

# Behavioral Health Care Coordination Across Child-Serving Systems: A Burgeoning Role for School Psychologists

*Jeffrey D. Shahidullah*

## Abstract

The school system is an important setting for child development. School-based providers, such as school psychologists, are positioned to address behavioral health issues (i.e., mental health, behavioral and social/emotional development, behavioral factors associated with medical conditions) within the school setting. To effectively address these issues, they often must develop partnerships with other child-serving “systems” including the home, community, and healthcare system. These partnerships facilitate communication, consultation, and care coordination to occur that link behavioral health, medical, sociocultural, and educational factors or systems. As a result of their training and placement within the school setting, school psychologists are uniquely situated to implement models of care coordination between the home, community, and healthcare system. The purpose of this essay is to broadly highlight the importance of interdisciplinary collaboration across child-serving systems, with adults collaborating as a school community to support each student’s healthy development. This discussion emphasizes the role of the school as the primary conduit in which to link these systems. Specifically, this article enumerates the burgeoning role of school psychologists in undertaking these interdisciplinary roles in linking systems of care. Implications for making these aspirational recommendations become a practical reality are discussed in the context of training and advocacy.

Key Words: interprofessional collaboration, family–school partnerships, behavioral, mental health, school–community partnerships, school psychology

## **Introduction**

Schools are positioned at the confluence of numerous child-serving “systems” including the home, community, and healthcare system. Child and adolescent developmental considerations include psychological, biological, sociocultural, and educational factors or systems that are each interdependent on the others (Bronfenbrenner, 1979; Engel, 1977, 1980; Halfon, Larson, Lu, Tullis, & Russ, 2014). Within each of these developmental systems, there has emerged a child-focused workforce that is trained to deliver care in an often prespecified way that aligns with guidelines or standards of care in their respective fields and delivery systems. The following sections describe the limitations in service delivery within each of the systems in which children function. Next, the rationale for why it is important to link each of those systems with the school setting is provided. Finally, the role of the educational system and school psychologists in linking care is discussed. While previous authors (e.g., Power, DuPaul, Shapiro, & Parrish, 1995) have called for improved coordination of care with schools, this call has not been fulfilled in practice. Thus, there continues to be urgency for identifying practical approaches to linking systems of care.

### **Behavioral Health Service Delivery Systems**

Traditional behavioral health (i.e., neurodevelopmental/mental health concerns, lifestyle factors affecting physical health) service delivery systems often include specialty behavioral health providers such as child and adolescent psychiatrists, psychologists, and licensed professional counselors. Unfortunately, there are numerous barriers that individuals in need of behavioral health services face when trying to access these providers, including workforce shortage issues (Kim, 2003; Thomas & Holzer, 2006), location/transportation issues (Syed, Gerber, & Sharp, 2014), stigma issues (Shim & Rust, 2013), and payment or insurance coverage issues (Ader et al., 2015; Kathol, Butler, McAlpine, & Kane, 2010; Kathol, Melek, Bair, & Sargent, 2008). Behavioral health services are not covered as extensively by insurance companies as are medical (i.e., physical health) services (Kathol et al., 2008). These barriers lead to poor follow through by children and families to specialty behavioral health service providers (Kessler, 2012). While traditional behavioral health delivery systems are positioned to provide care for many who are in need, the populations they serve are representative of only a subsegment of the population, namely, those

who are commercially insured, have the means for transportation to the clinic, can afford to take time off work, and are able to endure stigma associated with seeking behavioral health care (Mechanic, 2002; Rowan, McAlpine, & Blewett, 2014). Limitations of this delivery system include the lack of access it affords to care and its fragmented approach to care when services are not coordinated with other systems in which the child functions (Berwick, Nolan, & Whittington, 2008; Power, Shapiro, & DuPaul, 2003).

### **Medical Service Delivery Systems**

Within medical systems (i.e., biological or physical health systems), a provider or team of providers consisting of physicians (e.g., pediatrician, family physician, physician specialist), nurses, and physician's assistants, among others, is trained to examine, diagnose, and treat patients. Modalities of care may focus on prevention through anticipatory guidance/education as well as intervention through active support or monitoring and behavioral modification targeting lifestyle changes. However, due to the time-limited context in which this care delivery occurs (Yarnall, Pollak, Ostbye, Krause, & Michener, 2003) and a general lack of training in nonmedical treatment approaches (Horwitz et al., 2015; Shahidullah et al., 2017), the predominant treatment modalities are typically biologically based (e.g., medications for common health conditions including ADHD, depression, asthma, diabetes, gastrointestinal issues, recurring pain; Hampton, Richardson, Bostwick, Ward, & Green, 2015). This care is typically delivered in primary health clinics, although in some cases in tertiary care settings such as hospitals. An advantage of this delivery system for behavioral health care is that it is more accessible than specialty behavioral health settings/providers. Also, it affords the opportunity to receive care in the "medical home," which may be less stigmatizing than a specialty clinic (Croghan & Brown, 2010). Limitations of this delivery system are the lack of training that medical providers receive in behavioral health, particularly in nonbiologically based treatments, such as behavioral interventions that extend across the home and school (Horwitz et al., 2015; Shahidullah et al., 2017).

### **Social Service Delivery Systems**

Social and cultural developmental systems that influence child development are varied and include factors such as the family system, community engagement in health/education promotion, parental attitudes toward child development, and other issues related to ethnicity, race, religion, and socioeconomic status (Bronfenbrenner, 1979). These considerations are, to varying degrees, factors that affect a child's emotional well-being and academic attainment. Community-based social workers are examples of providers who are

trained to work across systems to evaluate the effects of environmental systems on quality of life for individuals and to work to remediate maladaptive social environments. These roles may involve collaboration and communication with schools and health care settings on behalf of a family. This advocacy on behalf of the family is important as often the voice of the family becomes marginalized or lost when a child's care is spread across a fragmented group of systems and providers (Browne et al., 2012).

### **Educational/School Service Delivery Systems**

Educational systems consist of teachers, teaching specialists, paraprofessionals, and administrators all working collaboratively in the school setting where children typically spend 35–40 hours per week, with the opportunity for more when considering afterschool and summer programming. School psychologists work closely with these school personnel at the individual classroom level and systems level to promote academic, social, and emotional well-being. In addition to the academic curricula, schools are uniquely positioned to provide behavioral health programming. Further, schools are also uniquely positioned to serve as conduits in which to link medical, community, and family systems which provide care to children (Anderson, 2016). Typically, schools are the common touchpoint among those systems and have the infrastructure that the other systems may not have—longitudinal access to students, trained staff and resources, and an authentic and performance-based learning environment.

### **The Need to Link Service Delivery Systems**

Identifying approaches to linking these various child-serving systems through communication, collaboration, and care coordination offers numerous potential advantages. One advantage is the opportunity for improved care when child concerns are viewed within an ecological framework (Bronfenbrenner, 1979; i.e., the idea that children function as part of multiple systems; thus, in order to influence change, we must change the ecological system around the child, rather than focusing exclusively on changing the child individually). When dimensional approaches to case conceptualization are used whereby behavioral and physical health are seen as varying degrees on an interconnected continuum, care can be provided that addresses developmental factors across systems. This approach emphasizes team-based care in the context of a family-centered model in which the child/family is recognized as being in partnership with this team. This family-centered model is more likely to encourage the families' strengths, choice, and independence in the decision-making process (Conway et al., 2006).

Additional advantages of linking these systems of care include providing care that is coordinated and less fragmented. When care is coordinated amongst multiple members of the team in the process of identifying needs and linking treatments to those needs, the care that children receive is more likely to address problems at multiple ecological levels spanning from the individual to the larger ecological system in which the problem occurs (Power et al., 2003). With this care coordination, there is less likely to be duplication of services (e.g., school counselor and specialty mental health provider both providing the same service at the expense of another type of needed support). Duplication of services leads to poor quality of care as well as added burden for families and added expense or misallocation of resources within these child-serving systems (Pires, 2013).

### **The Role of the Educational System and School Psychologists in Linking Care**

With the appropriate training, school psychologists are positioned to undertake roles in interdisciplinary collaboration across child-serving systems and providers. School psychologists can implement models of care coordination between the home, community, and healthcare system. These models may remediate many of the limitations that each system encounters when attempting to provide care in isolation. The following sections emphasize the role of the school system and school psychologists as the primary conduit in which to link these systems. This emphasis is important as schools represent a venue where these other systems may converge in care delivery for behavioral health problems. The following sections also specify interdisciplinary roles and partnerships that school psychologists are positioned to undertake. Implications for making these aspirational recommendations become a practical reality are discussed in the context of training and advocacy for school psychologists.

## **School System Partnerships Across Child-Serving Systems**

### **Partnerships With Behavioral Health Systems**

Specialty behavioral health systems (e.g., mental health clinics) present numerous access barriers as discussed above. Patients typically access these specialty services when they have a behavioral health issue causing impairment in social or academic functioning. These issues are often raised to the primary care physician only after the issues become distressing to the family and patient, at which time a referral to a specialty behavioral health provider (e.g., psychiatrist, psychologist, counselor) may be made. However, the culture and

stigma surrounding when one should see a provider may convince a family of a child with subclinical presentation (i.e., presentation that does not meet full diagnostic criteria for a disorder) and only mild to moderate levels of distress and impairment that their problem is not serious enough to warrant therapy. School-based services or school-coordinated services may offer accessible care to children at an early stage before problems require a higher level of support (Fazel, Hoagwood, Stephan, & Ford, 2014). Many of these youth may be diverted from needing more intensive services if they receive supports earlier.

### *Multitiered Systems of Support (MTSS)*

School-based service provision may be a way to address disparities in access to behavioral health services (Swick & Powers, 2018). A framework schools may use to view students' behavioral health needs through a continuum of care is schoolwide positive behavioral intervention and supports (SWPBIS or PBIS; Shepard, Shahidullah, & Carlson, 2013). Schools may be positioned to deliver prevention and intervention through multitiered systems of support (MTSS) frameworks, such as PBIS. Typically, within multitiered frameworks, universal programming is delivered to all students at Tier 1 (e.g., schoolwide code of conduct, schoolwide social/emotional programs, explicit teaching of expectations, a positive system of support in which prosocial behaviors are recognized). Tier 2 might consist of a relatively low-restriction intervention (e.g., *Check-In Check-Out Program*; Crone, Hawken, & Horner, 2010) or therapeutic groups (e.g., *Coping Cat Program*; Kendall & Hedtke, 2006).

These MTSS or PBIS frameworks conceptualize involvement of specialty behavioral health services as occurring at Tier 3 via referral to more intensive therapeutic services. At this level in the framework, school providers can discuss options for ongoing care with families. Some school districts may have the support in place (e.g., providers, resources) to deliver individualized therapy to students, while other districts may not. In these cases, parents may elect to access a provider outside of the school at this Tier 3 level (e.g., pediatrician, psychiatrist, psychologist, counselor).

### *Care Coordination*

When access to these specialty behavioral health delivery systems is available, there may still be limitations with the care that is provided. For example, specific treatments may be difficult to implement in specialty care settings (e.g., interpersonal and social skills training/practice, exposure-based treatments for anxiety). School psychologists can support these treatment efforts by collaborating with the specialty provider to facilitate school-based supports (e.g., guided school-based exposures, debriefing with both the student and therapist after a new therapeutic skill is taught). Some therapies may be less effective

when conducted individually rather than in groups. For example, evidence-based programs for externalizing (e.g., *Coping Power Program*; Lochman et al., 2009) and internalizing problems (e.g., *Friends for Life Program*; Barrett, Farrell, Ollendick, & Dadds, 2006) rely on group problem-solving skills training. This training is reinforced through activities such as role plays with peers. Facilitating opportunities for school-based group therapy may supplement individual therapy sessions focused on building skills.

### **Partnerships With Medical Systems**

Social, emotional, and behavioral health concerns of children and adolescents commonly present in medical delivery systems, such as primary care (Belar, 2008; Gatchel & Oordt, 2003). Approximately 50% of people in the U.S. will experience a behavioral health concern at some point in their lives, with many of these concerns originating in childhood (Murphey et al., 2014). Parents identify their child's pediatrician as the person they feel most comfortable in seeking out as their primary source of help for health concerns, including behavioral health concerns (Polaha, Dalton, & Allen, 2011). Unfortunately, in a survey conducted by the American Academy of Pediatrics, 65% of pediatricians reported that they lacked adequate training in identifying and appropriately managing behavioral health concerns (McMillan, Land, & Leslie, 2017). Even when pediatricians are adequately trained in behavioral health evaluation and treatment, there are numerous barriers that limit their ability to provide effective and comprehensive care (e.g., lack of time, lack of referral resources, difficulty in gathering data from school-based providers; Hampton et al., 2015).

#### *Care Coordination*

Of school students, 20% will present with some form of chronic illness or medical problem (e.g., obesity, diabetes, asthma, epilepsy, chronic/recurring pain; Canter & Roberts, 2012). Although tasked with addressing academic and learning needs, school personnel are also positioned to develop an alliance with medical providers for care coordination. Additionally, they may help by providing school-based supports in conjunction with medical service systems, as conditions like anxiety, depression, and learning problems frequently co-occur with chronic health conditions and may be overlooked by medical providers (Perrin, Bloom, & Gortmaker, 2007).

ADHD is an example of a common condition that has implications for care coordination between medical and behavioral health providers, particularly school-based providers. Shahidullah, Voris, Hicks, and Carlson (2014) discuss compelling evidence of the need for school-based supports. These supports

include behavioral and academic interventions and can be implemented in conjunction with medical therapies such as stimulant medications. The implementation of a behavioral modification approach across the home and school settings may increase the breadth and depth of the effects of medication (Pelham et al., 2016). While stimulant medication demonstrates positive effects in remediating core symptoms of ADHD (i.e., inattention, hyperactivity–impulsivity), it does not lead to sustained effects for peripheral areas of functional impairment (i.e., academic performance, aggression, compliance, parent–child and social relationships; Barnard, Stevens, To, Lan, & Mulsow, 2010; Pelham & Smith, 2000).

### *Communication With Medical Providers*

Effective communication between school and medical providers offers better care by decreasing the risk for duplication of services (Bradley-Klug & Armstrong, 2014). There is often overlap between the issues that pediatricians and school psychologists spend their time addressing (e.g., developmental, learning and behavior problems; pain/somatic complaints, social anxiety, school refusal). Haile Mariam, Bradley-Johnson, and Johnson (2002) surveyed pediatricians regarding their preferences on receiving information from schools for behavioral health concerns. Findings revealed that discrepancies exist between school psychologists and pediatricians in how each profession prefers to communicate regarding student issues and how information is shared. Haile Mariam et al.'s study highlighted the importance of developing a communication mechanism in which school performance data can be efficiently shared across providers.

Given the overlap in several conditions that both pediatricians and school psychologists spend their time managing, school psychologists may be positioned to deliver consultation around evaluation and treatment for specific issues (Bradley-Klug & Armstrong, 2014). Due to training and time barriers, pediatricians may not be able to allocate enough consideration to social, familial, or environmental factors that contribute to behavioral problems, anxiety, depression, learning issues, and so on (Hampton et al., 2015). Information from school personnel such as school psychologists may be helpful in evaluation and treatment decision-making around these issues.

While traditional modes of communication such as email/faxed updates and phone calls continue as the mainstay, there are examples of web-based portals in which school, family, and medical providers can communicate. For example, *myADHDportal.com* (Epstein et al., 2011) is a tool developed by a hospital-based ADHD clinic to develop user-friendly channels of stakeholder communication on care for children with ADHD. The portal includes options



for messaging as well as performance ratings in which school and home care-takers can document daily behavioral outcomes and share those with the child's physician for treatment decision-making and monitoring purposes.

Another need for care coordination between the medical and educational system pertains to students being reintegrated into school after a prolonged medical absence (e.g., hospital stay for illness/injury). Shields and colleagues (1995) describe the *eco-triadic model of educational consultation* that school personnel may use in attending to the educational and social/emotional needs of medically involved students and in facilitating a manageable return to school. After prolonged school absences, these students face challenges associated with the loss of instruction and the normative social experience of school (Moonie, Sterling, Figgs, & Castro, 2008). They may face reintegration distress regarding reactions from peers depending on the reason for their absence. The eco-triadic model emphasizes communication amongst providers from three systems—the child with health conditions and his/her family, the medical team, and school personnel.

*Provide Training to Primary Care Physicians on School Provider Roles/ Functions and Procedures*

School psychologists can reach out to the local pediatric office to discuss issues regarding evaluation and treatment approaches in the school and how those align with approaches in the pediatric office. For example, primary care physicians may be unaware of services and supports being provided within the school system. This may lead them to recommend that parents make requests for services from the school that the student does not need or that the school cannot feasibly provide.

An alternative approach would be for the school psychologist to work with the medical provider to establish an agreed upon communication method (e.g., primary care physician initially reaches out to the school psychologist via email to share and corroborate data; then both stakeholders discuss the best treatment approach that can feasibly be provided). Other relevant items for discussion between stakeholders may include viewpoints on homebound instruction, physician notes for excused absences, and the use of psychiatric medications. These discussions may help local primary care physicians identify the pertinent school-based personnel as well as the special education and other support programming available (e.g., Individual Family Service Plans, Individualized Education Programs, Individualized Healthcare Plans, Section 504 Plans). Due to Health Insurance Portability and Accountability Act (HIPPA) and Family Educational Rights and Privacy Act (FERPA) rules which protect the confidentiality of healthcare and educational records, it can often be difficult for data and information to be shared between the school and physician's

office. School psychologists can facilitate information sharing by ensuring that release of information consent forms are signed and documented appropriately.

### **Partnerships With Families and Communities**

By understanding the effects of family and community factors (e.g., education levels, attitudes toward child development and education, exposure to trauma/toxic stress), school psychologists may more fully appreciate the need to develop home–school linkages and partnerships. These linkages may ensure that what students are exposed to in the classroom is carried over and reinforced at home.

#### *Taking a Strengths-Based Approach*

School psychologists can partner with and gather information from parents, families, and communities to identify beliefs, expectations, values, and rules of interaction regarding the school/educational system. In the context of family–school meetings, both parties can then better understand the goals of the other and how those goals can be met while providing support for the student.

A component of developing family and community partnerships is attending to the influence of culture. Using Bronfenbrenner’s ecological model (1979), understanding the cultural influences that present at the micro-, meso-, and macro-level of the model can frame the attitudes, beliefs, and practices of the familial and community context in which the individual student functions. This aspect of family and community partnership seeks to acknowledge and affirm the beliefs of the family. This approach identifies strengths and assets within the family and community that may have been previously overlooked or that appear to run counter to the realities of the school’s culture.

It is important to understand the family and community culture regarding healthcare and medicine, including illness beliefs. When a child presents with a chronic health condition (e.g., depression, ADHD, diabetes, asthma, epilepsy) and appears in need of access to the healthcare system, a trusted school provider who has an established rapport and familiarity with the family may be able to provide psychoeducation on disease processes and treatment options. They may also be able to advocate for the child on the behalf of the family.

#### *Promoting Family Involvement in the Home*

The meta-analytic work of Jeynes (2005) shows that family communication of aspirations/expectations, parenting style, and other forms of subtle involvement at home are highly predictive of student success. School psychologists can implement training on positive parenting practices in the home focused on improving parent–child relationships, literacy, and social/emotional functioning. The National Association of School Psychologists (NASP) has developed

a practice guideline focused on conducting family–school conferences (Minke, 2010). Holding routine family–school conferences around students’ academic, social, and emotional success may facilitate alignment with expectations and responsibilities across these settings and utilize parents as strategic allies in goal-setting (Boazman, 2014). These conferences may also foster parents’ self-efficacy in understanding their own importance in promoting a child’s academic and social development (Hoover-Dempsey et al., 2005).

Another area in which school psychologists may be involved is in supporting families around homework performance. Several programs have been developed to assist families in fostering a positive environment and management skills for homework completion and performance (e.g., Dawson & Guare, 2008; Langberg, 2011). School psychologists can partner with families to implement and evaluate strategies that promote effective engagement, persistence, and learning related to homework such as expectations, positive consequences, and contingency management. School psychologists can recommend resources and work with students/families as they achieve a developmental progression through a set of competencies. The *Smart, But Scattered* workbook series (Dawson & Guare, 2008) and the *Homework, Organization, and Planning Skills* program (HOPS; Langberg, 2011) are examples of methods in which school psychologists can provide consultation to assist in families that struggle with organization, time management, and planning skills around homework performance.

### *Partnering With Community-Based Social Workers*

Developing alliances with social workers may assist in conducting a social or developmental history for a child by providing information that may help to understand factors (e.g., cultural, economic, familial, health) affecting a student’s performance. If it appears that a child’s living situation is adversely affecting their adjustment in the school, family, or community context, social workers may be positioned to work with the family/student to access social supports. Social workers can assist families in need of access to behavioral health services (but who may not be able to afford these services) to get connected to community mental health programs and transportation assistance programs. By paying close attention to social and familial factors influencing a child’s behavior, incidents of abuse or other adverse childhood experiences may be revealed.

### *Community Programming*

School psychologists can reach out to communities to provide programming on pertinent topics. For example, school psychologists can connect to learning disability groups, specialty disorders groups (e.g., Children and Adults with Attention Deficit/Hyperactivity Disorder; CHADD), or other specific populations (e.g., immigrants, English language learners) to provide information on

local resources, options for networking, and an overview of school policy and law including IDEA and Section 504.

School psychologists can reach out to healthcare and other community providers to create partnerships in district- or school-level initiatives. For example, local pediatricians, nurses, and social workers can give talks on health/health screening, safety, development issues, parenting, early literacy promotion, and so on, using the school setting to reach a wide range of families (see Waters et al., 2017 for a description of a school–community partnership around obesity prevention). Regarding obesity specifically, research demonstrates that partnerships may be able to leverage community resources to improve outcomes for students/families at high risk for obesity (Fiechtner et al., 2017). These community resources may include locations of farmers markets, supermarkets, parks, and fitness centers that provide affordable access to families.

## **Implications for Turning These Aspirational Recommendations Into a Practical Reality**

### **Advocacy Regarding Roles and Functions of School Psychologists**

Over 20 years ago, Power and colleagues (1995) advocated for school psychologists to take on partnership-based roles in linking child-serving systems of care. They called for an expansion in training to meet these demands. It is noteworthy that the impetus for an expansion in training does not necessitate reconceptualization of the roles and functions of school psychologists. In fact, guiding frameworks in the field of school psychology already endorse the roles of school psychologists pertaining to systems-level change agents and interdisciplinary collaborators. However, for many, the training that school psychologists receive to undertake these cross–systemic collaborations is not commensurate with the aspirational recommendations outlined in this article (Bradley-Klug & Armstrong, 2014).

The major organizational body for school psychologists, The National Association of School Psychologists (NASP), speaks to the importance of interdisciplinary and systems-level roles for school psychologists in their *Practice Model for Comprehensive and Integrated School Psychological Services* (2010). The following practice domains are those that directly align with the roles and competencies promoted in this article: Domain 2: Consultation and Collaboration, Domain 3: Interventions and Instructional Support to Develop Academic Skills, Domain 4: Interventions and Mental Health Services to Develop Social and Life Skills, Domain 5: School-Wide Practices to Promote Learning, Domain 6: Preventive and Responsive Services, Domain 7: Family–School Collaboration Services, and Domain 8: Diversity in Development and Learning.

In conceptualizing the roles and functions of school psychologists, Fagan (2014) highlighted those of *assessor*, *repairer*, *consultant*, and *engineer*. The role of *assessor* pertains to the psychoeducational assessment of children who are potentially in need of support. The role of *repairer* consists of designing and implementing prevention and intervention supports within the individual, group, or family process. The *consultant* role addresses the need for partnership and liaison amongst a range of allied providers in the remediation of academic, social, emotional, or behavioral difficulties. The role of *engineer* reflects the school psychologists' training and positioning as a systems-level change agent through the strategic coordination of multiple service delivery systems. This extension of the consultant role focuses assessment, prevention, and intervention efforts on the ecologies of the numerous systems in which children function.

School psychologists are also well positioned to undertake advocacy roles within the schools and communities in which they practice. For example, school psychologists can describe their roles and functions to other school personnel including teachers, principals, and other administrative decision-makers (or perhaps even policymakers to better fund school psychology positions). They can offer professional development trainings on relevant topic areas pertaining to child development, learning, and behavior. In relating each of these areas of student functioning to the work that various school personnel perform, school psychologists can then describe the wide range of roles and functions that they can perform in conjunction (i.e., through consultation and collaboration) with other providers and school staff.

Due to the shortage of school-based behavioral health providers, it is important for school psychologists to undertake roles in a consultative or partnership-based capacity with other providers in the school system as well as other systems. Shahidullah and Carlson (2014) found that the average case-load size for school psychologists was a little over 1,000 students. Rather than intervening directly with an individual student/family, a consultative or partnership-based approach allows for care or services to be delivered by a specific service delivery system. The school psychologist's role is then to link or coordinate that care with other service delivery systems including the school. This represents a more efficient allocation of school district resources.

### **Training**

Power et al. (1995) coined the term "pediatric school psychologist" to highlight the roles of school psychologists in linking and coordinating a wide range of systems, with a particular focus on the school, to promote optimal child development. The defining feature of a pediatric school psychologist is their use of an ecological framework (Bronfenbrenner, 1979) to address student needs through care coordination across child-serving systems.

Coursework in consultation, biological bases of behavior, child development, and systems-level intervention are typically required in school psychology graduate training programs and are considered necessary for practitioners to have requisite skills in these roles. Coursework that is not typically offered is that which formally covers public health topics demonstrating the role and function of the school as a conduit in which to link multiple systems of intervention, prevention, and health promotion. This coursework would highlight the role of the school in the context of larger health care reform, public policy, epidemiology, family advocacy, as well principles of implementation and prevention science.

Another example of recommended coursework is that which teaches how school psychologists can function effectively as members of an interdisciplinary team that includes primary medical providers. More specifically, training should occur on methods of interprofessional collaboration with attention paid to discipline-specific norms and practices. Opportunities for students to conduct observations in a variety of systems (e.g., hospitals, primary care, subspecialty medical clinics, family home visits, community mental health clinics) may be interwoven into the structured didactic curricula. It has long been recognized that when interdisciplinary training, education, and service delivery occurs early in a professional's training, they are more likely to collaborate across disciplines in the future (Lesse, 1989).

### **Conclusion**

Recognizing that schools sit at the confluence of numerous child-serving systems (i.e., home, community, and healthcare systems), appropriately trained school psychologists are encouraged to partner across systems and with other providers to improve the care of students. By creating interdisciplinary partnerships and linking the systems of care in which children live, it may be more feasible to deliver care to students and families that embodies the ecological framework regarding child development (Bronfenbrenner, 1979). There is a need for advocacy by school psychologists to support these emerging models for promoting children's behavioral health through interdisciplinary and community partnerships (Bradley-Klug & Armstrong, 2014; Power et al., 1995).

### **References**

- Ader, J., Stille, C. J., Keller, D., Miller, B. F., Barr, M. S., & Perrin, J. M. (2015). The medical home and integrated behavioral health: Advancing the policy agenda. *Pediatrics*, *135*, 909–917.

- Anderson, J. (2016). Is an ounce of prevention still worth a pound of cure? Community-based interagency collaboration to enhance student and family well-being. *School Community Journal*, 26, 9–23. Retrieved from <http://www.schoolcommunitynetwork.org/SCJ.aspx>
- Barnard, L., Stevens, T., To, Y. M., Lan, W. Y., & Mulsow, M. (2010). The importance of ADHD subtype classification for educational applications of DSM–5. *Journal of Attention Disorders*, 13, 573–583.
- Barrett, P. M., Farrell, L. J., Ollendick, T. H., & Dadds, M. (2006). Long-term outcomes of an Australian universal prevention trial of anxiety and depression symptoms in children and youth: An evaluation of the FRIENDS Program. *Journal of Clinical Child and Adolescent Psychology*, 35, 403–411.
- Belar, C. D. (2008). Clinical health psychology: A health care specialty in professional psychology. *Professional Psychology: Research and Practice*, 39, 229–233.
- Berwick, D. M., Nolan, T. W., & Whittington, J. (2008). The triple aim: Care, health, and cost. *Health Affairs*, 27, 759–769.
- Boazman, J. (2014). It's time to revamp the parent–teacher conference process: Let's include the child! *Parenting for High Potential*, 4, 10–13.
- Bradley-Klug, K. L., & Armstrong, K. (2014). Preparing school psychologists as partners in integrated health care delivery. *Trainers Forum: Journal of the Trainers of School Psychologists*, 32, 67–83.
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Cambridge, MA: Harvard University Press.
- Browne, A. J., Varcoe, C. M., Wong, S. T., Smye, V. L., Lavoie, J., Littlejohn, D.,...Lennox, S. (2012). Closing the health equity gap: Evidence-based strategies for primary health organizations. *International Journal of Equity in Health*, 11, 59.
- Canter, K. S., & Roberts, M. C. (2012). A systematic and quantitative review of interventions to facilitate school reentry for children with chronic health conditions. *Journal of Pediatric Psychology*, 37, 1065–1075.
- Conway, J., Johnson, B. H., Edgman-Levitan, S., Schlucter, J., Ford, D., Sodomka, P., & Simmons, L. (2006). *Partnering with patients and families to design a patient- and family-centered health care system: A roadmap for the future—A work in progress*. Retrieved from <http://www.ipfcc.org/resources/Roadmap.pdf>
- Croghan, T. W., & Brown, J. D. (2010). *Integrating mental health treatment into the patient-centered medical home*. Retrieved from <https://www.pcmh.ahrq.gov/page/integrating-mental-health-treatment-patient-centered-medical-home>
- Crone, D. A., Hawken, L. S., & Horner, R. H. (2010). *Responding to problem behavior in schools: The Behavior Education Program*. New York, NY: Guilford Press.
- Dawson, P., & Guare, R. (2008). *Smart but scattered: The revolutionary “executive skills” approach to helping kids reach their potential*. New York, NY: Guilford Press.
- Engel, G. L. (1977). The need for a new medical model: A challenge for biomedicine. *Science*, 196, 129–136.
- Engel, G. L. (1980). The clinical application of the biopsychosocial model. *American Journal of Psychiatry*, 137, 535–544.
- Epstein, J. N., Langberg, J. M., Lichtenstein, P. K., Kolb, R., Altaye, M., & Simon, J. O. (2011). Use of a web portal to improve community-based pediatric ADHD care: A cluster randomized trial. *Pediatrics*, 128, e1201–e1208.
- Fagan, T. K. (2014). Trends in the history of school psychology in the United States. In A. Thomas & J. Grimes (Eds.), *Best practices in school psychology* 5 (pp. 383–399). Bethesda, MD: National Association of School Psychologists.

- Fazel, M., Hoagwood, K., Stephan, S., & Ford, T. (2014). Mental health interventions in schools 1: Mental health interventions in schools in high-income countries. *Lancet Psychiatry*, *1*, 377–387.
- Fiechtner, L., Puente, G. C., Sharifi, M., Block, J. P., Price, S., Marshall, R.,...Taveras, E. M. (2017). *A community-resource map to support clinical–community linkages in a randomized controlled trial of childhood obesity, Eastern Massachusetts, 2014–2016*. Retrieved from [https://www.cdc.gov/pcd/issues/2017/16\\_0577.htm](https://www.cdc.gov/pcd/issues/2017/16_0577.htm)
- Gatchel, R. J., & Oordt, M. S. (2003). *Clinical health psychology and primary care: Practical advice and clinical guidance for successful collaboration*. Washington, DC: American Psychological Association.
- Haile Mariam, A., Bradley-Johnson, S., & Johnson, C. M. (2002). Pediatricians' preferences for ADHD information from schools. *School Psychology Review*, *31*, 94–105.
- Halfon, N., Larson, K., Lu, M., Tullis, E., & Russ, S. (2014). Lifecourse health development: Past, present, and future. *Maternal Child Health Journal*, *18*, 344–365.
- Hampton, E., Richardson, J. E., Bostwick, S., Ward, M. J., & Green, C. (2015). The current and ideal state of mental health training: Pediatric resident perspectives. *Teaching and Learning in Medicine*, *27*, 147–154.
- Hoover-Dempsey, K. V., Walker, J. M. T., Sandler, H. M., Whetsel, D., Green, C. L., Wilkins, A. S., & Clossen, K. E. (2005). Why do parents become involved? Research findings and implications. *Elementary School Journal*, *106*, 105–130.
- Horwitz, S. M., Storfer-Isser, A., Kerker, B. D., Szilagyi, M., Garner, A., O'Connor, K. G., & Stein, R. E. (2015). Barriers to the identification and management of psychosocial problems: Changes from 2004 to 2013. *Academic Pediatrics*, *15*, 613–620.
- Jeynes, W. H. (2005). A meta-analysis of the relation of parental involvement of urban elementary school student academic achievement. *Urban Education*, *40*, 237–269.
- Kathol, R. G., Butler, M., McAlpine, D. D., & Kane, R. L. (2010). Barriers to physical and mental condition integrated service delivery. *Psychosomatic Medicine*, *72*, 511–518.
- Kathol, R. G., Melek, S., Bair, B., & Sargent, S. (2008). Financing mental health and substance use disorder care within physical health: A look to the future. *Psychiatric Clinics of North America*, *31*, 11–25.
- Kendall, P. C., & Hedtke, K. (2006). *Cognitive–behavioral therapy for anxious children: Therapist manual* (3rd ed.). Ardmore, PA: Workbook Publishing.
- Kessler, R. (2012). Mental health care treatment initiation when mental health services are incorporated into primary care practice. *Journal of the American Board of Family Medicine*, *25*, 255–259.
- Kim, W. J. (2003). Child and adolescent psychiatry workforce: A critical shortage and national challenge. *Academic Psychiatry*, *27*, 277–282.
- Langberg, J. M. (2011). *Homework, organization, and planning skills (HOPS) interventions*. Bethesda, MD: National Association of School Psychologists.
- Lesse, S. (1989). Editorial: Early joint training for doctoral candidates in the health-care professions. *American Journal of Psychotherapy*, *43*, 155–157.
- Lochman, J. E., Boxmeyer, C., Powell, N., Qu, L., Wells, K., & Windle, M. (2009). Dissemination of the Coping Power Program: Importance of intensity of counselor training. *Journal of Consulting and Clinical Psychology*, *77*, 397–409.
- McMillan, J. A., Land, M., & Leslie, L. K. (2017). Pediatric residency education and the behavioral and mental health crisis. A call to action. *Pediatrics*, *139*, 21–41.
- Mechanic, D. (2002). Removing barriers to care among persons with psychiatric symptoms. *Health Affairs*, *21*, 137–147.



- Minke, K. (2010). *Family–school conferences: A guide for parents and teachers*. Bethesda, MD: National Association of School Psychologists.
- Moonie, S., Sterling, D. A., Figgs, L. W., & Castro, M. (2008). The relationship between school absence, academic performance, and asthma status. *Journal of School Health, 78*, 140–148.
- Murphey, D., Stratford, B., Gooze, R., Bringewatt, P., Cooper, M., Carney, R., & Rojas, A. (2014). *Policy brief: Are the children well? A model and recommendations for promoting the mental wellness of the nation's young people*. Retrieved from [http://www.rwjf.org/content/dam/farm/reports/issue\\_briefs/2014/rwjf414424](http://www.rwjf.org/content/dam/farm/reports/issue_briefs/2014/rwjf414424)
- National Association of School Psychologists (NASP). (2010). *Model for comprehensive and integrated school psychological services*. Retrieved from [http://www.nasponline.org/standards/2010standards/2\\_PracticeModel.pdf](http://www.nasponline.org/standards/2010standards/2_PracticeModel.pdf)
- Pelham, W. E., Jr., Fabiano, G. A., Waxmonsky, J. G., Greiner, A. R., Gnagy, E. M., Pelham, W. E., III, ... Hart, K. (2016). Treatment sequencing for childhood ADHD: A multiple-randomization study of adaptive medication and behavioral interventions. *Journal of Clinical Child & Adolescent Psychology, 45*, 396–415.
- Pelham, W. E., & Smith, B. H. (2000). Prediction and measurement of individual responses to Ritalin by children and adolescents with ADHD. In L. Greenhill & B. P. Osman (Eds.), *Ritalin: Theory and practice* (2nd ed., pp. 193–217). New York, NY: Mary Ann Liebert.
- Perrin, J. M., Bloom, S. R., & Gortmaker, S. L. (2007). The increase of childhood chronic conditions in the United States. *JAMA, 297*, 2755–2759.
- Pires, S. A. (2013). *Customizing health homes for children with serious behavioral health challenges*. Retrieved from [http://www.chcs.org/media/Customizing\\_Health\\_Homes\\_for\\_Children\\_with\\_Serious\\_BH\\_Challenges\\_-\\_SPires.pdf](http://www.chcs.org/media/Customizing_Health_Homes_for_Children_with_Serious_BH_Challenges_-_SPires.pdf)
- Polaha, J., Dalton, W. T., III, & Allen, S. (2011). The prevalence of psychosocial concerns in pediatric primary care serving rural children. *Journal of Pediatric Psychology Special Edition in Rural Children's Health, 36*, 652–660.
- Power, T. J., DuPaul, G. J., Shapiro, E. S., & Parrish, J. M. (1995). Pediatric school psychology: The emergence of a sub-specialty. *School Psychology Review, 24*, 244–257.
- Power, T. J., Shapiro, E. S., & DuPaul, G. J. (2003). Preparing psychologists to link systems of care in managing and preventing children's health problems. *Journal of Pediatric Psychology, 28*, 147–155.
- Rowan, K., McAlpine, D., & Blewett, L. (2014). Access to cost barriers to mental health care by insurance status, 1999–2010. *Health Affairs, 32*, 1723–1730.
- Shields, J. D., Heron, T. E., Rubenstein, C. L., & Katz, E. R. (1995). The eco-triadic model of educational consultation for students with cancer. *Education and Treatment of Children, 18*, 184–200.
- Shahidullah, J. D., & Carlson, J. S. (2014). Survey of nationally certified school psychologists' roles and training in psychopharmacology. *Psychology in the Schools, 51*, 705–721.
- Shahidullah, J. D., Kettlewell, P. W., DeHart, K. A., Rooney, K., Signore, A., Ladd, I., ... Larson, S. L. (2017). An empirical approach to assessing pediatric residents' attitudes, knowledge, and skills in primary care behavioral health. *International Journal of Health Sciences Education, 4*, 1–14.
- Shahidullah, J. D., Voris, D. S. T., Hicks, T. B., & Carlson, J. S. (2014). The importance and need for implementing school-based supports as adjuncts to pharmacotherapy for students diagnosed with ADHD. *Research and Practice in the Schools, 2*, 31–40.
- Shepard, J. M., Shahidullah, J. D., & Carlson, J. S. (2013). *Counseling students in levels 2 and 3: A PBIS/RTI guide*. Thousand Oaks, CA: Sage.

- Shim, R., & Rust, G. (2013). Primary care, behavioral health, and public health: Partners in reducing mental health stigma. *American Journal of Public Health, 103*, 774–776.
- Swick, D., & Powers, J. D. (2018). Increasing access to care by delivering mental health services in schools: The school-based support program. *School Community Journal, 28*(1), 129–144. Retrieved from <http://www.schoolcommunitynetwork.org/SCJ.aspx>
- Syed, S. T., Gerber, B. S., & Sharp, L. K. (2014). Traveling towards disease: Transportation barriers to health care access. *Journal of Community Health, 38*, 976–993.
- Thomas, C. R., & Holzer, C. E. (2006). The continuing shortage of child and adolescent psychiatrists. *Journal of the American Academy of Child & Adolescent Psychiatry, 45*, 1023–1031.
- Waters, E., Gibbs, L., Tadic, M., Ukoumunne, O. C., Magarey, A., Okely, A. D.,...Gold, L. (2017). Cluster randomized trial of a school–community child health promotion and obesity prevention intervention: Findings from the evaluation of Fun ‘n Healthy in Moreland! *BMC Public Health, 18*, 181–186.
- Yarnall, K. S., Pollak, K. I., Ostbye, T., Krause, K. M., & Michener, J. L. (2003). Primary care: Is there enough time for prevention? *American Journal of Public Health, 93*, 635–641.

Jeffrey D. Shahidullah is an assistant professor of psychiatry at the University of Texas at Austin Dell Medical School. He also practices as a pediatric psychologist at Dell Children’s Medical Center in Austin, TX within a developmental and behavioral pediatrics clinic. Dr. Shahidullah's clinical, research, and training interests pertain to integrating evidence-based behavioral health services within the two de facto child-serving systems—schools and primary care. Correspondence concerning this article may be addressed to Jeffrey D. Shahidullah, PhD, Department of Psychiatry, The University of Texas at Austin Dell Medical School, Health Discovery Building (HDB), 1601 Trinity St., Stop Z0600, HDB 4.222.28, Austin, TX 78712-1873, or email [Jeff.Shahidullah@austin.utexas.edu](mailto:Jeff.Shahidullah@austin.utexas.edu)