Collaboration Between PNPs and School Nurses: Meeting the Complex Medical and Academic Needs of the Child With ADHD

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ABSTRACT

Pediatric nurse practitioners take a lead role in diagnosing and coordinating the care of children with attention deficit hyperactivity disorder (ADHD). School nurses offer rich insight into the child's health and social and academic functioning in the school setting. School nurses develop individualized health care plans, administer and monitor medications, provide valuable input on Individualized Education Plans and Section 504 Accommodation Plans, and serve as the point person in communicating with the medical provider. Pediatric nurse practitioners can enhance the collaboration with school nurses by establishing communication parameters, streamlining medication regimens, and facilitating development of educational curricula for school nurses regarding evidence-based ADHD management. Optimizing partnerships with school nurses will provide better surveillance of treatment efficacy and can facilitate improved health and academic and social outcomes for children with ADHD. J Pediatr Health Care. (2016) *30*, 88-93.

KEY WORDS

Collaboration, ADHD, school nurse, nurse practitioner, advance practice nurse

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Attention deficit hyperactivity disorder (ADHD) is the most common neurobehavioral diagnosis and one of the most prevalent chronic health conditions in school-aged children (Steinau, 2013). ADHD is characterized by persistent inattention and/or hyperactivity/impulsivity, resulting in impairment in daily functioning, including within social and academic domains (Centers for Disease Control and Prevention [CDC], 2015b). In the National Survey of Children's Health: 2011-2012, parent reports revealed that 11% of school-aged children had received an ADHD diagnosis by a health care provider. Further, 6.1% of children ages 4 to 17 years were regularly prescribed medication for

their ADHD (CDC, 2014). Comorbid conditions may include autism spectrum disorder, learning disabilities, language delay, genetic conditions such as neurofibromatosis, Tourette syndrome, sleep pattern disturbances, anxiety, and mood disorders. Emotional dysregulation disorders such as oppositional defiant disorder and conduct disorder are prevalent in 25% to 45% of children with ADHD (Shaw, Stringaris, Nigg, & Leibenluft, 2014).

Pediatric nurse practitioners (PNPs) provide comprehensive evidence-based management of common developmental/behavioral disorders, including ADHD (Van Cleve, Hawkins-Walsh, & Shaffer, 2013). Medical treatment for ADHD includes provision and monitoring of pharmacologic therapies, recommendation for behavioral counseling, patient/family education, assistance with establishing school-based services, and ongoing care coordination (American Academy of Pediatrics [AAP], 2011). Interprofessional collaboration and multimodal treatment strategies can improve evidence-based care and tracking of health outcomes in children with ADHD (McGonnell et al., 2009; Palmer et al., 2010).

ADHD IN THE SCHOOL SETTING

As a public health condition, ADHD affects social, educational, economic, and family systems (CDC, 2015a). The school environment plays a crucial role in influencing the mental health and well-being of children and adolescents. Students with ADHD incur a higher annual cost to the United States education system and may have adverse educational outcomes, partly because of the possibility of special education placement, disciplinary measures, and grade retention (Robb et al., 2011).

School personnel are key partners in providing mental health services to children and in assessing academic and social functioning of the child with behavioral health diagnoses (Foy, Kelleyer & Laraque, 2010; Owens & Fabiano, 2011). School-based health needs for children with ADHD may include medication administration, assessment for treatment efficacy, identification of adverse effects, and monitoring for other mental health concerns. Academic needs may include psychoeducational testing and special education placement. Behavioral needs can include development of positive behavioral support plans, provision of school-based counseling services, and surveillance for psychosocial stressors such as peer relationship difficulties. Previous interventions to improve the care of children with ADHD have focused on enhancing the communication between physicians, parents, and school personnel (Wright et al., 2015).

INTERPROFESSIONAL COLLABORATION

Within the school system, interprofessional collaboration is necessary to meet the needs of the child with ADHD. Team members may include teachers, guidance counselors, school psychologists, and school nurses. There is a shortage of qualified trained professionals who can meet the mental health needs of children in the school setting (Phillips, 2012). School nurses are the health representative within the school system, providing valuable information about each child's physical, social/emotional, and developmental health needs (National Association of School Nurses (NASN), 2013a). A 2002-2003 national survey of mental health services in schools estimated that school nurses spent approximately one third of their time providing mental health services (U.S. Department of Health and Human Services, 2006). NASN (2013a) states that school nurses serve as "advocates, facilitators, and counselors of mental health services both within the school environment and in the community."

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The AAP advocates for having a full-time school nurse in every school building and recommends that pediatric health care professionals establish liaisons with and communicate clearly to school nurses to meet the complex health needs of students (AAP, 2008, 2009). According to parental reports, fewer than 5% of primary care physicians communicated with the child's school (Wolraich, Bickman, Lambert, Simmons, & Doffing, 2005). The ADHD Identification and Management in Schools (AIMS) framework has been proposed to improve communication and collaboration between school personnel and health care providers (Dang, Warrington, Tung, Baker, & Pan, 2007). This model, however, has not been validated in multiple school communities. Collaboration between school nurses and PNPs can have a synergistic effect by improving surveillance of medication efficacy and adverse effects, providing surveillance of other mental health, behavioral, and psychosocial issues, and monitoring for academic improvement.

IMPROVING LINES OF COMMUNICATION

It is essential to streamline communication and to have realistic expectations about how much the school nurse can provide as "point person" for each individual student. One barrier to effective interprofessional communication is that parents may not complete required release of information forms. Sharing of health and academic information must occur within the context of the confidentiality requirements of both the Health Insurance Portability and Accountability Act and the Family Educational Rights and Privacy Act (Fiks & Leslie, 2010; NASN, 2012). Other barriers to

collaboration can include time constraints, lack of funding, absence of resources, and role restrictions (Power, Blum, Guevara, Jones, & Leslie, 2013; Wright et al., 2015).

Once parental permission for NP/school nurse communication is obtained, the school nurse can assimilate information from teachers, school psychologists, guidance counselors, and other school personnel and communicate directly with the PNP. Detailed information about social issues, academic concerns, or other behavioral problems will help with ongoing assessment and care management. Nonmedical school staff may not provide the comprehensive feedback that is most helpful in monitoring the child with ADHD. The PNP can enhance communication by suggesting specific follow-up questions and by giving the school nurse a clear method of communicating with the medical office. Teleconferencing capabilities between the medical office and the school may enhance communication opportunities and allow multiple school personnel to briefly discuss their concerns for the child in real time (Nelson, Duncan, Peacock, & Bui, 2012).

The school nurse can be supportive in making sure that behavioral assessment forms (such as the Conners' Teacher Rating Scale or the NICHQ Vanderbilt Assessment Scale) are completed and returned. PNPs often ask the parents to deliver these forms to teachers to be completed and returned to the medical office. This indirect method leaves the school nurse out of the loop regarding the efficacy of the child's medication regimen and other treatment strategies. Having bidirectional contact, with the school nurse as the point person, can facilitate more effective evaluation of the child's ADHD treatment regimen and identification of potential roadblocks. The school nurse may be able to perform *brief* informal behavioral observations and include the information in a narrative format along with the completed teacher forms.

School nurses develop Individualized Health Plans to optimize the health care of children with medical conditions that may affect "safe and optimal school attendance and academic performance" (NASN, 2013b, 2015). An Individualized Health Plan may also be part of a Chapter 15 Service Agreement (504 Plan) or Individualized Education Plan (IEP) for the student with ADHD. The IEP is a written statement of the educational program tailored to meet a child's unique needs. Children who qualify for special education under the Individuals with Disabilities Education Act must have an IEP. When a medical diagnosis causes limitation in the child's ability to learn in the regular school setting, a 504 Plan will detail reasonable accommodations to help ensure that the child is receiving the same access to education as his or her peers. For children who have disruptive behaviors associated with their ADHD diagnosis, a positive behavioral support plan should be incorporated into the IEP or 504 Plan. School nurse input on IEPs and 504 Plans is essential. Team meetings that evaluate the appropriateness and effectiveness of an IEP or a 504 Plan should include the school nurse as the health care representative.

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MEDICATION STRATEGIES

Milder symptoms of ADHD may be managed by behavioral and/or academic strategies that are consistently followed by all school personnel. Medication therapy is often also necessary to reduce the overwhelming symptoms that impair the child's functioning in the school setting. Many school districts employ school nurses who are required to travel to multiple district buildings throughout the day. This interruption in care may lead to difficulty in administering medications at optimal dosage times and also reduces the nurse's ability to monitor the child effectively. Evaluation of medication effectiveness and potential adverse effects is essential, as the medication's peak level is often during the course of the school day (Wolraich et al., 2005). Shorter acting ADHD medications typically require 4- to 6-hour dosing intervals. During the school day, children with these regimens often require a mid-day dose that is administered by the school nurse. Simplifying medication regimens has been shown to improve medication adherence (Chacko, Newcorn, Feirsen, & Uderman, 2010) and decreases interruption in the child's school day. When possible, NPs can consider prescribing long-acting formulations of stimulant and alpha-agonist medications, or the once-daily nonstimulant atomoxetine.

School nurses may be asked to assess health information such as weight and blood pressure and to monitor for adverse effects of medication such as headache, stomachache, tics, or excessive irritability. Close monitoring may be necessary when medications are started, doses are adjusted, or other concerns arise. The specialty parenting magazine *ADDitude* counsels parents that when starting or switching ADHD medications, the school nurse can be the parents "greatest ally" by

helping monitor the dose and gathering information from teachers on the functional impact of dosage increases (Silver, n.d.).

COLLABORATION IN ACTION

The authors work in two separate hospital-based developmental behavioral pediatrics clinics in the mid-Atlantic area. We estimate that more than 50% of our practice consists of managing school-aged children with ADHD. Once the diagnosis of ADHD is established, patient education includes information to help the family identify and remove health-related barriers to the child's academic success. Parent educational materials include concrete information on partnering with the school nurse and educators to establish effective lines of communication. Release of information forms are typically completed by the parents at the initial appointment to ensure that pertinent medical information can be shared with the school. Families are asked to sign reciprocal permission forms at the school within the first few days after diagnosis. We encourage families to meet with the school as soon as the diagnosis is made to review the planned medical/behavioral treatment, discuss appropriate learning and behavioral accommodations, and provide medications that are prescribed during school hours.

The initial contact between the PNP and the school nurse is often indirect and occurs around school day medication administration requests. To reduce the risk of stigmatizing the child who must go to the school nurse for behavioral medications, we prescribe medications for administration at school only when necessary. When mid-day dosing is required, we write specific, detailed medication administration instructions on dated, standardized school medication forms. Schools typically require a labeled prescription bottle for each medication, and we request that a second labeled pill bottle be provided by the pharmacist with mid-day dosing instructions. It is essential that school personnel pay close attention to when the child's medication seems to wear off so that dosing schedules can be adjusted accordingly. We also encourage families to formulate a back-up plan with the school nurse in case a morning dose of medication is forgotten at home. Although many children need medication coverage through their bus ride home and prior to their after-school activities, school personnel frequently ask that medication dosing be avoided during the last half hour or so of the school day. In our practices, we have had to negotiate medication timing with the parents and schools to ensure that medications can be provided at optimal times. We may ask that the parents give the child's morning dose 30 to 60 minutes earlier on school days. This timing adjustment may allow the child's afternoon dose to be given by the school nurse prior to the end of the school day. Providers in after-school care programs also may be willing to administer medications later in the day to meet the child's individual treatment needs.

After IEP or 504 Plan meetings, we ask that the school nurse forward a copy of the child's treatment plan to the medical office. We have participated in these meetings via teleconference when necessary, and this service may be considered a billable service with appropriate documentation. The school nurse can also help to ensure that completed behavioral rating forms are faxed to the medical office. Interprofessional communication is often easily accomplished via e-mail and through brief phone calls. When the targeted outcomes are achieved, follow-up discussions between the school nurse and the PNP should occur two to three times per year (Dang et al., 2007). The PNP documents all communications in the child's medical record. During the child's office visits, parents often appreciate hearing that this collaborative effort is under way to provide the best possible care for their child's needs. Ongoing quality improvement efforts include tracking of phone/fax/e-mail communications and evaluating the effectiveness of the collaboration process during the course of the school year.

ADVOCACY FOR ENHANCED KNOWLEDGE

A comprehensive nursing education and practical pediatric experience provide appropriate preparation for the school nurse to recognize mental health concerns (Puskar & Bernardo, 2007). However, these providers have reported a "lack of confidence" in their skills and identify a need for more professional education regarding these conditions (Maughan & Mangena, 2014; Pryjmachuk, Graham, Haddad, & Tylee, 2011). Models for educational curricula for school nurses have been developed for chronic neurologic conditions, anaphylaxis, and asthma (Cavanaugh & Strickland, 2011; Sprague-McRae & Rosenblum, 2013; Wu & Hill, 1998), but no such curricula has been validated for management of ADHD and other common behavioral conditions. Johnson (2012) developed a "School Nurse ADHD Toolkit" to promote "early identification, referral, treatment and monitoring of students with ADHD," although validity and usefulness have not yet been evaluated. As experts in pediatric care and nursing-based education, PNPs should collaborate with school nursing leaders on developing a standardized school nurse educational curriculum on ADHD management. Additionally, PNPs can offer continuing education programming about ADHD management through local and national school nurse conferences. As new evidence-based treatment guidelines and medication options emerge, PNPs should take an active role in educating their school nurse colleagues, facilitating their ability to share novel information about ADHD with all school personnel.

CONCLUSION

PNPs are at the forefront of pediatric primary care provision and take a lead role in managing the care of children with ADHD. School nurses offer an undeniably significant contribution to the daily mental and physical well-being of children and adolescents. They provide assessment of students with ADHD in their social and academic environment, giving insight into the effectiveness of the prescribed treatment and accommodations. PNPs can establish communication parameters, streamline medication regimens, and help to facilitate development of educational curricula for school nurses regarding evidence-based ADHD management. Implementation of the provided recommendations can optimize collaboration between PNPs and school nurses/school systems and serve as an example for other providers. Excellent partnerships between PNPs and school nurses will provide better surveillance of treatment efficacy and can facilitate improved health, social, and academic outcomes for the child with ADHD.

PNPs can establish communication parameters, streamline medication regimens, and help to facilitate development of educational curricula for school nurses regarding evidence-based ADHD management.

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