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ABSTRACT

Teachers, psychologists, medical personnel, and parents need to work together with a common base of knowledge to provide appropriate services to children with attention deficit disorder (ADD). The history of ADD symptoms begins in the late 19th century but the term ADD was not coined until 1980. Since that time, definitions and terms have undergone revision. In West Virginia, the medical and educational training that is needed is difficult to deliver during half of the year because of mountains and winter weather. Training packages that are representative of the necessary interdisciplinary focus must be developed and refined in module format. These modules could be used in any existing network in rural areas. Three examples of such modules are presented. Module 1, Definition, Diagnosis, and Medication, clarifies the physician's role in the assessment process and explains the diagnostic criteria and medication that physicians use in diagnosing and treating ADD. Module 2, Education, includes sections on implications for education, assessment, service delivery, and intervention. It also provides the educator, parent, and medical caregiver with information to bridge the communication gap that presently exists among these parties. Module 3, Home, consists of implications for the home, intervention, and coping strategies for parents. (KS)

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ADHD TRAINING MODULES FOR RURAL HEALTH CARE PROVIDERS, EDUCATORS AND PARENTS

INTRODUCTION

Although what we know today as ADD/ADHD (attention deficit disorder/attention deficit hyperactive disorder) has been investigated for at least the last 50 years, an explosion into every facet of the disorder has occurred during the last decade. The current literature of disciplines such as medical, educational, etc., is replete with information concerning ADD. This multidisciplinary view of the disorder is necessary to define ADD, to suggest research directions, and to plan appropriately for children with this disorder when the disorder leads to learning and behavior problems (Lerner, 1993). The purpose of this paper therefore is to provide interested parties with a review of selected issues involving medical, parent, and educational interventions and to formulate some sample training modules that are built on what is believed to be best practices in the educational and medical fields today.

HISTORY AND ISSUES OF DEFINITION

Although the disorder that we term today as ADD has evolved in a somewhat circuitous pattern, behavioral manifestations have always been the very core of the definitions of the syndrome. Identification of the entity can be traced to the late nineteenth century with the first descriptions of behavioral disorders occurring as sequelae of an insult to the brain (Kavanagh & Truss, 1988). If symptoms such as inattention , poor impulse control, hyperactivity, etc. followed a head injury or a central nervous system infection, the etiology seemed obvious. Consequently, it is not surprising that both medical and lay opinion alike would refer to such sequelae as brain damage.

Over time, those behavioral manifestations that were associated with brain injury, came to be observed in children who had no history of such an insult. In keeping with the popular theories of that era, the damage to the central nervous system (CNS) was considered so minimal that its only manifestations were the behavioral syndrome, hence the term Minimal Brain Damage. However, by the early 1960's, the behavioral

syndrome and the frequently associated occurrence of learning disability were arbitrarily linked together under the rubric of minimal brain dysfunction (MBD). Although the term was mainly associated with the psychiatric literature, it was rapidly adopted by other disciplines.

The early literature on ADD focused on the hyperactivity component of the syndrome. Current terminology emphasizes the primary aspects of attentional dysfunction as the principal behavioral manifestation of the syndrome. Consequently, the decades of the 60's and 70's provided the impetus to clarify MBD and in so doing necessitated the disentangling of the behavioral symptoms from those cognitive aspects that are best considered in the domain of learning disability.

Prior to 1940, there were really only three major categories for children with problems in society in general: mental retardation, deaf and blind, and the physically handicapped. During the 40's and 50's the syndrome of minimal brain dysfunction (MBD) was studied extensively by many disciplines, hence the emergence of the terms dyslexia, dysgraphia, dyscalculia, etc. These terms eventually helped to define the field of learning disabilities. Strauss and Lehtinen (1947) looked at social behaviors of children with MBD. The Strauss triad of disinhibition, distractibility and perseveration was used to diagnose children with attention and social problems. These terms were then altered to include children with hyperactivity, distractibility and impulsivity and the term hyperkinetic as developed. In 1980, the term ADD was coined to describe these children and to focus on ATTENTION as the root of the disorder. Following close behind was the term ATTENTION DEFICIT HYPERACTIVITY DISORDER (ADHD) which was proposed in 1987 to suggest that both attention and hyperactivity were important in describing the disorder. The DSM-III and the DSM-IIIR differ in their definition of the problem. The DSM-III offers two dated: ADD W/H and W/O. The first defines attention deficit disorder with hyperactivity; the second, attention deficit disorder without hyperactivity. ADD W/H was diagnosed using criteria similar to the Strauss guidelines generated in the 1940's. ADD W/O included those students with learning disabilities where attention was the central processing function that was not intact; social behavior was NOT a presenting condition. DSM-IIIR uses the term ADHD as the major diagnostic category, but allows for ADD without hyperactivity (undifferentiated ADD) as a subcategory.

The DSM-IIIR is currently in use and presents hyperactivity, impulsivity, and distractibility as areas for diagnosis of ADHD. The diagnostic procedure includes history and observations as well as physical, neurological and psychological examinations. The presenting conditions must be chronic and pervasive, not situational or temporary; underlying the behavior is a neurological disorder (McBurnett, Lahey, Pfiffner, 1993). The brain mechanism thought to be dysfunctional is the reticular activating system/locus ceruleus. If this part of the brain is functioning properly, it allows an individual to screen out extraneous stimuli. Consequently, the current definition most quoted is "a disorder of developmentally appropriate degree of inattention, impulsiveness, and overactivity which arises in early childhood and is relatively chronic throughout adolescence. The disorder is significantly pervasive and appears to have a biological predisposition. The disorder is not the direct result of gross brain damage, psychosis, autism, or severe/profound mental retardation" (Barkley, 1990).

Estimates of the incidence of ADD children in our public schools today range from 3-20% of the school aged population, K-12. There is an increasing reliance of general educators to assume the responsibility for ADD children (Shaywitz & Shaywitz, 1992). This will become more pronounced as the state adopts an INTEGRATED EDUCATION MODEL, (WV Department of Education, 1992) which will eventually place all mildly handicapped children in the regular classroom.

West Virginia is experiencing the same challenges as the rest of the country in trying to provide the most effective and comprehensive programming for ADD children. The majority of referrals within the system today center around children with ADD like symptoms. It is not a disorder that is specific to a particular setting because it impacts the educational, social and family life of the ADD child. Diagnosis and treatment require a team approach that utilizes the expertise of physicians, counselors, psychologists, nurses, parents, and both regular and special educators.

Consequently, there is an urgent need for professionals representing various disciplines to collaborate in sharing their knowledge and successes. This need is intensified because of the rural nature and the rugged terrain of the State of West Virginia. The major training

facilities, both educational and medical, are located at West Virginia University. The University is located in the northern part of the state, on the Pennsylvania border. It is mandated to serve over half of the counties in the state. Mountains and winter weather make driving during half of the year extremely difficult. Hence, the need for training packets or modules that can be shared and utilized across the state. These modules will include the most promising interdisciplinary training model with effective methodologies and supporting training materials. These modules could be utilized in any existing network in the most rural of areas.

PL 94-142 became a federal mandate almost 19 years ago, but provisions for an appropriate education for special needs children continues to be challenging. In July, 1991, the State of West Virginia provided a legal impetus for teachers, psychologists, medical personnel, parents and others to work together to provide appropriate services to ADD children. It is hoped that training packages that are to be developed and refined in module formate will be inclusive and representative of the interdisciplinary focus that is necessary. Examples of sample modules dealing with medical diagnosis, school and home follow.

MODULE 1
Definition, Diagnosis, and Medication

Background and Current Definition
Diagnostic Criteria
Medications and their Impact

Policy 2419: Regulations for the Education of Exceptional Students (West Virginia Department of Education, 1991) categorizes ADHD under the ruberic of Other Health Impaired. As a result of this categorization, the family physician or pediatrician is required to play a major role in the assessment process for children with ADHD. The family physician or pediatrician also initiates the comprehensive treatment program with counseling and stimulant medication, and coordinates the use of special education, mental health, and other resources as needed (Hughes, Goldman, & Snyder, 1983).

The purpose of this module is to clarify the physician's role in the assessment process and to explain and discuss the diagnostic criteria and

medication that physicians use in diagnosing and treating ADHD. The module will present a brief historical background, a current definition and the diagnostic criteria from the DSM-IIIR Manual (American Psychological Association, 1987) will be illustrated and explained and discussed. The most common medications (methylphenidate, dextroamphetamine, and ritalin) and their impact on the child in various settings will also be examined (Levy, 1993; Fox & Rieder, 1993; Dupaul & Rapport, 1993; Ahmann, Waltonen, Olsen, Theye, Van Erem & Laplant, 1993).

MODEL II: EDUCATION

This module involves the educational component of the ADHD training and addresses the following four areas:

1. Implications of Education
2. Assessment
3. Service Delivery
4. Intervention

This module will also provide the educator, parent, and medical caregiver information that will help bridge the gap of communication that presently exists among all three parties. Continuous communication problems are especially prevalent in rural communities where the provision of health care as well as support for parents and the school system is almost nonexistent. The primary focus will be on developming a working relationship between the three parties and providing assistance to the school and family.

1. **IMPLICATIONS FOR EDUCATION:** Children with ADHD in the regular classroom face a risk of school failure two to three times greater than that of other children without disabilities but with equivalent intelligence (Rubinstein & Brown, 1981; Zentall, 1993). Since teachers play an important role when working with children diagnosed as ADHD, training and education is essential to their success.

2. **ASSESSMENT:** Typical practice in research and the clinical assessment of ADD involves teacher and parent rating scales, observational techniques, and interviews (MCKinney, Montague, & Hocutt, 1993). In West Virginia, the identification of ADHD is not only the responsibility of the school system, but, for IDEA, it requires a physician's examination and signature verifying that the disorder exists. Many school systems have just recently devleoped a consistent process for educaional identification, but the verification by a physician is much

more difficult due to the lack of availability and knowledge that is particularly common in rural areas. In addition, consistent monitoring of the effects of prescribed medications has been nonexistent also.

3. **SERVICE DELIVERY:** Since September 1991, when the U.S . Department of Education issued a policy clarification on issues involved in the education of students with ADD, local agencies have become more aware of statutory requirements regarding assessment of children with ADD under either Section 504 of PL 93-112 or PL 94-142, the Individuals with Disabilities Education Act (IDEA)(Davila, Williams, & McDonald, 1991; McKinney, Montague, Hocutt, 1993). The majority of students are served in the regular classroom where modifications are made to help ensure success. Students with disabilities can be served in the regular classroom with additional support from special education programs or they can be placed in special education classroom on a full-time basis. The regular education placement often becomes an issue due to the lack of understanding of the disorder.

4. **INTERVENTION:** The need for appropriate intervention continues to surface in all settings, even in special education classrooms. Clinical psychologists, neuropsychologists, and physicians conducted most of the reported research in laboratory clinic settings (including clinic-based classroom); only 21 of the 137 studies reported on interventions in actual classroom settings (Fiore, Becker, Nero, 1993). These limitations often result in the development of strategies that do not necessarily work in an actual school environment. In actuality, the expectation should be that the appropriate interventions will be selected, agreed upon, and consistently used by all instructional personnel working with the student (McCarney, 1989).

MODULE III: HOME

This module involves the home component in which the child lives and will consist of the following:

1. Implications of the Home
2. Intervention
3. Coping Strategies for Parents

Since there is no cure for ADHD, the primary focus of this module will be to assit parents by providing support services in regard to the medical aspect in conjuntion with the school as it pertains to the educational needs of the child. The main therapeutic objective for the child with ADHD and their parents, therefore, is to teach the family methods of coping and compensating for this ongoing learning and

behavioral disability (Anastopoulos, DuPaul, Barkley, 1991).

1. **IMPLICATIONS OF HOME:** The child identified as ADHD not only has difficulty in school, but also exhibits problems at home. If these problems are treated by individual, behavioral, group, or family therapy without addressing the reasons for the problems (the child's disability), no progress will be made (Silver, 1989). In rural areas such as West Virginia where the availability of services for families is severely limited, addressing the problems in an appropriate manner becomes very difficult.

2. & 3. **INTERVENTION AND COPING STRATEGIES:** Educational intervention is important but consistent intervention at home is also important to ensure overall success for the child. Many parents are in need of assistance with parenting skills when dealing with authority struggles as well as sibling disputes. Youngsters often exhibit inattentiveness, impulsivity, and physical restlessness which interferes with good behaviors. Implicit in this conceptualization is the need to restructure environmental demands and contingencies so as to create a "prosthetic" home and school environment that allows the child with ADHD to devleop compensatory skills for coping with this chronic and pervasive behavioral disability (Anastopoulos, Dupaul, Barkley, 1991).

This module will attempt to provide interventions and strategies that may be used with parents to improve their relationship with their children.

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