Improving Quality of Care
mehealth for ADHD

Susan Buningh, MRE, interviews Tanya Froehlich, MD, MS, FAAP

WHEN YOU'RE SEEKING diagnosis and treatment for ADHD, it's important to have clear communication with all parties involved. Enter state-of-the-art software: mehealth for ADHD has been called a breakthrough assessment and treatment tool that will improve communication between physicians, parents, and teachers. How can this online tool be used to optimize treatment and minimize side effects?

A nationwide rollout of mehealth for ADHD is being supported by a research grant from the National Institutes of Health. In the context of this grant, investigators at Cincinnati Children's Hospital Medical Center are recruiting pediatricians across the United States to use the mehealth for ADHD software. To date, more than 900 US pediatricians have consented to participate in this research study and use mehealth for ADHD with their patients.

To learn about the benefits for children with ADHD, executive editor Susan Buningh spoke with one of the researchers who helped develop mehealth for ADHD. Tanya Froehlich, MD, MS, FAAP, is a developmental-behavioral pediatrician, ADHD researcher, and professor of developmental and behavioral pediatrics at the University of Cincinnati and Cincinnati Children's Hospital Medical Center. The following excerpts from CHADD's ADHD365 podcast with Dr. Froehlich were edited for clarity and length.

SUSAN BUNINGH: What do the guidelines from the American Academy of Pediatrics recommend for ADHD diagnosis and treatment in children?

TANYA FROEHLICH: To make the diagnosis, doctors need to make sure that children have ADHD-related symptoms in both the home and the school settings. As a result, we need to get ADHD symptom ratings from both parents and teachers. In addition, just having a few symptoms does not meet criteria for the diagnosis—rather, children have to have at least six symptoms that are present, often or very often, in both settings, that cause problems with functioning. We also need to make sure that these symptoms are not due to another condition, because many other conditions can cause problems with inattention or overactivity. That's the diagnostic point of view. From the treatment point of view, when we are prescribing medications, we need to make sure that we're monitoring symptoms and side effects in both the home and the school setting to determine: Are these medications effective? Are they well tolerated? Do we need to change the dose? Furthermore, it's recommended not just to prescribe medication treatment, but also to use behavioral interventions. We're going to get the best functioning for each child if we pair the pharmacology intervention and behavioral interventions together.

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BUNINGH: What is the current state of ADHD care? Which providers see most of the children who have ADHD? Are they actually following the AAP guidelines?

FROEHLICH: Most commonly, children are treated for ADHD by their general pediatricians. Pediatricians are making a big effort, but we're not we're not completely where we want to be with following the guidelines. We are having a big problem with pediatricians being able to monitor the symptom ratings, impairment ratings, and side effect ratings in both home and school settings. The guideline also recommends that within the first month of starting a new medication, providers have contact with the families to systematically monitor how things are going, and too often that is not happening either.

BUNINGH: What are the consequences for the child's outcome if the guidelines are not being followed?

FROEHLICH: In terms of diagnostic assessments, if we're not rigorously following the guidelines, we risk misdiagnosing the child. And in that case, we may be giving ADHD medication when it's not appropriate. We may not be giving the kinds of treatments that the child actually needs to address the source of his or her inattention and overactivity. In addition, if we're not monitoring the symptoms and side effects in both the home and school settings, then we don't have the information we need to adjust the medications and dosing appropriately. In this case, we are not getting the most "bang for the buck" with our treatment. In fact, we found in some studies that when we are actually rigorously following these parent and teacher symptoms and side effects ratings, we can fine tune the treatment regimen to get double the improvement in ADHD symptoms compared to cases when there's not appropriate monitoring.

BUNINGH: What are you and the team at Cincinnati Children's doing to help providers do better with adhering to the guidelines?

FROEHLICH: We have conducted a big effort in the Cincinnati area called the ADHD Collaborative. In the Collaborative, we worked with providers to understand the specific guideline recommendations and the reasoning behind each one. Then we worked with providers to adjust their office flows to ensure that their diagnostic assessments are conducted with full rigor, including collecting ADHD symptom and impairment ratings from both parents and teachers, and also that their offices are set up to collect these ADHD and side effect ratings at regular intervals during the treatment phase. The Collaborative was our local effort, but we realized that the difficulties with adhering to the ADHD practice guidelines are nationwide and not just in our region.

Since we didn't have the person-power to send out teams to train doctors and to overflow office flows nationwide, our team created an ADHD web portal called mehealth for ADHD, for use by doctors, nurse practitioners, psychologists, and other treatment professionals nationwide. The web portal allows practitioners to quickly and easily collect the needed standardized ratings from both parents and teachers, for the diagnostic assessments as well as during the treatment period.

It allows the families as well as the teachers to enter ADHD symptom and medication side effect ratings directly into the online system. It also has questions about common conditions that can travel with ADHD, such as anxiety, oppositional defiant, and conduct disorder. Collecting ratings using the online system is much easier and quicker than the traditional method of collecting ratings on paper by mail or fax, since keeping track of all that paperwork is difficult.

BUNINGH: Has mehealth been tested?

FROEHLICH: Yes. The gold standard way that we in medicine check to see whether or not an intervention is working is called a randomized controlled trial. We've conducted two randomized controlled trials, in which we looked at how doctors who were using the mehealth system fared compared to doctors who were following the usual care practices.

We found that doctors using mehealth did much better with getting the recommended ADHD assessment pieces from both parents and teachers: during the first month of ADHD treatment, the recommended rating scales were collected from over 80% of parents and teachers. And the process was really quick: on average, doctors got the ratings back from parents and teachers with-

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in two to three days. In the control practices where doctors were following using usual care practices, only 11% of children had both parent and teacher information collected in the first month.

And we didn't just find that mehealth enabled doctors to collect the information that's recommended at the appropriate time intervals. Most importantly, the children actually did better, and had much better ADHD symptom control. We found double the reduction in ADHD symptoms for each child when the mehealth system was used as opposed to just the usual care practices.

BUNINGH: Are there other advantages to families when mehealth is used?

FROEHLICH: The mehealth system also has a messaging feature so there can be communication between the family, the doctor, and the teachers. This is just fantastic, because it's really hard for doctors and teachers to connect, and this messaging system makes it easy. It's also helpful because there are laws that doctors can't simply reach out to anyone and ask about how a child is doing without securing parental permission; with mehealth the parents invite the teachers to participate, and in that way they are giving their permission and initiating that contact between the doctors and the teachers. In addition, when we follow usual care practices and have the teachers fax or mail in their ADHD symptom and side effect ratings, most of the time, the parents never see that. The mehealth system has a feature that allows parents to view the ratings and all the comments that the teachers are making.

Another feature of this system is a medication choice wizard that helps to educate parents about how the different medications work and their side effects. It's a really huge benefit both to the families and the doctors. Another feature of this system is a built-in behavioral intervention. We know that currently only 13% of kids who have ADHD are actually getting behavioral interventions, which is which is really quite dismal, because functioning improves the most when kids have not just medications but also behavioral treatments. The mehealth system allows families and teachers to easily set up and track progress toward behavioral goals. It guides parents to select a reasonable number of goals for the child to work on, and then it also helps in selecting rewards. And once a child is consistently achieving a certain goal, it will adjust expectations so that behavior can improve to the next level. In this way, the system does all that psychologist would do, such as reviewing progress and moving the targets as needed. Most kids don't have access to psychologists who can provide evidence-based treatments—since this kind of care is expensive, time-consuming, and hard to find—so the mehealth system was designed to perform these functions automatically.

BUNINGH: How can pediatricians sign up to use mehealth for ADHD? And what should parents do if they are interested in being able to use the mehealth features?

FROEHLICH: Parents can let their child's doctor know about the system and their interest in using it. The great thing is that the National Institutes of Health is funding a grant to allow clinicians to use the mehealth system without a fee. Pediatricians can go to www.mehealth.com to sign up, and it's absolutely free.

BUNINGH: How easy is it for parents and teachers to use?

FROEHLICH: Parents and teachers are given a mehealth account, and they create their own password to login. If they have any problems with the system, we both have an email and a phone line that they can call with any difficulties.

Tanya Froehlich, MD, MS, FAAP, *is a developmental-behavioral pediatrician and an ADHD clinical specialist and researcher. She is a member of the board of directors for the Society for Developmental and Behavioral Pediatrics and for the American Professional Society of ADHD and Related Disorders, and currently serves on national ADHD clinical practice guideline development committees for both the American Academy of Pediatrics and the SDBP. In addition, Dr. Froehlich has provided consultation to the Centers for Disease Control and the US Office of the Inspector General regarding ADHD care, research needs, and clinical considerations.*

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