


# A Phenomenological Case Study of Communication Between Clinicians About Attention-Deficit/Hyperactivity Disorder Assessment

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## Abstract

**Introduction.** Communication between clinicians related to attention-deficit/hyperactivity disorder (ADHD) assessment is challenging because it involves a number of individuals. While the communication process might be more efficient if these individuals worked together, research on ADHD-specific collaborative care models is scarce. The purpose of this qualitative study was to investigate the parties with whom prescribers communicate and how they collaborate. **Methods.** Providers were interviewed, and the data were analyzed using a phenomenological case study approach. **Results.** The results suggested that there were communication breakdowns between providers and teachers that hindered the assessment process. **Discussion.** Communication related to ADHD assessment may be more complex than theoretical models may conceptualize.

## Keywords

attention-deficit/hyperactivity disorder, provider communication, mental health services, health information exchanges

## Introduction

Attention-deficit/hyperactivity disorder (ADHD) is the most common child mental health condition, affecting between 3% and 5% of children in the United States.<sup>1,2</sup> Communication between clinicians with respect to treating ADHD is a significant quality of care issue for the health system because communication can be complex and time consuming since it involves many providers from different disciplines. These interactions can be intricate because the providers often work in different locations from each other,<sup>3</sup> and these providers frequently practice in separate care systems (ie, health and mental health), which have their own practice styles. Interprovider communication can also be difficult because the process of completing evidence-based assessments and gathering information related to the diagnosis can be time intensive. Time is often scarce in health care settings,<sup>4</sup> especially primary care, the setting where most cases of ADHD are treated.<sup>5,6</sup> As a result, ADHD is generally considered a primary care issue. However, very few studies have examined the communication challenges associated with managing ADHD in either primary care or specialty mental health care settings, and

the nature of providers' communication surrounding ADHD may separate it from communication related to other mental health and physical health conditions.

Although depression in adults is now commonly diagnosed in primary care settings, the process of assessing and diagnosing ADHD in this location may make it distinct from other mental health conditions.<sup>7</sup> One factor distinguishing the assessment of ADHD from other physical and mental health conditions may be the greater number of professionals involved in the diagnosis and assessment process. Health providers often evaluate ADHD using standardized assessment tools that are typically completed by the child's parent/caregiver and teacher.<sup>8-10</sup> Following the assessment process, ADHD is commonly treated with stimulants,<sup>11</sup> leading to this

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study's focus on pediatric prescribers such as pediatricians, psychiatrists, and nurse practitioners.

The assessment of ADHD in children requires input from teachers, something that is unnecessary for the diagnosis of depression in adults. To diagnose ADHD, a clinician must find evidence that a child has had clinically significant impairment in at least 2 settings, such as the social or school domains.<sup>12</sup> The symptoms of ADHD cause children difficulties in the school sphere, and thus providers often call upon teachers to evaluate a patient's ADHD symptoms using ADHD assessment scales that are designed for teacher input. Although, in theory, a completed teacher version of an ADHD assessment scale is important for the health provider to receive,<sup>8</sup> in practice, it may be challenging for providers to always get this information. Links between the providers and schools are imperative so that providers may diagnose ADHD with confidence because it is necessary to have the teacher's completed ADHD rating scale in order to establish the diagnosis.

Our understanding of health communication among providers across system boundaries is limited, calling into question the adequacy of existing models of health communication. These models theorize that interactions between health providers occur mostly between professionals in the physical health system.<sup>13</sup> These models rarely consider interactions between physical health and mental health providers, or exchanges between either of these groups of providers with teachers in schools. When child mental health conditions such as ADHD are involved, communication becomes more complex with the addition of professionals from groups who do not work in the same service system. For example, the assessment and diagnosis of ADHD frequently requires feedback from the child's teacher and can often involve a specialty mental health provider, such as a social worker, psychologist, or psychiatrist. The addition of these professionals expands the group of individuals who must communicate together and increases the complexity of that interaction with the addition of the education and mental health systems. These systems have separate work cultures and means of data collection related to ADHD, making communication with health providers more challenging.

Considering these issues raised by health communication theory, the purpose of this study was to better understand how communication may play a role in the way that health providers who prescribe stimulants evaluate ADHD, as well as examine how different external social factors may affect how providers treat ADHD. In addition, this study will consider the adequacy of an existing model of health communication to describe the providers involved in the ADHD assessment process.

## Methods

This project used a case study approach to examine different providers' perspectives on communication related to ADHD.<sup>14</sup> The case study approach was used to develop a revealing explanation of the data that takes advantage of a thorough understanding of context, because of research indicating that practice setting may be important with respect to physical health and mental health providers' communication.<sup>3</sup> The emphasis on context distinguishes the case study, and more broadly other qualitative approaches, from quantitative research that is presumed to be free of context such as societal values through the use of control variables.<sup>15</sup> As a result of the emphasis on understanding context, 3 cases were studied, and these sites are described below.

In addition, the researchers wanted to explore how providers experience ADHD-related communication as well as the situations and conditions under which they experienced the communication. For this reason, the investigators adopted a phenomenological analysis strategy that attempts to isolate common themes among study participants' perspectives on communication about ADHD in their daily lives (also known as lived experience), and used a technique where researchers set their preconceptions about these study phenomena aside as a means of developing an accurate understanding of context (ie, bracketing).<sup>16,17</sup> The result of the phenomenological analysis was a description and interpretation of how the study subjects constructed the meaning of their experience of the study phenomena. The researchers concluded that this phenomenological approach was a better fit for the study's objectives compared with a grounded theory approach since this method emphasizes theory development and this study relies on an adaptation of existing health communication theory.<sup>18,19</sup>

This phenomenological analysis strategy raises the issue of the interpretation of data, which Crowe and Sheppard<sup>15</sup> suggest is an important distinction between qualitative and quantitative approaches. These authors indicate that interpretation using a quantitative approach tends to focus on the probability of an event's occurrence as assessed with numbers calculated with statistical formulas, whereas interpretation using a qualitative approach emphasizes how study participants construct meaning from their lived experience of the phenomena being examined. So these methodologists argue that theory is developed in some qualitative studies using inductive reasoning from observation, while theories are tested using hypotheses following a deductive reasoning strategy in quantitative studies. Consistent with the phenomenological approach toward interpretation, interviews were designed in such a way as to go into a wide

range of topics with substantial depth of information by focusing on a small group of key informant interviewees. Because of the nature of this approach, sample sizes within the range of 5 to 25 subjects are considered to be adequate for phenomenological studies.<sup>20</sup>

### Sample Selection

This phenomenological case study is a subset of a larger study that assessed parental perceptions and approaches to care for a child who received a first-time diagnosis of ADHD. Prescribing clinicians who recruited parents for the study were also invited to participate and share their lived experiences in diagnosing and managing children with ADHD. Eleven pediatric providers were recruited for the study after meeting all of the following criteria: They care for a pediatric patient with ADHD, they are able to prescribe medication, and the parent of the pediatric patient has been recruited into the study. These selection criteria, as opposed to selection based on expertise in ADHD or number of years in practice, affords greater variability in practice behavior, which is desirable to capture a broad range of practice behaviors. Three of the providers were nurse practitioners, and the remainder were physicians. Consistent with the fact that ADHD is often treated in primary care, the majority of the providers practiced in primary care settings ( $n = 8$ ), whereas 3 practiced in specialty mental health settings.

### Description of the Study Sites

The pediatric providers who participated in the study all practiced at 3 clinics that were located in the same neighborhood and served a common surrounding community. The clinics serve a population that is mostly African American and is insured by Medicaid. The first clinic, the Primary Care Pediatric Clinic, is a hospital-based primary care clinic located in a large teaching hospital in a the mid-size city in the mid-Atlantic United States. The clinic offers a range of services, including well-baby visits and child visits, as well as psychosocial assessments.

The second clinic site, the Children's Mental Health Center, is a hospital-based outpatient mental health clinic, which is also affiliated with the same teaching hospital. The mental health clinic offers diagnostic assessments, crisis intervention, intensive case management, psychopharmacologic management, psychotherapy, and school-based clinical services.

The Behavioral Pediatric Clinic is the third site. This clinic is affiliated with a large teaching university in the same urban setting as the other two sites. The Behavioral Pediatric Clinic offers diagnostic assessments, therapeutic

recommendations for school and home, as well as treatment of medical and social needs, including medication and counseling.

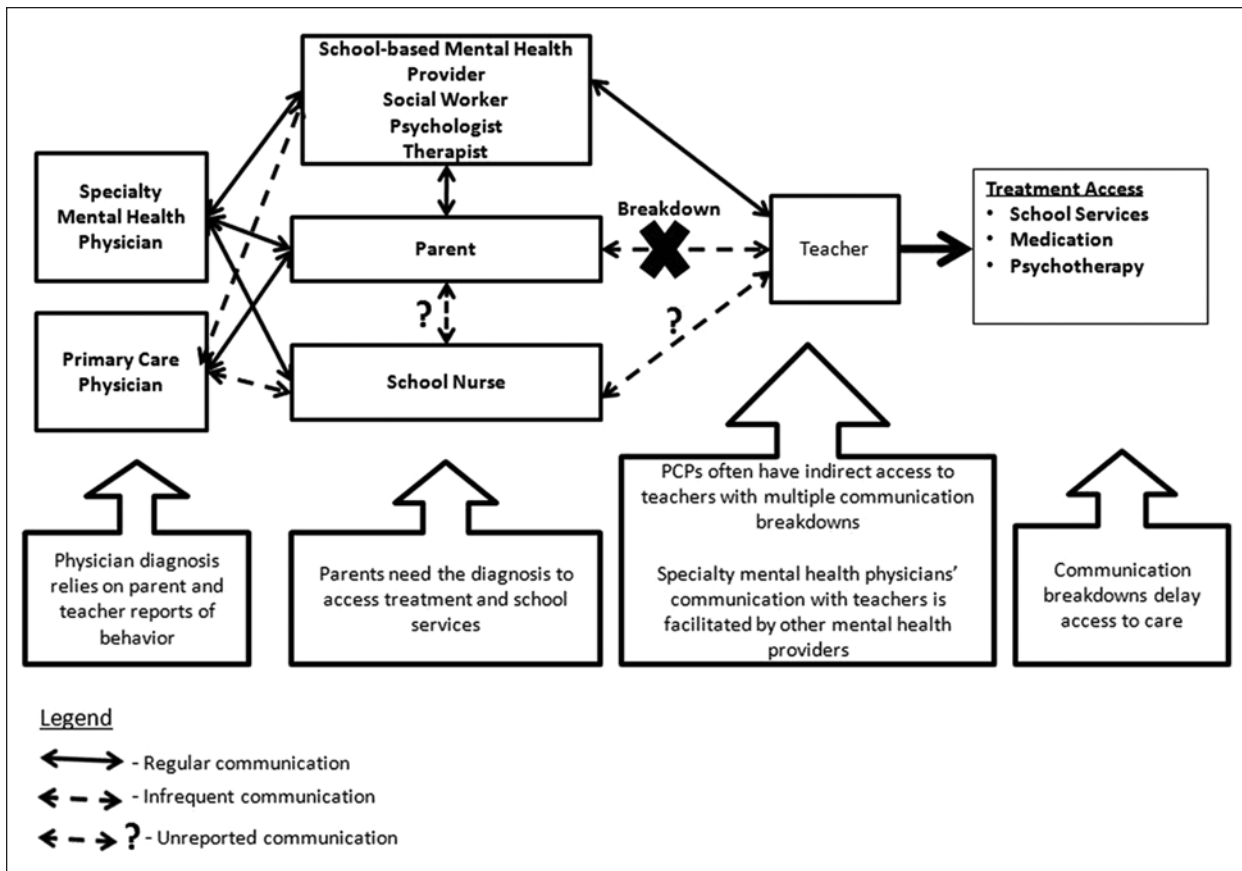
### Qualitative Interviews

Face-to-face interviews with providers who treated patients with ADHD were conducted to assess the providers' practice behavior strategies. The interviews were semi-structured around the following topics: What standards do providers follow in assessment and diagnosis of ADHD? What influences the initiation of treatment and ongoing management of ADHD? How important is parent and/or child input in the treatment process? Do providers engage children and their families to become active participants in the decisions about treatment? What are the difficulties encountered in treating ADHD, including untoward experiences? How do providers overcome potential obstacles in providing treatment for their patients? How do schools or other social and political agencies influence providers' treatment decisions?

The interviews were scheduled at a time that was most convenient for the provider and lasted approximately 1 hour. All interviews were conducted in the provider's private office in the clinic. Confidentiality was stressed, and permission to audiotape the interview was obtained in advance. The principal investigator (SdR) or a research assistant conducted all interviews. Prior to conducting an interview, research assistants read articles on the epistemology and methods for qualitative research. They also conducted a practice interview that was critiqued for interviewing technique by the principal investigator and a consultant with expertise in qualitative research methods. Audiotaped interviews were transcribed verbatim and coded using NVivo version 2.0 qualitative data analysis software (QSR International, 2002).

### Data Analysis

The analysis of the transcribed interviews followed methods for a phenomenological case study to explore provider communication and practices related to the evaluation, diagnosis, and treatment of ADHD.<sup>16,17,20</sup> At the first level of analysis, 5 members of the research team independently read each interview to identify statements that pertained to how providers assimilated information to assess ADHD and the conditions that influenced their treatment decisions. Coding was an iterative process to ensure the trustworthiness of the data. Each coder read the first few interviews to establish the initial codes and definitions. Identified codes were discussed among the group, defining characteristics of each code were



**Figure 1.** Provider attention-deficit/hyperactivity disorder (ADHD) assessment communication map.

established, and a coding manual was developed. Next, each coder re-read the initial interviews and coded the data using the revised definitions and coding manual. The coded text was again discussed among the group, and codes were refined, collapsed, or eliminated as needed. This process continued until there was 100% agreement in definitions and coded data. The research team moved on to the next interviews using the established definitions and coding manual. After group discussion, any new codes that emerged were added to the coding manual. The coders re-read the current and prior set of interviews to ensure that all information related to the existing and newly identified codes had been captured. The coding manual evolved from the data and through this process. Saturation was reached after 5 interviews when no new codes were identified with each subsequent interview. At the second level of analysis, the coded passages were categorized into themes. The themes reflected the inter-relation and associations among the codes. Data were visually displayed using tables to look for patterns within and across provider participants. In the final level of analysis, a conceptual

model emerged from the relationships and patterns observed in the data.

## Results

This analysis revealed that providers are frequently faced with a number of communication challenges and breakdowns that may influence the manner in which they assess ADHD. The communication map generated from interview data (Figure 1) illustrates these issues.

The communication process started with either primary care or specialty mental health physicians who initiated the ADHD assessment process, often through discussions with parents/caregivers during an office visit. From that point, there were several different routes and parties (eg, mental health clinicians, school nurses) through which communication could flow in order to achieve the end goal of ADHD treatment access, and communication may be mediated by one party to reach another party (eg, a primary care provider [PCP] relying on parents to convey a message to their child's teacher at school). Additionally, the process of



communication can be hindered by weak or nonexistent (represented in Figure 1 by dotted lines or question marks) communication relationships between PCPs and mental health clinicians. Such considerations lead to the complex nature of communication in the context of ADHD treatment.

### Communication Breakdowns and Challenges

The results indicate that a breakdown may occur along the communication pathway between PCPs and teachers. The role of teachers in symptom assessment is notable because they are often the first to identify the problem and inform parents, who then initiate the process of ADHD diagnosis. As described by one PCP,

... what happens is the parent comes in with complaints from the school ... sometimes it'll be like "the teacher says that this child needs medication," or they'll even come in and say "my child can't go back to school until they have medication."

In order to make an accurate diagnosis, providers will subsequently attempt to obtain both teacher and parent reports of symptoms using the Vanderbilt ADHD Diagnostic Scales or the Conners Rating Scale. At this point, however, communication frequently breaks down between providers and teachers because teachers often do not complete and return their assessments. One PCP described her understanding of the communication breakdown:

... That's the hardest problem, that parents will come in and say that ... the child's teachers are complaining, ... but ... we give 'em the forms and either it doesn't make it to the school, ... or they get it to the school, and the teachers don't fill it out. ... So there are these ... ways of losing this information, or we're just not getting it.

It is unclear why teachers do not complete assessments. Among other reasons, teachers may either forget or feel that according to one provider (speaking in the voice of a teacher), "It's not my job to fill them out." One PCP described an experience with schools that appears to be common among providers. The PCP said, "I have a really hard time getting school reports back on these kids, a really hard time; ... trying to get the teacher report information back is very, very, very challenging."

This communication breakdown during ADHD assessment can significantly hinder the process of making a diagnosis, leading to a less than optimal scenario in which the provider must treat the child by prescribing a medication. Physicians reported that at times they felt pressured by parents and indirectly by teachers to act

immediately by prescribing a stimulant to address the child's behavior in school. This pressure presented physicians with the difficult decision of whether to make a diagnosis and then proceed with treatment without complete assessments from both teachers and the parents. One provider in a primary care setting described these difficulties of trying to diagnose ADHD without teacher forms:

... More often than we would like to be, we are in a position where we need to make a decision of whether to assign someone a diagnosis or to start med[ication]s without a diagnosis because we don't have teacher forms. ... How much longer do we wait to actually get teacher feedback?

The conundrum was that although the child seemed to have clinically significant symptoms by physician observation, the *Diagnostic and Statistical Manual of Mental Disorders*, fourth edition (*DSM-IV*) diagnostic criteria require evidence of functional impairment across at least 2 domains (eg, home, school) in order to diagnose ADHD. While doctors wait for complete information from teachers or parents, the child's performance at school may continue to suffer. One behavioral pediatric provider reported, "... by the time I get the checklist back, ... a few months later ... the child keeps getting suspended, or the child is sent home, or mom has gotten numerous phone calls ... ." Access to school-based services that help children with ADHD such as individual education plans and Admission, Review, Dismissal meetings may be impeded, since a diagnosis is required to authorize these services.

### Discussion

This study's findings suggested that communication related to ADHD treatment is far more complex than even theoretical models may conceptualize because of the number of involved parties. This result indicates that existing theories of health communication may need to be modified to include cross-system interactions and additional individuals.<sup>13</sup> Within the school setting, such parties include teachers, nurses, and administrative staff (if specific school services such as individual education plans need to be implemented). In the realm of mental health treatment, PCPs, mental health clinicians (eg, psychiatrists, social workers), and school-based mental health providers are important players. Finally, caretakers and/or other family members are involved in the home setting. Many parties clearly participate in ADHD treatment, and coordinating effective communication between them presents considerable challenges to all involved.

One way that ADHD-related communication could be advanced is by supporting health information exchanges that might offer a significant way to promote better communication between providers and improve care coordination.<sup>21</sup> Health information exchanges are an internet-based form of health information technology, such as a shared database of health information. These exchanges allow providers to access information on services for shared patients provided in other settings (eg, primary care, specialty care, hospitals) and reduce service duplication.

Moreover, health information exchanges present a way to address the communication breakdowns between PCPs and teachers that were identified in this study. These exchanges could incorporate schools for the purpose of PCP–teacher interaction related to the completion of ADHD assessments. This incorporation could be accomplished by allowing physicians to electronically distribute ADHD assessments to teachers through the health information exchange. Teachers could complete the assessments and return them to the physician using a secure and confidential method. Thus health technology could be a solution to the communication breakdown between physicians and teachers by making it easier for teachers to directly respond to physicians with completed ADHD assessment forms. On one hand, the study results suggested that physicians' inability to assign a diagnosis (where it is warranted) because of the receipt of limited assessment information from teachers might lead to treatment access delays and poor educational outcomes for the children involved. Meanwhile, there is evidence that both underdiagnosis and overdiagnosis of ADHD may be an issue,<sup>22</sup> and public concern has emphasized the possibility that too many children who do not need stimulants may be prescribed them.<sup>23</sup> Indeed, physicians' lack of information from teachers could possibly lead to a diagnosis of ADHD and the subsequent treatment of children who might not have met the *DSM-IV* criteria for ADHD had more information been available. Health information exchanges may provide a way to solve the communication breakdown between physicians and teachers, thus improving the quality of care for children with ADHD. Although health information exchanges offer much promise for improving communication, they come with certain challenges. For example, electronic medical records are not always compatible across treatment sites, and health information technology frequently requires financial investment in software, especially in the case of electronic medical records.

Health information exchanges may help address limitations connected with providers' communication surrounding ADHD resulting from decreased public

funding for schools. Although teachers are usually engaged in the ADHD assessment process, the school system has been under tremendous financial strain in recent years, resulting in reduced resources and increased class sizes.<sup>25</sup> These trends may mean that some teachers find it even more difficult than before to take the time to provide feedback to clinicians about students with ADHD. Moreover, some teachers might feel that they work in schools to teach children, not to provide them with mental health services. These circumstances could place limitations on clinicians' ability to gather information to diagnose ADHD accurately, and health information exchanges might make the ADHD assessment process easier for teachers.

### Limitations and Strengths

One of the limitations of this study is that prescribers were recruited from teaching hospitals and, therefore, may not be representative of all PCPs. One might expect that the communication could be worse in other settings such as private practices because these PCPs may have fewer staff to coordinate communication. Although the emphasis of this study was not on teachers, given the finding of their importance to provider communication, a future study investigating teachers' perceptions and lived experience related to the ADHD diagnosis and treatment of children in their classrooms would be the next step in this line of research.

### Conclusion

Good quality health care for children with ADHD requires providers to have access to accurate, timely assessment information from multiple sources and settings. Health information exchanges might reduce communication breakdowns between time pressed physicians and teachers. Such health technology solutions will promote communication across systems and improve access to the full range of treatment options. Children's health care may be better coordinated, and the quality of care should rise as a result, which would help improve children's mental health outcomes related to ADHD.

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