Chapter Four

Professional Training and Workforce Development in Systems of Care

Topical Discussion Overview
Human Services Workforce Within a System of Care: Issues, Opportunities and Challenges

Carol MacKinnon-Lewis
Joan Dodge
Sybil Goldman
Robert M. Friedman

This forum provided an opportunity for dialogue about the current state of education and training for the human services workforce serving children and adolescents with mental health needs and co-occurring substance abuse and mental health disorders within community-based systems of care, across the public child-service systems. A broad stakeholder group representing child-serving agencies, universities, funding agencies, and family organizations participated in discussing critical issues of workforce education and training, both at the pre-service and in-service levels. In addition, the group was made aware of two national efforts that are currently underway to help address this issue of workforce training within systems of care for children and their families.

The first effort pertains to a project funded by the Substance Abuse and Mental Health Services Administration (SAMHSA), in which the Georgetown University National Technical Assistance Center for Children's Mental Health and the Research and Training Center for Children's Mental Health at the University of South Florida are collaborating to catalogue resources (training curricula and web-based trainings) developed within federal child-serving agencies or their funded training centers to teach new knowledge, attitudes, and skills particularly around the emerging field of evidence-based practices within systems of care The second effort is an initiative by the Research and Training Center for Children's Mental Health at the University of South Florida in which a web-based access point and accompanying listserv for university-based training programs and curricula has been established to promote communication among faculty interested in systems of care. These two national efforts are seen as a starting point for interesting other stakeholders at the state and community levels to address human service delivery workforce issues within systems of care for children and families.

Stimulus questions were posed to the stakeholder group that attended this forum as a way to begin a dialogue on this topic area. Questions included the following:

- What trends have you noticed impacting the human services delivery workforce for children with or at risk of behavioral health needs and their families?
- What are some specific strategies that could be implemented at federal, state and/or local levels to ensure a workforce that has the skills, knowledge, and attitudes necessary to provide services reflective of the major values and principles in the children's mental health field and based on current research findings?
- How can the children's mental health field ensure that pre-service education is relevant in preparing the human services workforce for roles in public community-based systems of care?
- How can the children's mental health field ensure that in-service training is relevant in preparing the human services workforce for roles in public community-based systems of care?
- How might we partner with other child-serving systems to train personnel in key settings such as schools and primary care practitioners' offices to recognize and respond to mental health needs?
- How can we disseminate information about evidence-based practices and provide training opportunities for practitioners to become skilled in these practices?
- How can we ensure that services and supports are culturally competent for ethnic and minority youth and their families and are there some concrete strategies for recruitment of persons from different cultures and races?

Background and Context for Dialogue

The crisis that exists in the children's mental health workforce, both in terms of a shortage of providers and the need for training in new models of care, was underscored in the Surgeon General's report on Mental Health (USDHHS, 1999). Advances in new service delivery models and research in treatment effectiveness have outpaced preparation of the human service delivery workforce (Huang, Macbeth, Dodge, & Jacobstein, 2004 in draft). The critical need to address workforce training issues is echoed in the 2003 President's New Freedom Commission on Mental Health Report, "Achieving the Promise: Transforming Mental Health Care in America." The report calls for significant changes in both clinical practice models and service organization to improve access, quality, and outcomes in mental health care, recommendations that will be challenging, if not impossible to achieve, without a prepared workforce.

Stakeholder Discussion on Trends and Strategies

Initial discussion by the stakeholder group pertained to trends that have contributed to this critical shortage in the human services delivery workforce for children with behavioral health needs and their families. High turnover and the fluid nature of the workforce were identified as significant problems. For example, states have great difficulty in recruiting and retaining child welfare workers; this is particularly the case in rural areas. Nationally, the turnover rate is between 30 and 40 percent annually (GAO, 2003). Moreover, multiple child-serving agencies (e.g., schools, juvenile justice, primary health care, child welfare) are frequently requested to identify and respond therapeutically to children with behavioral health disorders; yet workers in these child-serving agencies are often not recognized or trained as part of the mental health workforce, nor are the particular settings of these systems equipped to provide mental health treatment services. Thus, education and training of the workforce are clearly not defined by discipline or service setting, which contributes to the complexity of the task before us.

Several emerging demographic trends were identified as having an impact on the human services delivery workforce. The ethnic and cultural composition of the population served has changed dramatically in this country. Not only has there been significant growth in the total youth population of children of color, it is projected that this trend will continue over the next decade. There is a corresponding need for a culturally competent workforce; yet there is a critical under-representation of people of color in the mental health workforce as well as a lack of workers who have adequate knowledge, skills, and attitudes relative to cultural and linguistic competence.

Other demographic trends that have had an impact on the composition of today's mental health providers and the need for increased training are (1) increased feminization of the workforce, (2) different norms and values in how generations approach work, with work in the behavioral health fields less valued among the younger generation, (3) a move toward privatization and outsourcing of services, and (4) the aging out of the existing workforce.

The crisis that exists in the children's mental health workforce is partially attributable to the shortage and retention of workers, but also to dramatic shifts in the values and principles underlying how services are provided for children and families, due in part to the systems of care and family advocacy movements (Huang, 2004). It has been argued that today's pre-service academic training of mental health workers bears little resemblance to the current demands and expectations of actual service delivery, particularly within community based systems of care (Meyers, Kaufman, & Goldman, 1999). Moreover, these shifts have resulted in the need to retrain and retool existing providers, who are expected to perform roles and responsibilities for which they have not been explicitly trained. A number of strategies were suggested by the forum's participants for closing the workforce gap, targeted at both the pre-service and in-service levels, especially strategies involving families in training.

The important role that families play not only as consumers, but as partners in the design and provision of mental health services and supports, was emphasized in the New Freedom Commission report,"*Achieving the Promise: Transforming Mental Health Care in America*" and was a focus of the discussion for this forum There has been a dramatic shift in families' roles, from being seen as simply recipients of care to genuine partners in the service system, including policy and treatment planning to the development and delivery of services to their children (Huang et al., 2004). It was stressed that this shift in roles and power must be incorporated into professional training programs by (1) including families in the design of training as well as training itself, (2) jointly training family members and professionals, (3) providing stipends and other strategies for engaging and supporting family members in training, (4) creating more "train the trainer" programs, (5) providing college credit/CEUs/certificate opportunities for families who are trainers/trainees, (6) establishing coaching/mentoring programs, and (7) establishing standard training procedures and curricula whereby families and providers can work together.

At the pre-service level, several strategies were discussed and recommendations developed including the following: (1) universities to redesign existing course content to enhance the competencies (knowledge, skills, and attitudes) necessary to provide mental health interventions consistent with current values and principles of care as well as those supported by the latest evidence based practices; (2) universities to cut across disciplinary boundaries and offer interdisciplinary training/curricula (e.g., mental health, substance abuse, developmental disabilities) with accompanying internships specifically designed to translate theory and research into effective practice across settings; (3) universities to recruit culturally diverse students and students interested in working with diverse populations; thus, hopefully, better meeting the needs of families being served in community settings; (4) national and state organizations to provide leadership in reviewing credentialing standards across professional disciplines, emphasizing the importance of cross-disciplinary training, and newer technologies needed for implementing community based systems of care; (5) high schools and community colleges to develop strategies for preparing workforce not attending college, particularly for workers such as behavioral aides; and (6) state agencies to engage key stakeholders in reviewing and adapting their licensing guidelines/examination process across core competencies for training professionals and paraprofessionals across professional disciplines as well as provide in-service training opportunities to human service workers across the child-serving agencies based on newly established core competencies.

Additional suggestions were offered for training at the in-service level. The primary focus was on ways in which evidence on comprehensive interventions that have a solid research base can be translated into actual practice in the service arena. There is a discrepancy between the knowledge base and the development of new skills utilizing that knowledge. Training programs will need to build the capacity to teach these new skills, possibly in "bite-sized pieces," focusing on the fundamental components. Different strategies must be designed to change practitioner behavior for different disciplines (Huang, 2004). However, irrespective of discipline and setting, an emphasis on basic communication, observation, and facilitation skills were deemed critical. It was also suggested that cross training between systems/agencies would be important.

Conclusion

This forum provided an exciting opportunity to hear from a group of stakeholders who recognize the importance of transforming pre-service and in-service training and education to develop a qualified and competent workforce; thus, ensuring better outcomes for children with mental health and co-occurring needs and their families. It is anticipated that the innovative strategies suggested by the group will be shared with interested others and steps can be taken to design ways to implement them at various levels.

References

Huang, L., Macbeth, G., Dodge, J., & Jacobstein, D. (2004). Transforming the workforce in children's mental health. Manuscript submitted for publication.

Meyers, J., Kaufman, M., & Goldman, S. (1999). Promising practices: Training strategies for serving children with serious emotional disturbance and their families in a system of care. *Systems of Care: Promising Practices in Children's Mental Health*, 1998 Series, Vol. V. Washington, D. C.: Center for Effective Collaboration and Practice, American Institutes for Research.

New Freedom Commission on Mental Health (2003). *Achieving the promise: Transforming mental health care in America: Final report.* DHHS Pub.No.SMA 03-3832. Rockville, MD

U. S. Department of Health and Human Services. (1999). *Mental health: A report of the Surgeon General.* Rockville, MD: U. S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, National Institutes of Health, National Institute of Mental Health.

CONTRIBUTING AUTHORS

Carol MacKinnon-Lewis, Ph.D.
Department of Child & Family Studies, Louis de la Parte Florida Mental Health Institute, University of South Florida, 13301 Bruce B. Downs Blvd., Tampa, FL 33612, 813-974-2075, fax: 813-974-6257, email: CMackinnon@fmhi.usf.edu

Joan Dodge, Ph.D.
Senior Policy Associate, Georgetown University National Technical Assistance Center for Children's Mental Health, 3307 M Street, NW Suite 401, Washington DC 20007, 202-687-5054, fax: 202-687-1954, e-mail: dodgej@georgetown.edu

Sybil Goldman, M.S.W.
Senior Advisor on Children, Substance Abuse and Mental Health Services Administration,(SAMHSA), 1 Choke Cherry, Room 8-1051 Rockville MD 20850, 240-276-2014, fax: 240-276-2021; e-mail: sybil.goldman@samhsa.gov

Robert M. Friedman, Ph.D.
Chair and Professor, Department of Child & Family Studies, Louis de la Parte, Florida Mental Health Institute, University of South Florida, 13301 Bruce B. Downs Blvd., Tampa, FL 33612, 813-974-4640, fax: 813-974-7743, email: friedman@fmhi.usf.edu

Topical Discussion

Graduate Training in Parent Professional Partnerships: Training Model that Impacts Children's Mental Health

Susan McCammon
Jeannie Golden
Shari Ballard-Krishnan
Johanna McDonald

Acknowledgments: The presenters acknowledge the work of Holly Colton, Scott Cross, Elisabeth Franklin, and the parents and children whose accomplishments are summarized.

Introduction

Parents of children with serious emotional disturbance have traditionally been involved in their children's services as service recipients (individual or family therapy) or targets for change (parent training; Friesen & Stephens, 1998). A more contemporary model involves parents as partners in the service planning and delivery process (Osher & Osher, 2002). However, despite enthusiasm toward a partnership model, its application in practice remains limited (Alexander & Dore, 1999). A parent participant in the discussion group related her discrepant experiences in seeking assistance for her two children, one served in the mental health system, and one in the developmental disabilities care system. While both systems focused on family issues and parenting, the developmental disabilities system response included an offer of respite, parent support, and skill building for the child. However, in the mental health system she was not considered a part of the treatment team, and the office-based therapy came across as critical and blaming. In order to facilitate a paradigm and practice shift from a provider-driven model toward a partnership model in mental heath services, one strategy is the development of expanded roles for parents, including roles as service providers and as educators for students preparing for careers in the helping professions (McCammon, Spence, & Friesen, 2001)." The approaches necessary to facilitate a paradigm and practice shift from a provider-driven model toward a partnership model include development of expanded roles for parents, including roles as service providers and as educators for students preparing for careers in the helping professions (McCammon, Spencer, & Friesen, 2001).

This topical discussion centered on implementation of an applied behavior analysis (ABA) focus within a university graduate psychology training program that incorporates a parent-professional partnership model. The university participants (two professors and a graduate of the program) discussed their experiences teaching graduate students in a clinical psychology program with an ABA track to partner with parents. The theoretical framework of ABA was described in the context of treatment settings and parental role. Two case study examples summarized below illustrate how the program's parent-professional partnerships were related to real-world improvement in child behaviors.

ABA approach facilitates parent-professional partnerships

In the behavioral model utilized within this training program, individuals with knowledge of the child, and who spend the majority of the time with the child (i.e. the parents), are viewed as being in the best position to help the child. With in-home training and support, the parent becomes the expert who makes the greatest contribution to the child's learning and acquisition of skills. Because the behavioral model is "skill-based" rather than "illness-based," the emphasis is on giving everyone better skills to work with the child–parents, other family members, therapists–rather than placing blame. The child is not seen as having an illness that is someone's fault, but rather as having individualized learning and behavioral needs that require everyone working with the child to use specialized techniques.

Many professionals who subscribe to other theoretical models rely on expert knowledge of children in general, or children with a particular diagnosis. This often translates into interpretation of family dynamics and a child's motives, with generic advice for caregivers. Professionals practicing non-behavioral office based therapies do not typically provide treatment in the child's home and classroom, or assist the parent with the child's everyday behaviors and teaching the child new skills in the natural setting, where behaviors occur and skills are used. In contrast, the behavioral professional views the child's home and school environments as the most important places for learning skills and altering behaviors. Therefore, they must work with all the significant others in the child's life as co-therapists and fellow experts on a team.

Partnership affects outcomes

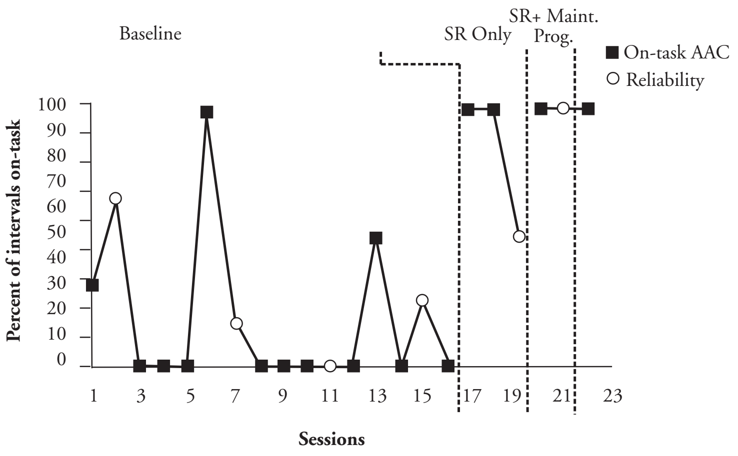
Case study 1: An eleven-year-old girl with cerebral palsy was exhibiting depressive symptoms (crying, trying to choke herself) and behavioral disruptions (grabbing, arguing, destruction of property, noncompliance, and temper tantrums) at home and in her special education classroom. The parents believed the child had been inappropriately tested and incorrectly placed in a special education class. The consulting professor initiated retesting for the child using the Test of Nonverbal Intelligence. The parents were correct and the graduate student and professor assisted the parents in advocating for the child to be placed in a regular classroom setting. In this classroom, however, the child exhibited significant behavioral and learning problems, secondary to her disability, as well as severe deficits in communication. Again, parent professional collaboration resulted in implementing a behavioral support program at home and in the classroom for the child.

The behavioral support program consisted of two interventions applied in a multiple baseline design across individuals (morning assistant, afternoon assistant and mother) with changing conditions (reinforcement only, preprogramming only, and the two treatments combined). The reinforcement treatment consisted of verbal praise, tokens, preferred tangibles, response cost and time-out. The preprogramming treatment involved preprogramming an augmentative alternative communication (AAC) device with academic material for class participation. Two graduate students developed the program, which was implemented by assistants and the child's mother.

Figure 1 shows the effect of the interventions on the child's behavior of on-task communication while doing homework with her mother. Measurement of on-task communication revealed a low of 18% of intervals during baseline. The reinforcement treatment resulted in a significant increase in on-task communication (83%). However, both treatments combined provided the greatest increase in on-task communication (100%). During summer tutoring sessions with her mother, one maintenance data point revealed on-task communication of 100%.

Perhaps more important, was the fact that this child was able to remain in the regular class setting as the result of the collaborative efforts between the parent and professional who worked with the child. Additionally, graduate students directly observed and participated in this collaboration as part of their professional training.

Figure 1
Percent of Intervals of On-Task Augmentative Alternative Communication (AAC) Across Individuals



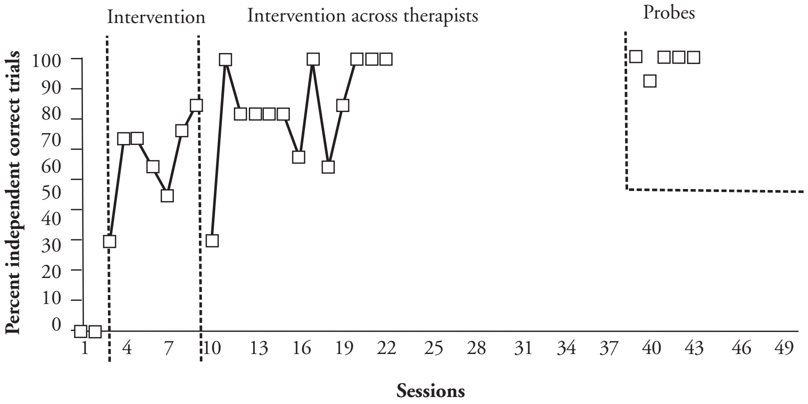
Case study 2: A mother of a child with autism collaborated with graduate students in teaching her son to engage in a mini-conversation (see Figure 2). Results indicated that the child, after having a baseline performance level of 0 correct responses, rose to 80% accuracy during intervention, 100% accuracy with a variety of therapists, and 100% accuracy in follow-up generalization probes. More importantly, however, the collaborative relationship between the mother of this child, the professor, the graduate student and the teacher in the classroom permitted this child with autism to function successfully in a regular first grade classroom.

Parents of children with autism have traditionally been blamed for their child's disorder or told that they would need to accept the prognosis of having a child with a lifelong disability. Many of these parents have decided to seek their own information and resources and become the advocate for their child. Our training program offers experience and training for graduate students to work collaboratively with these parents; they receive training, provide therapy, and advocate for the child side-by-side as partners. The professional, a supervising professor from the university, has an ongoing collaborative relationship with parents of children with autism. As a part of their internship, the students work with these parents and their children in their homes. In addition to classroom instruction, the graduate students observe collaborative relationships and get first-hand experience working in partnership with parents.

Where do we go from here?

Parent participants in the group commented that similar partnerships would have been beneficial to their children. A web site for locating board certified behavior analysts was shared with the group: www.BACB.com. Providing university graduate training for future professionals in applied behavior analysis and parent-professional collaboration produces a win-win-win situation. The university wins because they provide a program that prepares students for functioning as professionals in the real world, the students win because they receive training they can use in their professional career, but, most importantly, the families are helped to provide the best possible outcome for their children.

Figure 2
Percent of Correct, Independent Trials During Baseline and the Teaching of Conversation



References

Alexander, B. L., & Dore, M. M. (1999). Making the parents as partners principle a reality: The role of the alliance. *Journal of Child and Family Studies, 8,* 255- 270.

Friesen, B. J., & Stephens, B. (1998). Expanding family roles in the system of care: Research and practice. In M. H. Epstein, K. Kutash, & A. Duchnowski (Eds.). *Outcomes for children and youth with emotional and behavioral disorders and their families: Programs and evaluation best practices,* (pp. 231-259). Austin, TX: PRO-Ed.

McCammon, S. L., Spencer, S. A., & Friesen, B. J. (2001). Promoting family empowerment through multiple roles. In D.A. Dosser, Jr., D. Handron, S L.

McCammon, & J. Y. Powell (Eds). *Child mental health: Exploring systems of care in the new millennium.* Haworth: New York.

Osher, T. W., & Osher, D. M. (2002). The paradigm shift to true collaboration with families. *Journal of Child and Family Studies, 11,* 47-60.

CONTRIBUTING AUTHORS

Susan McCammon, Ph.D.
Department of Psychology, East Carolina University, Greenville, NC 27858,
252-328-6357, fax: 252-328-6283, e-mail: mccammons@mailecu.edu

Jeannie Golden, Ph.D.
Department of Psychology, East Carolina University, Greenville, NC 27858,
252-328-6202, fax: 252-328-6283, e-mail: goldenj@mail.ecu.edu

Shari Ballard-Krishnan
Parent Advocate, 1550 Brandywine, Bloomfield Hills, MI 48304, 248-852-2891,
e-mail: sharikrish@aol.com

Johanna McDonald, M.A.
Director, Positive Changes, LLC 1634 Ferris Ave. Orlando, FL 32803,
813-737-6069, e-mail: johannagartz@aol.com

Adequacy of Staffing in Residential Mental Health Programs for Youth in the U.S.

Lynn A. Warner
Kathleen J. Pottick
Vanessa Tápanes

Acknowledgments: This research was funded by the Annie E. Casey Foundation (Grant# 201.0034), by the National Institute of Mental Health (Grant# MH 58908) for support of an undergraduate minority research intern (Project L/Earn), and in collaboration with the Center for Mental Health Services, Department of Health and Human Services, Substance Abuse and Mental Health Services Administration.

Introduction

Little is known about the internal organizational operations of residential mental health care settings (RCSs) in the U.S., especially those that serve youth. There are, however, substantial concerns about the cost-effectiveness of RCSs for children and adolescents (Holden et al., 2002), and little evidence to support that treatment in RCSs contributes to better outcomes for clients (Kutash & Rivera, 1996). Recent research from national mental health services data show that youth in RCSs have severe and complex problems: nearly half are victims of abuse or neglect, nearly half have more than one psychiatric diagnosis, and more than half are severely impaired based on Global Assessment of Functioning (GAF) scores of 50 or below. This level of impairment is the same for youth in RCSs as for youth in inpatient settings (Warner & Pottick, 2003). Yet, because of their status in out-of-home placements, youth in RCSs are at risk for multiple disruptions in their living situations, which may further compromise their ability to transition successfully to adult roles. To effectively enhance the life chances of youth in residential care, information is needed on their characteristics and an organizations' capacity to serve them.

Current information about the population of youth in residential care and organizational features of RCSs is limited for at least two reasons. First, a small proportion of the youth mental health service population is in residential mental health care (5%; Pottick, Warner, Henderson, Milazzo-Sayre, & Mandersheid, 2004), so more resources have been devoted to examining inpatient and outpatient care. Second, RCSs are directed by child welfare and juvenile justice systems, as well as the mental health system, making accountability piecemeal and problematic.

Staff expertise and availability, and the extent of compatibility between staff expertise and client need, are key components of organizational capacity. The most recently published information available from the Center for Mental Health Services (CMHS) provides an overview of the availability of services, volume of services, staffing and finances of adult- and youth-serving mental health organizations in 1994, and describes trends that have occurred since the late 1960s (Manderscheid et al., 2001). The limited data on RCSs for youth show that *other mental health workers* (persons with less than a Bachelor's degree) comprised the majority of staff (75%); 15% were professional care providers (e.g., psychiatrists, psychologists, social workers, registered nurses); and 10% were administrative/support staff. Overall, the data confirm that large-scale changes in mental health services began in the 1990s, with a notable substitution of higher cost professionals with staff from less expensive labor categories.

We use data from a nationally representative sample of mental health facilities in 1998 to provide updated information about staffing patterns. We additionally provide updated estimates of the number of hours worked by professional mental health staff and examine issues of adequacy of staffing in RCSs for youth by evaluating the deployment of professional mental health staff as a function of setting size and clinical case mix.

Method

In 1998 CMHS's Survey and Analysis Branch fielded a survey of mental health organizations in collaboration with national associations representing state mental health programs, hospitals and psychiatric health care systems. The study, described in detail elsewhere (Manderscheid et al., 2001) is known as the 'SMHO' (the acronym for the Survey of Mental Health Organizations and General Hospital Mental Health Services, and Managed Behavioral Health Care Organizations). It replaced the IMHO/GHMHS (i.e., Inventory of Mental Health Organizations and General Hospital Mental Health Services) used in previous CMHS surveys of mental health organizations. The data set includes limited information on the universe of all specialty mental health organizations and separate psychiatric services of non-Federal general hospitals ($N = 5{,}745$), and detailed information on a representative sample of those organizations ($n = 875$). It does not include organizations that are under the jurisdiction of juvenile justice or child welfare departments. A total of 355 RCSs responded to the 1998 survey. Based on reported ages of clients, we identified 74 facilities that serve only youth under the age of 18 (weighted $n = 311$) that are the focus of the current study.

Each organization reported the number of staff, the total weekly hours for staff, the number of interns/trainees, and the total weekly hours for interns/trainees for 15 separate personnel categories. The survey instrument instructions identified the sample week as September 13-19, 1998, and stated not to indicate full-time equivalents but total number of personnel in each category, and total hours worked by those personnel. We created a category that consisted of all mental health professionals with a B.A. and above, including: psychiatrists, social workers, psychologists, and other mental health professionals (e.g., activity therapists, other counselors).

We created variables to reflect number of weekly hours worked by mental health professional staff, and with data about the number of youth in each setting we calculated weekly mental health professional hours per client. The number of youth in RCSs ranged from 1 to 116, with a mean of 18.8 and a median of 6. Because average hours per client across all facilities might obscure differences in staff time devoted to youth in facilities with small versus large populations, we created a three-level facility size variable: 39 facilities (12.5%) had 5 or fewer youth; 81 (26.0%) had between 6 and 10 youth, and 191 (61.4%) had more than 10 youth. Diagnostic case mix information was based on the organizations' reports of the number of clients in each of seven diagnostic groups: schizophrenia and other psychoses, mood disorders, other mental health diagnoses, mental retardation/developmental disability, alcohol/drug abuse, non-mental health diagnoses, and unknown/undiagnosed. Due to the small number of youths in diagnostic categories we combined other mental health diagnoses, mental retardation/developmental disability, and alcohol/drug abuse into one category. A separate variable captured the number of children and adolescents with serious emotional disturbance according to the organization's definition.

Results are based on frequency distributions, analyses of variance, and post hoc Scheffé tests. All analyses were weighted. CMHS calculated weights to inflate sample counts to national estimates.

Results

Most (7,675) of the youth in RCSs were in facilities with 10 or more clients, 511 youth were in medium size RCSs, and 71 were in small size RCSs. Figure 1 displays information on clinical case mix by setting size. Overall, most (54%) of the youth had a diagnosis other than mood disorder (39%) and schizophrenia (7%). Diagnostic case mix is similar across setting sizes with the exception of significantly more youth with schizophrenia (17%) in medium size settings, $F(2) = 14.44$, $p \leq 0.0001$. When case mix is examined on the basis of the proportion of youth with serious emotional disturbance, substantial differences by setting size are apparent. There were significantly higher proportions of youth diagnosed with serious emotional disturbance in medium (100%) and large (93%) settings compared to small settings (57%), $F(2) = 15.13$, $p \leq 0.0001$.

The mean weekly hours worked by mental health professionals, and mean weekly professional staff hours per youth are presented in Figure 2 by size of RCS, and for total RCSs. There are more mental health professionals working in larger settings, but not statistically significantly more. Weekly hours per professional ranged from 33.01 in small RCSs to 37.80 in large RCSs suggesting that most professionals work full time schedules in all size settings. However, weekly mental health professional hours spent per youth are substantially different across RCSs. Each youth in a small setting receives, on average, 25.5

hours of care from a mental health professional, whereas each youth in a large setting receives, on average, 1.4 hours of care, $F(2) = 79.57, p \leq 0.0001$.

Discussion

The high proportion of youth with serious emotional disturbance in RCSs confirms that this client population is in need of intensive psychiatric and psychosocial services. To be effective in RCSs, the work force requires specialized education on the treatment needs of youth who are seriously emotionally disturbed, and who have fragile connections to family settings.

Although the data available do not provide insight into the quality of care delivered by mental health professionals in RCSs, the marked disparity between small and large settings in the amount of time spent by mental health professionals suggests there are inequities in service delivery. On average, significantly fewer hours of care were provided in RCSs with more children, but more of the youth in large RCSs were seriously emotionally disturbed than youth in smaller size RCSs. To address these inequities, larger size RCSs must have sufficient resources to hire and retain clinicians with advanced degrees, otherwise staff 'burnout' and turnover are likely to be chronic problems. In addition to a bigger workforce, inequities

Figure 1
Clinical Case Mix in Residential Care Settings by Setting Size

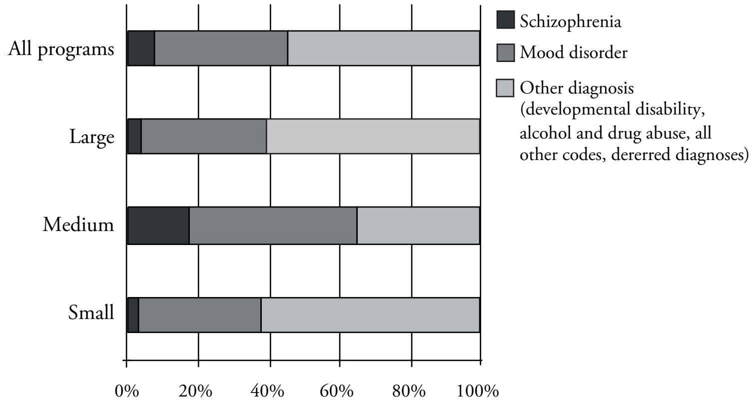
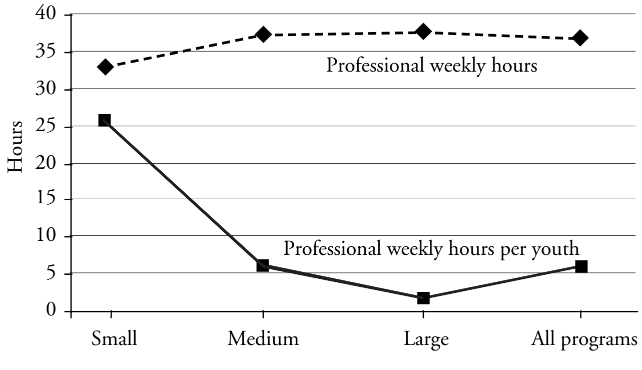


Figure 2
Mental Health Professional Weekly Hours
and Weekly Hours Per Youth in Residential Care Settings



in service delivery could possibly be addressed by staff functioning. For example, training programs may choose to incorporate classes or coursework that prepare master's level counselors and social workers to work with and oversee personnel who have not received comparable specialized education, but who collaborate in the delivery of care in resource-deprived settings.

References

Holden, E. W., O'Connell, S. R., Connor, T., Brannan, A. M., Foster, E. M., Blau, G., & Panciera, H. (2002). Evaluation of the Connecticut Title IV-E Waiver Program: Assessing the effectiveness, implementation fidelity, and costs/benefits of a continuum of care. *Children and Youth Services Review, 24*, 409-430.

Kutash, K., & Rivera, V.R. (1996). *What works in children's mental health services: Uncovering answers to critical questions*. Baltimore, MD: Paul H. Brookes Publishing Company.

Manderscheid, R.W., Atay, J. E., Hernández-Cartagena, M. del R., Edmond, P. Y., Male, A., Parker, A. C. E., & Zhang, H. (2001). Highlights of organized mental health services in 1998 and major national and state trends. In R.W. Manderscheid and M. J. Henderson, (Eds.), *Mental Health, United States, 2000*. DHHS Pub No. (SMA) 01-3537, pp. 135-171. Washington, D.C.: Supt. of Docs., Govt. Print. Off.

Pottick, K. J., Warner, L. A., Isaacs, M., Henderson, M.J., Milazzo-Sayre, L., & Manderscheid, R.W. (2004). Children and adolescents treated in specialty mental health care programs in the United States: 1986 and 1997. In R.W. Manderscheid and M. J. Henderson, (Eds.), *Mental Health, United States, 2002*. DHHS Pub No. (SMA) 3938, pp. 314-326. Washington, D.C.: Supt. of Docs., Govt. Print. Off.

Warner, L. A., & Pottick, K. J. (Summer, 2003). *Nearly 66,000 Youth Live in U.S. Mental Health Programs. Latest Findings in Children's Mental Health*. Policy report submitted to the Annie E. Casey Foundation. New Brunswick, NJ: Institute for Health, Health Care Policy, and Aging Research, Rutgers University. Vol.2 (1).

CONTRIBUTING AUTHORS

Lynn A. Warner, Ph.D.
Assistant Professor, Rutgers University, School of Social Work, 536 George Street, New Brunswick, NJ 08901, 732-932-5064, fax: 732-932-8181, e-mail: lywarner@rci.rutgers.edu

Kathleen J. Pottick, Ph.D.
Professor, Rutgers University, Institute for Health, Health Care Policy, and Aging Research and School of Social Work; 30 College Avenue, New Brunswick, NJ 08901, 732-932-6582, fax: 732-932-6872, e-mail: pottick@rci.rutgers.edu

Vanessa Tápanes
Project L/EARN NIMH Research Intern, Douglass College, Rutgers University, Institute for Health, Health Care Policy, and Aging Research; 30 College Avenue, New Brunswick, NJ 08901, e-mail: vtapanes@hotmail.com

Perspectives of Parents, Case Managers and Pediatricians on Children and Psychopharmacology: Results From Focus Groups

Jennifer Taub
Matthew Johnsen
Christina Breault

Introduction

Recent literature shows that there have been increases in prescriptions of all classes of psychoactive medications for children of all ages in recent years (Zito et al., 1999; Zito et al., 2000; Zito & Safer 2001). Our review of pharmacy claims indicates that similar trends exist for the Massachusetts Medicaid population; psychoactive medication prescriptions for those under 19 years of age rose from 2.9% in 1994, to 6.5% in 2000 and 8% in 2002. Nearly one-third of all psychoactive medications prescribed in 2001 to children were prescribed by either pediatricians (28%) or family practitioners (4%). As many as 13% of adolescents in the Medicaid population received a prescription for psychoactive medication in 2001.

The high prevalence of prescriptions for psychoactive medications currently written by physicians without specific psychiatric training leaves many unanswered questions about the experiences of providers, care managers, and caregivers of children with serious emotional disorders (SED). The current study was undertaken to learn more about the experiences of these different groups as they face challenges in with treating children and adolescents with behavioral and psychiatric disorders who are in need of medication.

Method

Subjects. For this study we conducted three focus groups, each lasting approximately 90 minutes. One group was comprised of parents or primary caregivers of children who had received medication prescriptions for behavioral problems or psychiatric disorders. The second group included case managers who work to connect children in need of services with professionals who can provide medication or medication evaluations. A third group was conducted with pediatricians who have prescribed psychoactive medications for their patients. For those wishing to participate, informed consent was obtained, and all risks and benefits were clearly explained. Caregivers and case managers received $30 for participation, and physicians received $100 for participation. Childcare was provided for caregivers.

Recruitment methods differed for each group. For the Caregiver group, our local Parent/Professional Advocacy League (PAL), and a parent advocate from a local child mental health agency, assisted in our efforts. The resulting group had seven participants, and included primary caregivers of one or more children with SED who have taken psychoactive medications. The Case Manager group was recruited through local area offices of the Department of Social Services and the Department of Mental Health. Administrators were contacted and they distributed our recruitment flyer among their staff. This group had six participants. The Physician group was recruited from within local pediatric practices in the central Massachusetts area that were affiliated with the clinics of our university's medical school and hospital. This group was especially difficult to recruit. Eight pediatricians agreed to participate, and five were able to attend the scheduled group. One did not come, one came late, and three pediatricians participated in the entire discussion.

Questions. Each focus group participant was asked questions about his or her role in treatment for children (see Table 1). The questions to the Caregiver group focused on the steps taken and challenges encountered in getting treatment for their children, identified who prescribed medication, and the parent's role in treatment. The Case Managers' discussion focused around issues in getting appropriate assessments and treatment for the children they work with. The Physician group was asked about the steps they take in assessing, treating, referring and prescribing medications to children with psychiatric issues. All groups also were asked what they would do if given the opportunity to make changes to better meet the needs of children with psychiatric disabilities.

Table 1
Focus Group Questions

Parent/Caregiver group

- When your child first had a behavioral or psychiatric problem, what steps did you take to get him or her treatment? Did you go to your pediatrician?
- How long did it take for you to get treatment?
- What kinds of problems have you faced trying to get treatment and support for your child?
- If you have wanted medication for your child, have you been able to get it?
- Who has prescribed the medication? Is this your preferred prescriber?
- What role have you had in your child's medication treatment planning?
- What role have you had in your child's behavioral health (therapy) treatment planning?

Case Manager group:

- When a client may have a psychiatric problem, what steps do you typically take in getting the child an appropriate assessment?
- When a client has a psychiatric problem, what steps do you typically take in getting the child appropriate treatment?
- What kinds of problems have you encountered in getting clients appropriate assessment and treatment?
- If you were able to make changes in the service system to better meet the needs of children with psychiatric disabilities, what kinds of changes would you make?

Physician Group:

- When a patient may have a psychiatric problem, what steps do you typically take in assessing and treating the child?
- What kinds of problems have you encountered in assessing and treating children with psychiatric disabilities?
- If a child needs a psychiatric assessment, how do generally go about getting this?
- If you were given the opportunity (and the power) to make changes to better meet the needs of children with psychiatric disabilities, what kinds of changes would you make?

Results & Discussion

Caregiver group. In the Caregiver group, participants reported it took anywhere from 8 months to 14 years to get appropriate treatment for their children. Some said they had recognized problems for a long time, but that their providers didn't validate them. One caregiver said her child "didn't get the attention that was needed until [my child] finally hurt a teacher," and another said she'd asked her pediatrician for a testing referral for two and a half years but the doctor refused. Others had numerous treatment providers over the years, yet still reported difficulty getting their children properly diagnosed. Until their children were properly diagnosed, many felt they had spent months or years bringing their children to treatment that was ineffective or not as helpful as it could have been. The parents all reported the same frustrations as they felt their child's "lives are going by." A typical story was that of a child who was diagnosed at age five with Attention Deficit/Hyperactive Disorder (ADHD), and prescribed Ritalin for five years by a pediatrician with no additional testing or follow-up. Once psychological testing was obtained by the caregiver, other psychological problems were identified, and a new treatment plan, which included therapy and changes in medication, was initiated. Other participants told stories with similar themes, where "doctors don't listen to parents" and consequently parents reported not being able to get the appropriate care for their children.

Another theme that arose in the Caregiver group was the lack of continuity in care. Caregivers reported that therapists and psychiatrists have a high turnover in the clinics that serve their children. Often when a clinician would leave a setting parents reported a gap in care, typically for months before a new clinician was available. They were concerned about the impact of this on their children.

Case Manager group. Themes that arose in the Case Manager group were the lack of psychiatric providers as well as difficulties in the continuity of care for therapy and medication. One participant recounted a time she looked through the local phone book and called every psychiatrist listed, yet still could not get an appointment for her Medicaid-insured client. Case Managers also noted that, in their experience, pediatricians were very likely to diagnose ADHD and prescribe stimulant medication for their clients. "Every time you take the child to a pediatrician they leave with a prescription for Ritalin," said one. They were concerned that other psychological issues went unnoticed. One other difficulty that they all reported was that both a child's psychologist and their psychiatrist need to be part of the same agency. If their therapist moves to another agency, then the child also loses their psychiatrist. Similarly, if their psychiatrist leaves, the child will be "left hanging" with no one to refill their prescription.

Physician group. The Physician group noted great difficulty in getting referrals for psychiatric care for their patients. They reported that they often used personal connections to get appointments, saying that it could be extremely difficult to get a referral otherwise. One participant told us "I get psych referrals through begging." They also noted that some patients are reluctant to see psychiatrists, or are impatient for their name to come up on a waiting list for an appointment and want their pediatricians to prescribe medications for psychiatric issues in the meantime. The physicians all agreed that it is hard to engage either a therapist or a psychiatrist, usually because they aren't taking new patients or because of insurance issues. In the meantime, people get frustrated, angry and begin "demanding medication" from pediatricians.

While our focus groups do not represent all pediatricians, case managers or caregivers who cope with issues regarding psychoactive medications for children, their responses provide a snapshot of some concerns common to each group, and some the potential differences and conflicts between mental health services consumers and providers. All groups reported struggling with a lack of access to timely psychiatric and psychological care. It was difficult to get appointments with psychiatrically trained prescribers or with therapists and psychologists trained in psychological testing and assessment. Even once patients were able to see a provider, frequent turnover in clinics that take Medicaid, or among providers on different insurance panels, led to a lack of continuity in care.

Differences between the groups were most pronounced in the area of diagnosis, particularly regarding ADHD. Parents and case managers both reported struggling to get children properly and accurately diagnosed, and reported frustration with pediatricians who they felt overdiagnosed ADHD while underdiagnosing other psychiatric disorders. At the same time, pediatricians felt very confident with their diagnostic skills and treatment of ADHD, but less so with other psychiatric issues. A combination of a lack of training in other areas, and a lack of providers trained in diagnosing and treating psychiatric issues other than ADHD are likely contributors to these findings. This study, while small, points to a need in our area for increased access to a range of psychological and psychiatric services for children and adolescents, as well as additional training and supports for pediatricians. Additional research with larger and more diverse samples is warranted to see if these difficulties are encountered more broadly.

References

Zito, J. M. & Safer, D. J. (2001). Services and prevention: Pharmacoepidemiology of antidepressant use. *Biological Psychiatry 49*(12), 1121-1127

Zito, J. M., Safer, D. J., dosReis, S., Magder, L. S., Gardner, J. F. & Zarin, D. A. (1999). Psychotherapeutic medication patterns for youths with attention-deficit/hyperactivity disorder. *Archives of Pediatrics and Adolescent Medicine 153*(12), 1257-1263

Zito, J. M., Safer, D. J., dosReis, S., Gardner, J. F., Boles, M. & Lynch F. (2000). Trends in the prescribing of psychotropic medications to preschoolers. *The Journal of the American Medical Association 283*(8), 1025-1030

Zito, J. M. & Safer, D. J. (2001). Services and prevention: Pharmacoepidemiology of antidepressant use. *Biological Psychiatry 49*(12) 1121-1127

CONTRIBUTING AUTHORS

Jennifer Taub, Ph.D.

Matthew Johnsen, Ph.D.

Christina Breault, B.S.

Correspond with first author: Jennifer Taub, Ph.D., University of Massachusetts
Medical School, Center for Mental Health Services Research
305 Belmont St, 8th floor, Worcester MA 01604, 508-856-3522
e-mail: jennifer.taub@umassmed.edu

Issues for Pediatricians who Prescribe Psychoactive Medications: Training, Experience, Needs, Implications

Jennifer Taub
Matthew Johnsen
Christina Breault

Introduction

In recent years there has been a marked increase in the numbers of prescriptions for psychotropic medications written for children and adolescents. Since 1986, a three- to five-fold increase in anti-depressant prescriptions (Zito et al., 2002) and a seven-fold increase in amphetamine prescriptions was reported (Zito et al., 2003). Between 1990 and 1996, Shireman and others (2002) reported a 69% increase in the use of SSRIs. Other studies have also documented dramatic increases in the rates of psychoactive medication prescribed to preschoolers, including a three-fold increase in stimulant prescriptions and more than a two-fold increase in the antidepressant prescriptions between 1991 and 1995 (Zito et al., 2000).

Our review of pharmacy claims indicates that similar trends exist for the Massachusetts Medicaid population. Psychoactive medication prescriptions written to Massachusetts Medicaid recipients under 19 years of age rose from 2.9% in 1994, to 6.5% in 2000 and 8% in 2002. As many as 13% of adolescents in the Medicaid population received a prescription for psychoactive medication in 2001.

Who has been writing these prescriptions for children and adolescents? Jensen (2002) found that most stimulant medication prescriptions originate from pediatricians and primary care providers. A study in Michigan in the late 1990s found that pediatricians wrote 59% of methylphenidate prescriptions for children (Rappley, Gardiner, Jetton & Houang, 1995). Studies have found that over half of children receiving prescriptions for stimulants are not diagnosed with ADHD, or do not meet ADHD criteria (Angold, Erkanli, Egger & Costello, 2000; Jensen et al., 1999). A North Carolina study found that 58% pediatricians reported prescribing SSRIs, and 31% reported prescribing SSRIs in combination with other psychotropic medications (Rushton, Clark, & Freed, 2000). In Massachusetts, almost one-third (28%) of all psychoactive medications prescribed in 2001 to children were prescribed by pediatricians. While it is clear that pediatricians are writing many of the prescriptions for psychoactive medications for children, little is known about the types of training pediatricians have in diagnosing and treating psychological disorders in children and adolescents.

Method

Researchers from the Center for Mental Health Services Research conducted face-to-face interviews with 23 pediatricians in central Massachusetts. The 90-minute in-depth qualitative interviews were designed by a task force of the New England Partnership for Appropriate Psychoactive Medication Prescribing. Interviews collected information about patient caseloads, physician training, comfort diagnosing and treating psychiatric illnesses with psychopharmacological agents, and issues and concerns regarding patients' access to appropriate psychiatric care and referrals.

The response rate was lower than expected and physician recruitment required great effort. The 23 pediatricians in the study represented a response rate of 36%. Many indicated they were unable to arrange for a 90-minute block of time to complete the interview. Informed consent was obtained, and all risks and benefits were clearly explained to participants. Pediatricians were paid $100 for their participation.

Results

Physician Training. While 91% of participants indicated that they had received some form of continuing medical education in psychiatry, this was most typically in the form of a workshop at a conference lasting just a few hours. About one-third reported completion of a psychiatry rotation in medical school (36%). Most reported no specialized training in psychopharmacology (64%), and what training was reported generally consisted of continuing education training on prescribing stimulant medications for ADHD.

Caseload, Characteristics, and Referrals. On average, participating physicians saw 58 patients per week (*SD* = 33.8). More than half of these physicians (54.5%) had annual caseloads of over 1,000 patients. About 40% of the children in these caseloads were under five years of age, and only a quarter were above the age of 16. Participants indicated that 24% of their patients had some type of behavioral or psychiatric problem, about half of whom (13%) had a specific DSM-IV diagnosis.

Among patients with specific DSM-IV diagnoses, pediatricians reported that 29% came to them already in treatment with a psychiatrist. Pediatricians made referrals for 59% of those children with DSM diagnoses who did not have a psychiatrist. Pediatricians reported that 36% of these patients were already seeing other mental health professionals at the time of their involvement with the case, and they made referrals for 81% of those without a therapist.

While they made many referrals, the pediatricians reported many difficulties and barriers to their patients actually seeing psychiatrists or therapists. Barriers included a general lack of access to providers in the area, particularly for psychiatrists with expertise in prescribing psychoactive medications to children. Pediatricians reported difficulties with insurance carriers, with few to no openings for clinicians on their panels. Patient waits of two to four months were not uncommon. A few physicians interviewed were part of a practice that featured an on-site behavioral unit or had very strong ties within the larger practice to a child psychiatrist. In these cases, physicians reported that obtaining these referrals and consultations was very easy.

Once seen by other clinicians, the pediatricians reported they rarely received the type and amount of information they would like back from their colleagues. They reported *never* receiving information from psychiatrists 59% of the time, while only 18% indicated that they received helpful information most of the time. While the kind of information that physicians indicated that they would like to hear back was often not substantial (diagnosis, medication type and amount if anything was prescribed, brief statement of recommendations), most physicians reported that they rarely, if ever, received this documentation.

Physician Comfort with Psychiatric Diagnosis and Treatment. We found a wide range of comfort levels among physicians in the independent diagnosis and treatment of patients with psychiatric problems (see Figure 1). Most physicians indicated that they were *very* or *somewhat comfortable* diagnosing Depression (86%), ADHD (82%) and Eating Disorders (82%) without specialty consultation. Most indicated that they were *somewhat* or *very uncomfortable* making diagnoses of Bipolar (91%), Post-traumatic Stress Disorder (77%), Tourette's Syndrome (68%) and Autism (65%) without specialty consultation.

While many physicians were comfortable diagnosing without specialty consultation, treating patients with medication without specialty consultation is another matter (see Figure 2). Only for patients with ADHD (100%) did physicians indicate that they were very or somewhat comfortable treating them with medication without specialty consultation. However, no pediatricians reported being comfortable in treating bipolar disorder or PTSD without specialty consultation.

There was a high level of comfort diagnosing and treating ADHD and a relatively low level of comfort treating other psychiatric conditions. Physicians reported a very high level of comfort prescribing stimulants and a relatively high degree of comfort prescribing SSRIs, but also a relative lack of comfort with virtually all other classes of psychopharmacological agents. Despite the relatively low level of expressed comfort prescribing alpha agonists, anti-psychotics, mood stabilizers, tricyclics, and benzodiazepines, it is noteworthy that at least some physicians found themselves in a position in which they prescribed drugs within classes with which they were somewhat or very uncomfortable. For example, while no pediatricians indicated that they were comfortable prescribing mood stabilizers, 48% indicated that they had prescribed them during the previous year.

Common examples of scenarios in which physicians reported prescribing medications that they were uncomfortable with included (a) when a new patient came in and was already on a medication, the physician continued to prescribe medication until the patient saw a psychiatrist; and (b) when a physician was asked to prescribe a medication that had worked previously for a patient. When asked how often they prescribed psychotropic medications because it was not possible to get a timely mental health evaluation or psychotherapy, 23% said never, 5% said all the time, and another 27% said often. Almost half (45.5%) indicated they had to do this at least occasionally.

Discussion

These data indicate that pediatricians in Massachusetts are following the national trends. As the numbers of children and adolescents who are given psychoactive medications increase, more pediatricians are placed in the role of prescriber. This study, while limited in sample size, offers an in-depth look into some of the issues facing pediatricians as they try to meet the needs of their patients with psychiatric issues.

Figure 1
% of Pediatricians Somewhat or Very Comfortable Diagnosing and Treating with Medication

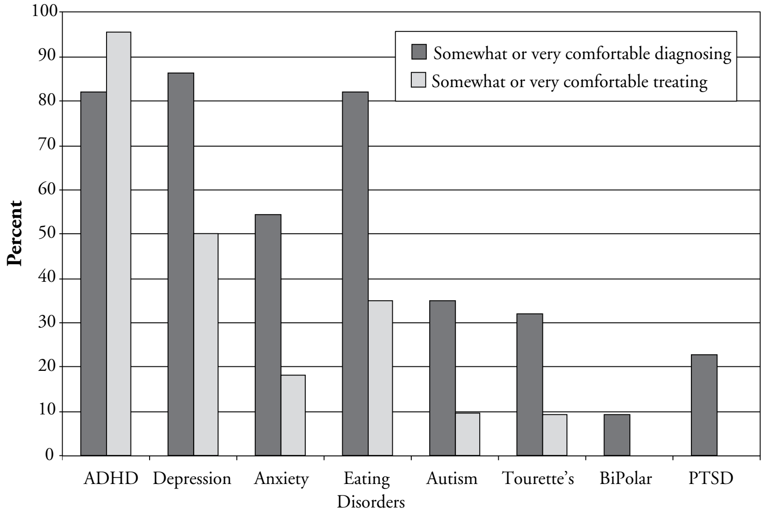
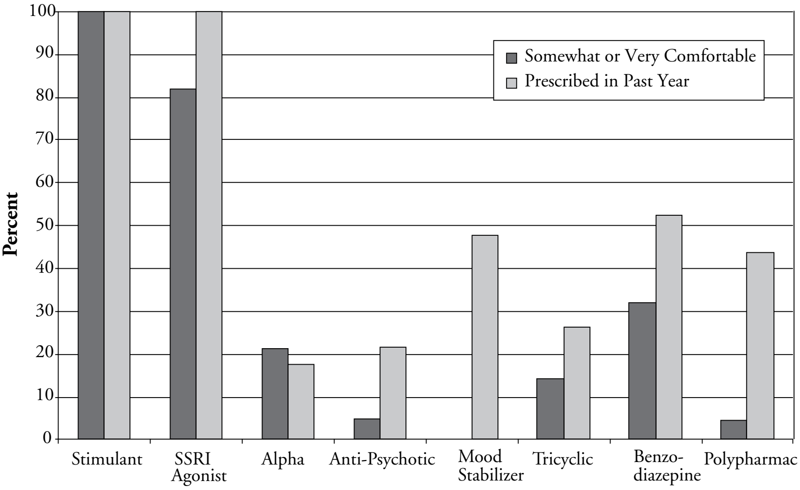


Figure 2
Comfort in Prescribing and Prescriptions in Past Year



While the pediatricians surveyed here are prescribing many different types of psychoactive medications for many different types of problems, the training and comfort they report is limited. Outside of the realm of ADHD and stimulant medications, the pediatricians interviewed were not very experienced in, or comfortable with, prescribing psychoactive medications. Additional training in psychopharmacological issues for children would likely be useful and welcome. Another frustration commonly reported was a lack of access to child psychiatric services, both for patients and for support and consultation for pediatricians. Alignment of child psychiatric services with physician groups so that pediatricians can have ready access to referrals as well as formal and informal consultations would be beneficial to both pediatricians and to patients. In several practices we visited, this kind of arrangement appeared to be working well, creating a direct link for the physician to receive informal feedback about treatment courses that the physician was relatively familiar with (for example ADHD), but also providing for times from referral to treatment that averaged a week rather than the 2-4 months more commonly reported.

References

Angold, A., Erkanli, A., Egger, H. L., & Costello, E.J. (2000). Stimulant treatment for children: a A community perspective. *Journal of the American Academy of Child and Adolescent Psychiatry, 39*, 975-984.

Jensen, P. S., (2002). Is ADHD overdiagnosed and overtreated? a A review of the epidemiologic evidence. *Emotional and Behavioral Disorders in Youth, 2*(4), 95-97.

Jensen, P. S., Kettle, L., Roper, M. T., Sloan, M. T., Dulcan, M. K., Hoven, C., Bird, H. R., Bauermeister, J. J., & Payne, J. D. (1999). Are stimulants over prescribed? treatment Treatment of adhd in four communities. *Journal of the American Academy of Child and Adolescent Psychiatry, 38,* 797-804.

Rappley, M. D., Gardiner, J. C., Jetton, J. R. & Houang, R. T. (1995). The use of methylphenidate in Michigan. *Archives of Pediatrics & Adolescent Medicine, 149*(6), 675-679.

Rushton, J. L., Clark, S., J., & Freed, G. L. (2000). Pediatrician and family physician prescription of selective serotonin reuptake inhibitors. *Pediatrics, 105*(6), E82.

Shireman, T. I., Olson, B. M., & Dewan, N. A. (2002). Patterns of antidepressant use among children and adolescents. *Psychiatric Services, 53*, 1444-1450.

Zito, J. M., Safer, D. J., dosReis, S., Gardner, J. F., Boles, M. & Lynch F. (2000). Trends in the prescribing of psychotropic medications to preschoolers. *The Journal of the American Medical Association, 283*(8), 1025-1030.

Zito, J. M., Safer, D. J., DosReis, S., Gardner, J. F., Soeken, K., Boles, M., & Lynch, F. (2002). Rising prevalence of antidepressants among us youths. *Pediatrics* 109(5). 721-727.

Zito, J. M., Safer, D. J., DosReis, S., Gardner, J. F., Magder, L., Soeken, K., Boles, M., Lynch, F. & Riddle, M. A. (2003). Psychotropic practice patterns for youth: a 10-year perspective. *Archives of Pediatrics & Adolescent Medicine, 157*(1), 17-25.

CONTRIBUTING AUTHORS

Jennifer Taub, Ph.D.
508-856-3522, e-mail: jennifer.taub@umassmed.edu

Matthew Johnsen
Research Associate Professor, 508-856-8692, Fax: 508-856-8700,
e-mail: Matthew.johnsen@umassmed.edu

Christina Breault
Research Associate, 508-856-8713, Fax: 508-856-8700,
e-mail: Christina.breault@umassmed.edu

All authors: Center for Mental Health Services Research, Department of Psychiatry,
University of Massachusetts Medical School, 305 Belmont St., Room 8C-29,
Worcester, MA 01604,