at the 2025 Consortium of Multiple Sclerosis Centers Annual Meeting, which focused on using wearable devices to monitor incomplete bladder emptying in multiple sclerosis patients. 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!