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Improving Communication in ADHD Care: *Results from In-office Linguistic Research*

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ABSTRACT

Introduction: An in-office linguistic study was conducted to help improve understanding of how to better evaluate and treat attention-deficit/hyperactivity disorder (ADHD).

Methods: Naturally occurring interactions were recorded among 7 psychiatrists and 23 patients and 8 pediatricians along with 22 patients and their parents. Participants were interviewed separately post-visit. Transcripts of interactions and interviews were analyzed using sociolinguistic techniques.

Results: Visits were variable in length and lacked concrete treatment plans. In the pediatric

FOCUS POINTS

- Effective provider-patient communication is an important part of the diagnosis and treatment of attention-deficit/hyperactivity disorder (ADHD).
- This observational research study revealed gaps in communication between physicians and their patients with ADHD, including the use of limited metrics to evaluate symptoms, positioning of stimulant medications as a "trial," and the lack of a formal treatment plan discussion.
- Strategies exist to improve the efficiency and efficacy of conversations about ADHD. These include formulating a treatment plan and discussing it at subsequent visits, setting goals and tracking progress against these goals, and evaluating symptoms in all areas of patients' lives, including work/school, social and family.

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setting, children were typically excluded from dialogues, accounting for only 8% of words spoken. School was the primary metric used to evaluate symptoms. Pediatricians allayed parents' concerns about stimulant therapy by promising to prescribe the lowest possible dose, rather than discussing titrating to an optimal dose. Adults were evaluated idiosyncratically without the use of scales or tools. Stimulants were positioned as short-term "trials" without strong physician recommendations.

Discussion: Conversations about stimulant therapy lacked goal- and expectation-setting. Also missing from conversations was a definitive treatment plan based on the core symptoms of ADHD. Incorporating open-ended questions and tools or rating scales may result in a more effective and efficient in-office dialogue.

Conclusion: Further research is warranted to assess the efficacy of communication strategies to enhance in-office discussions of ADHD and stimulant therapy.

INTRODUCTION

Attention-deficit/hyperactivity disorder (ADHD) is the most common neurobehavioral disorder of childhood, with core symptoms including inattention, hyperactivity, and impulsivity that by definition cause significant impairment in at least two areas of the individuals' life.[1] Although ADHD typically presents in childhood, symptoms often persist into adolescence and adulthood.[1] Despite causing significant impairment in multiple life domains, ADHD continues to be underdiagnosed and marked by poor adherence to treatment.[2,3]

Diagnosis and treatment of ADHD depends on successful communication.[4,5] This communication requires physicians to synthesize data from multiple sources, including patient self-report, the report of others, and often the use of validated tools. However, studies have demonstrated that physicians, patients, and parents often use different metrics to measure treatment success,[6] and that physicians and patients may provide differing views about ADHD symptoms/diagnoses[7] These discrepancies have been observed even when patients are treated by high prescribers of stimulants, ie, clinicians who one would expect to be most familiar with ADHD and its management. In addition, physicians must assess baseline concerns/questions from parents/patients and effectively communicate both the risks and benefits of treatment to parents/patients.[8,9]

To evaluate how discussions of ADHD take place, an observational linguistic study was conducted, based on accepted methodologies.[10-12] This study was designed with two arms. The intent of the first arm was to capture naturally-occurring conversations between pediatricians, their patients with ADHD and patients' parents. The intent of the second arm was to capture similar discussions between psychiatrists and their adult patients with ADHD. Patients fell into one of two categories within these two cohorts: initial consultation with the physician or first follow-up after the prescription of a stimulant medication. This noninterventional research study was designed to assess the current "landscape" of ADHD dialogues and did not involve the testing of a priori hypotheses.

METHODS

This observational study received approval from the Independent Investigational Review Board, Inc. in December 2008 and fieldwork was conducted in January-February 2009. Letters of invitation were mailed to 948 pediatricians and 700 psychiatrists. All physicians were community-based and high-volume prescribers of stimulant medication for the treatment of ADHD. The first 8 pediatricians and 7 psychiatrists who responded to the mailing and met screening criteria (Table 1) were enrolled to participate in the study. Based on previous research in physician-patient communication, this was determined to be an appropriate sample size given the financial resources available for this project. The response rate to the number of invitations mailed is comparable to other research of this type.[6,7]

On previously agreed-upon days, field researchers were sent to physicians' offices. Office staff approached all patients who had regularly scheduled appointments and met eligibility criteria (Table 2), and invited them to take part in a study of physician-patient communication. All research participants were compensated for their participation, but none were aware of the study sponsor. In the adult arm, informed, written consent

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was obtained from all participants. In the pediatric arm, informed, written consent was obtained from physicians and parents; assent was obtained from patients. After obtaining consent and assent, the office visit was video- and audio-taped without the researcher present in the exam room.

Immediately following the visit, patients (in the adult arm of the study) and parents (in the pediatric arm of the study) participated in structured, recorded interviews with the researcher. Physicians were similarly interviewed regarding all patients who had participated in the study at the end of the day. This time was chosen in order to minimize intrusion on the natural practice pattern of the physicians' offices and to avoid exposing physicians to the interview questions and causing potential bias. Medical records were brought into the physician interview to aid with recall. The purpose of the post-visit interviews was to determine the relative congruence of participants' perceptions regarding issues discussed in the visit, including diagnoses, medication regimen, side effects, definition of success, and level of satisfaction with treatment. Interview questions were designed to uncover what participants meant to convey and what they understood.

All visits and post-visit interviews were transcribed using audio recordings as the primary source material. Videotapes provided a means for transcript quality control, and facilitated inclusion into written transcripts of non-verbal cues (eg, nodding, shrugging shoulders) that played a role in the conversation. Given this study's narrow focus on physician-patient dialogue, other aspects of body language, such as eye contact, were not systematically analyzed as part of this research. Transcripts were analyzed using techniques from the field of interactional sociolinguistics[13,14] including word- and turn-level analyses of conversation. Analysts first reviewed a subset of transcripts and noted trends in physician-patient/parent dialogues. Analyses were developed and conducted on the full sample of transcripts to assess the validity and pervasiveness of these trends. This was an iterative process involving a team of analysts with training in sociolinguistics, medical anthropology and psychology. Examples of specific analyses conducted can be found in Table 3. Descriptive

TABLE 1
Physician Eligibility Criteria

Pediatricians
• Board certified pediatrician in private practice • Developmental pediatricians were excluded from the study • In practice between 2 and 35 years • See at least 15 patients 7–13 years of age in office/week, at least 5 of whom have ADHD • Write at least 3 new stimulant prescriptions for ADHD/week
Psychiatrists
• Board certified psychiatrist in private practice • In practice between 2 and 35 years • Treat only adults (>18 years of age) • See at least 15 patients 25–44 years of age in office/week, at least 5 of whom have ADHD • Write at least 3 new stimulant prescriptions for ADHD/week

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TABLE 2
Patient Eligibility Criteria

Pediatric Arm
• Children 7–13 years of age with parent or legally-authorized representative present • All parties fluent in English • Visits should be one of the following: – Initial consultations or first ADHD visit with physician, patient, and parent – Initial prescription of a stimulant for ADHD by this physician – First follow-up with this physician after initiation of a stimulant for ADHD
Adult Arm
• English-speaking adults 25–44 years of age without cognitive impairments (ie, patient must be able to sign legal consent form for him/herself and participate in post-visit interview) • Visits should be one of the following: – Initial consultations or first ADHD visit with physician and patient – Initial prescription of a stimulant for ADHD by this physician – First follow-up with this physician after initiation of a stimulant for ADHD • Comorbid psychiatric conditions (eg, anxiety, depression) are not criteria for exclusion

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statistics (ie, distribution, central tendency) were applied to the results.

RESULTS

All practices yielded at least 1 patient for the final sample (Table 4). Eighty interactions were recorded; 35 were excluded from the final sample upon review by data analysts because they did not meet enrollment criteria. From the 45 interactions included in the final sample, 22 pediatric patients (11 initial consults, 11 follow-ups) and 23 adult patients (15 initial consults, 8 follow-ups) were included. Patient demographics can be found in Table 5. This sample size is similar to other previously published work in the area of physician-patient communication.[6,7,15,16]

RESULTS

Pediatric Setting

Discussions included parent, child, and pediatrician all together without any one-on-one time for either the patient or the parent with the pediatrician. Children were typically left out of the conversation and averaged only 8% of the words spoken within a visit (Figure 1). Together, pediatricians and parents accounted for the bulk of words spoken during these encounters, and pediatricians spoke more than parents did (64% and 28%, respectively). A number of pediatricians never spoke directly to the child, the majority of pediatricians' questions were directed primarily at parents (71%), and parents sometimes answered questions directed at children. Both pediatricians

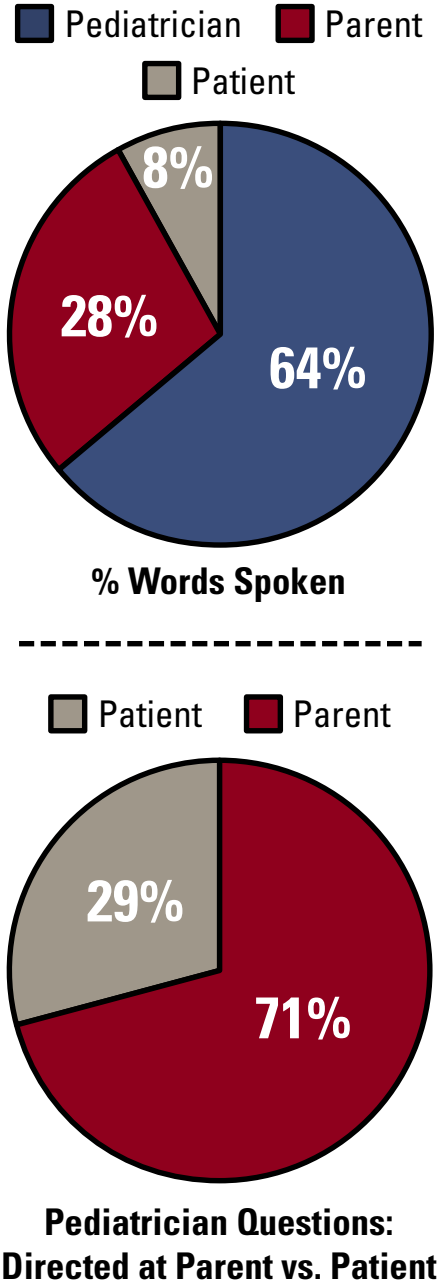
TABLE 3
Examples of Specific Linguistic Analyses Conducted*

- Measurement of office visit length (time at talk)
- Quantification of topics discussed and time spent on each
- Quantification of the proportion of the dialogue during which each participant (ie, physician, patient, and parent, when present) spoke
- Quantification and qualification of questions asked and answered
- Identification of requests for information (by any party) or making of recommendations (typically a treatment recommendation made by the physician)
- Classification of linguistic markers demonstrating level of knowledge/understanding about topics discussed

* This list is not exhaustive

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FIGURE 1
Participation framework in pediatrician visits



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and parents often spoke about children in the third person (eg, "she" and "he" vs. "you").

Dialogues focused on school as a metric for treatment success (95% of visits), with little attention paid to home or social life (mentioned in only 27% of visits). Specifically, school was the only topic discussed in all pediatric visits. However, in post-visit interviews, parents discussed the impact of ADHD symptoms outside of school, for example on social activities and interactions with other family members.

Example: *Visits with Pediatricians Focus on School*

Below is the partial transcript of a 9-year-old male patient and his mother of a follow-up visit after prescription of a stimulant at the pediatrician's office.

DOCTOR: So other than the zombie state at the beginning—

MOTHER: Mm-hmm.

DOCTOR: And now him still bein' a little bit restless—

MOTHER: Mm-hmm.

DOCTOR: You're pretty happy with it?

MOTHER: Yeah. I've been—I'm very, very pleased with it. And he hasn't made any more comments about not bein' smart or anything. I mean, he seems like he's really, you know, catchin' on in school. I'm still concerned—I think I let this go on too long.

DOCTOR: Mm-hmm.

MOTHER: Because I should have brought him last year actually.

DOCTOR: Mm-hmm.

MOTHER: 'Cause he's almost a full grade level behind. And I keep pressing the teachers, you know, I said, "He was diagnosed with ADD, if there's any way they could do any kind of pull-out to get him caught up."

TABLE 4
Physician Demographics

Pediatricians (8)
• In practice 15 years on average (range: 6–25) • 75% male • 88% schedule initial consults specific to ADHD • 13% schedule general psychiatric consults without being specific • 50% ask the patient/parent to fill out paperwork before an initial consult • On average, report prescribing a new ADHD stimulant to patients 4.1 times/week • On average, report prescribing stimulants to: – 48% of ADHD patients during an initial evaluation – 52% of ADHD patients during the follow-up to an initial consult
Psychiatrists (7)
• In practice 20 years on average (range: 9–30) • 71% male • 14% schedule initial consults specific to ADHD • 86% schedule general psychiatric consult without being specific • 14% ask the patient to fill out paperwork before an initial consult • On average, report prescribing a new ADHD stimulant 11.9 times/week • On average, report prescribing: – 62% of ADHD patients during an initial evaluation – 18% of ADHD patients during the follow-up to an initial consult – 20% of ADHD patients in the course of treating another condition

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TABLE 5
Patient Demographics

22 Pediatric Patients
• 91% were male • Average age was 9 years (range 6–14) • 77% were accompanied by a mother/stepmother only • Reported 1.2 comorbidities on average, for which they take an average of <1.0 non-ADHD medications • 95% had some form of health insurance and had prescription drug coverage • 64% had known their physician for at least 5 years • 27% visit this physician every 6 months
23 Adult Patients
• 52% were male • Average age was 33 years (range 22–50) • Reported 2.0 comorbidities on average, for which they take an average of 1.3 non-ADHD medications • 96% had some form of health insurance and prescription drug coverage • 52% were visiting this physician for the first time • Of those who had a previous relationship with the physician, 83% came to see the physician >1/month

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DOCTOR: Mm-hmm.

MOTHER: And they keep sayin' that they'll test him to see if there's any more learning disabilities or, you know, or any other issues besides that, but they're kinda draggin' their feet on it a little bit, so—

DOCTOR: Well, he's a grade behind, but is he having to, now with the medication, is he having any difficulty with schoolwork?

MOTHER: No. He's catchin' up. He's catchin' up pretty good.

DOCTOR: Oh, good.

Pediatricians attempted to address parents' concerns about initiating stimulants by promising to use the lowest possible dose of medication (82% of initial consultations). The "optimal dose" (ie, dose which would produce the best control of symptoms with the least amount of side effects) was discussed in 18% of visits. In 58% of visits, pediatricians provided mixed messages about medication holidays (including not taking stimulant medication over the weekend), neither advocating for nor cautioning against them. When discussed, the decision to take a break from stimulant therapy was usually left up to parents (83% of visits in which discussed). In addition, physicians and parents (in the pediatric setting) generally were not aligned on the specific goals of therapy when asked during post-visit interviews (Table 6).

Adverse events (AEs) were discussed in all 11 initial consultations with pediatricians. Problems with appetite and/or weight loss were most often discussed (10 of 11 visits), although the AE most often brought up by parents was the "zombie" effect of stimulants on their children (3 of 11 visits). In post-visit interviews, only 2 of 11 parents continued to express concerns, and no parents could recall all the AEs discussed during the visit. AEs, including appetite problems/weight loss, mood/emotional issues, and sleep problems, were assessed in 10 of 11 (91%) of the follow-up visits with pediatricians. When parents reported the presence of AEs, pediatricians managed them with nutritional supplements (eg, PediaSure), changes in stimulant therapy (dose changes or switches from one brand to another) or a wait-and-see approach.

Adult Setting

Despite the existence of widely accepted tools or rating scales to diagnose and assess ADHD, such instruments were absent in the majority of visits with adult patients. Psychiatrists asked questions from the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* in 4 of the 11 initial consults. However, 40% of psychiatrists who did not use a tool reported that they had done so when asked post-visit. Assessment questions were inconsistent across the sample of adult patients, with no single topic of question occurring in all visits as a way to diagnose or evaluate ADHD. Furthermore, assessments did not take into account patients' compensatory efforts to accom-

TABLE 6
Examples of Misalignment on Goals of Therapy

Physician	Patient/Parent
"We want a wow effect...we want to treat to whatever maximum potential he has."	"We really just want to see him stay focused."
"I didn't want them to have an expectation that wasn't met."	"He should be able to focus and stop being so hyperactive...He'll be more attentive to the teacher."
"The goals we talked about would be that this medication would help him in school to listen to his teacher, to stay on task. And also, help him get his homework done in the evening."	"Just that he can pay attention."
"I said come back in two weeks and explain to my nurse practitioner whether it [stimulant] worked or not."	"He said this should help me prioritize, get more things done. And...it might actually make me sleep better because I'll be more at ease."
Post-visit Interview	
"Did you and the patient/parent set goals/expectations? If so what were they?"	"Did you and the doctor set goals/expectations? If so, what were they?"

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plish tasks (eg, work, interactions with family and friends). Visit discussions focused on specific incidents (eg, a fight with spouse), and not the underlying condition.

Stimulants were offered as short-term "trials" in 65% of visits with adult patients. Discussions of stimulants lacked a strong recommendation by the psychiatrist. Instead, language used by psychiatrists was typically of the type, "we will see if it works." In addition, psychiatrists reminded adult patients that there were other options, which they did not specify, available if the current stimulant was unsuccessful (30% of visits).

Example: *Visits with Psychiatrists Lack Strong Medication Recommendations*

Below is the partial transcript of a 22-year-old female patient during the initial consult at psychiatrist's office.

DOCTOR: Have you ever lost any jobs, uh, or anything like that because of, you know, having difficulty with focus or so—

PATIENT: Unh-unh.

DOCTOR: Okay. Your work, when you do, is usually pretty good, or do you kinda throw it together or is it pretty detailed, nicely neat, or—

PATIENT: Umm, no. Probably no. Definitely not nice and neat. Well, I guess you can—sometimes. Only if it's—I guess only if it's required by like a professor or something, if they're asking for like a specific type of neatness—

DOCTOR: Mm-hmm.

PATIENT: Then I'll like go to the extent obviously do that. But otherwise it's usually pretty thrown together [laughs].

DOCTOR: [Laughs] Okay. Okay. Uh, well, umm, what I'm gonna do is—more than likely probably, you know, I'll probably try you on a little bit of medicine and see how we do with that.

...

DOCTOR: I'm gonna start probably around 30 and I probably will go up from there.

PATIENT: Okay.

DOCTOR: 'Cause it goes up anywhere from 20 up to 70 milligrams.

PATIENT: Okay.

DOCTOR: I usually start low—

PATIENT: Yeah. [laughs]

DOCTOR: It's just the way I do things.

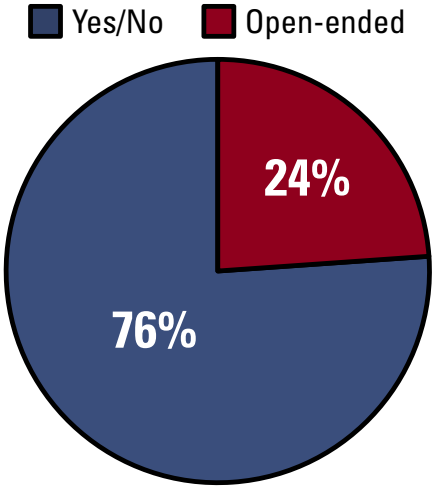
Among adult patients who had begun stimulant therapy, efficacy of medication was evaluated, for example, asking, "How's the...?" Optimization of therapy was not discussed; that is, physicians did not specifically discuss titrating medication to a dose at which symptoms were best controlled with the least possible amount of side effects. Also, 76% of questioning regarding medication was yes/no versus open-ended (Figure 2). Evaluations were focused on positive change (eg, "what has improved with medication") and did not address areas that still needed improvement. Discussions lacked attention to target symptoms of ADHD.

AEs were discussed in 13 of 15 (87%) of initial consultations with psychiatrists. Problems with appetite and/or weight loss (10 visits), mood/emotional issues (7 visits), and sleep difficulty (6 visits) were most often discussed. In post-visit interviews, patients did not report concerns about AEs. All 8 follow-up visits with psychiatrists included assessments of AEs, most often sleep problems (6 visits) and mood/emotional issues (4 visits). These conversations confirmed the absence of AEs and lacked detailed or probing questions.

All Settings

Visit lengths were extremely variable. The median visit length was 6.25 minutes, with a range of 2.00–52.25 minutes. The median visit length with a pediatrician was 20.15 minutes, while the median visit length with a psychiatrist was 12.92 minutes. There were also differences in median visit length based on visit type (ie, initial consultation or follow-up)

FIGURE 2
Questions evaluating medication efficacy with adult patients



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(Table 7). However, visit length did not influence patient/parent satisfaction reported post-visit; all patients/parents reported satisfaction.

Visits lacked a formal treatment plan. General expectations were set in 24 of 26 visits in which a new stimulant was initiated (92%). However, these were typically not specific to the core symptoms of ADHD. For example, goals regarding improvements in focus and attention were set in 11 visits (42%). Improvement in family/home life and/or social situations was not discussed in any visits. Physicians set expectations about how long stimulants would work in 15 visits (58%) and about the immediacy of onset in 9 visits (35%). Finally, titration to optimal effect and the need for long-term compliance was not routinely discussed. Dose increases were not steps that were discussed during these visits, and the possibility of using higher doses was not linked specifically to symptom improvement.

DISCUSSION

In the pediatric setting, visits were structured in a way that did not allow full participation by patients. Successful three-party discourse depends upon all participants being given an opportunity to voice their opinions.[9,17-20] Many pediatricians talked primarily or exclusively to parents with only 8% of words spoken by the child who was being evaluated. Not including the pediatric patient in the consultation raises questions about the ethical nature of treatment. As discussed by the Committee on Bioethics in *Pediatrics*,[21] the assent of children and adolescents should be obtained "to the greatest extent possible," in order to "foster trust...and perhaps improve long-term health outcomes." In addition, there are a variety of negative consequences that can arise from an evaluation in which the pediatrician and parent talk about the child as though he or she was not present. These could include personal feelings of shame, negative feelings about being diagnosed with ADHD, and mistrust of healthcare providers. Given the lifelong impairments associated with ADHD, the development of a trusting relationship between patients and their healthcare providers at an early age is of the utmost importance, in the hopes that this may prevent problems with adherence to medication as the patient progresses to adolescence and adulthood.

TABLE 7
Median Visit Length (Minutes)*

Visit Type	PED	PSYCH	All Visits
Initial Consultation	31.50 (n=11)	14.80 (n=15)	21.46 (n=26)
Follow-up Visit	16.25 (n=11)	7.02 (n=8)	14.17 (n=19)
All Visits	**20.15 (n=22)**	**12.92 (n=23)**	**16.25 (n=45)**

* Calculated by time at talk; does not include waiting time.

Ped=pediatrician; Psych=psychiatrist.

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Although parents revealed post-visit that many aspects of life (eg, home, interpersonal and social activities) are impacted by their children's (the patients') ADHD, and American Academy of Pediatrics guidelines state that family functioning in addition to school performance should be assessed as part of ADHD diagnosis and management,[1] unfortunately, school was the only consistent metric by which pediatricians benchmarked patients' symptoms in these visits. Discussions of stimulants typically focused on providing children with the lowest possible dose rather than setting expectations regarding finding the optimal dose. Information enforcing long-term adherence to medication as recommended in the literature[22] was infrequently incorporated into these office visits. This approach is contrary to recent practice parameters,[23] which stress the importance of medication as first-line treatment for ADHD.

In the pediatric setting, children can be engaged in the communication whenever possible through the use of questions such as, "Tell me about yourself," "What do you like to do for fun?" and "How would you describe yourself?" These types of questions will allow pediatricians to get to know their patients, and can also expand the discussion of ADHD beyond school. Both parents and children can be taught to assess and improve behaviors at home and in social situations. Finally, pediatricians can identify and assess parents' underlying concerns about stimulant therapy without undermining dose titration. An open-ended question such as, "Tell me what concerns you about this medication," can initiate this discussion.

The diagnosis of ADHD is hampered by the lack of objective outward markers such as fever or elevated blood pressure. There are, however, tools and scales which can help screen for adult ADHD and track symptom improvement in an objective form. The Adult ADHD Self-Report Scale 6-item screener is one tool which has been studied by the World Health Organization. The ADHD-Rating

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Scale consists of 18 items that can be quickly evaluated to objectively track medication response as described in previously published treatment algorithms for adult ADHD.[24] The ADHD Impact Module-Adult[25] is a validated scale for monitoring the progress of adult patients with ADHD on medication. A systematic evaluation of the core symptoms of ADHD would represent a marked improvement over the inconsistent appraisals observed during these encounters.

Despite the existence of these scales, however, assessments of symptoms and medication efficacy among adult patients were idiosyncratic. Different forms of stimulants (eg, short-acting, long-acting, different active ingredients) were not differentiated and were offered to patients on a trial basis. Recommendations of medications lacked conviction. The efficacy of adult patients' stimulant was assessed; however, this was done on a limited, yes-or-no basis, usually without attempts to titrate to the optimal dose, as recommended in clinical guidelines.[26]

In the adult setting, psychiatrists can integrate widely accepted tools into their discussions for a more in-depth and efficient assessment of patient progress and medication efficacy. Efficacy can also be evaluated through the use of open-ended questions, which give the patient the opportunity to share his or her story and focus on aspects of daily life that are important to him or her. The stimulant recommendation can be strengthened in several ways, including a balanced discussion of risks and benefits and tying the medication to specific goals related to the core symptoms of ADHD.

Visit lengths were extremely variable overall, ranging from 2 minutes (a follow-up with a psychiatrist) to over 52 minutes (an initial consult with a pediatrician). Interestingly, the old adage that "there is no substitute for time" was not supported by this study. Visit length did not correlate with parent/patient satisfaction post-visit in that all patients/parents reported satisfaction regardless of visit length. In some instances, patient satisfaction was more closely linked to the particular questions asked, for example those specific to developmental history, current home, social and occupational functioning, and not to the total amount of time spent in the office visit. However, it should be noted that this study analyzed a single interaction and did not capture the length and breadth of the physician-patient relationship.

Visits with both psychiatrists and pediatricians lacked discussion of a concrete treatment plan with specific expectations and goals for therapy as recommended in clinical guidelines.[26,27] In addition, discussions did not address dosing schedules or plans for titration, further evidence that current clinical practice does not reflect the body of knowledge about ADHD and its treatment. Few visits contained a comprehensive evaluation of risks and benefits. Patient or parent fears about side effects were generally met with promises to cease or reduce medication rather than reassurance and review of empirical evidence regarding side effects.

Overall, formulating a treatment plan and discussing it at each visit can improve the effectiveness and efficiency of discussions of ADHD. Initial consultations can be structured include the setting of 1–2 concrete goals and the identification of target symptoms to be monitored. Subsequent follow-up visits can assess those target symptoms, evaluate medication tolerability, and adjust dose if necessary. Physicians are encouraged to explain that optimal improvement requires adherence to treatment, and to integrate all aspects of patients' lives (eg, work, social, home, school) into the treatment plan.

This study has several limitations, and additional research is needed to validate the findings described. Physicians participating in this study may not be entirely representative of all clinicians who treat ADHD. All were highly experienced in the field of ADHD and all were board-certified. Participants were aware that they were being recorded; however, this topic has been researched in detail and many studies conclude that recording has little to no effect on research subjects' behavior.[28-31] The sample size, while appropriate for qualitative research, may not be not generalizable to the ADHD population overall. Research with a larger, community-based sample could better explore these findings in an attempt to improve the quality of care and treatment outcomes for individuals with ADHD.

CONCLUSION

An in-office linguistic study was conducted to gather both naturally occurring conversations between pediatricians and psychiatrists and their patients with ADHD during initial consultations and follow-up visits. Results from this small study confirm the commonly held belief that current medical training leaves most physicians underprepared to successfully diagnose and treat ADHD. Specifically, post-visit interviews revealed substantial misalignment between the impressions of the visit content from the perspective of the treat-

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ing physicians and those of the patients and their families. Analyses of in-office dialogues revealed the absence of a clear treatment plan at the time of initial consultations. Both initial consultations and follow-up discussions were notable in their focus on potential treatment adverse effects and a lack of focus on the positive impact of ADHD and its treatment on patients' home and social lives. The lack of attention to target symptoms, goals of therapy, and balanced discussions of risks and benefits suggest a substantial gap between the current content of community-based office visits to treat ADHD and the management strategies promoted by national treatment guidelines.

Further research in this area is needed to help physicians understand the impact of their communication with patients during initial consults and medication follow-up appointments. Research with a larger, randomized sample could examine variability among clinicians' knowledge of the elements of a good clinical encounter and how to translate this into a long-lasting therapeutic relationship that will optimize the care of patients with ADHD. Results from such research could be leveraged in the development of medical education curricula, specialty training, and the creation of continuing medical education programs, helping to disseminate valuable knowledge to community-based, or "real world", providers who diagnose and treat this pervasive condition on a daily basis. ***CNS***

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