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Concurrent reductions in psychotropic medication, assault, and physical restraint in two residential treatment programs for youth

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ABSTRACT

Over the past decade, the level of clinical needs of youth in residential treatment has increased significantly. Youth in out-of-home settings typically experience higher levels of psychotropic medication use than their peers living at home, even when controlling for the severity of clinical issues. The purpose of the current study was to examine the effects of an approach to clinically reassess psychotropic medication utilization for youth residing in residential treatment settings while also observing the impact on the youth's need for physical containment. Medication changes were based on a data-informed process, using input from a multi-disciplinary treatment team. Data for 531 youth who were consecutively admitted to one of two non-affiliated intensive residential treatment programs, one in the Midwest and one in New England, was analyzed. Over half of these youth (n = 292, 55%) had their medications reduced during their stay and only 14% (n = 76) were prescribed more medication at discharge than they had been taking at admission. The remainder either saw no change during their stay (n = 104, 20%) or were never on medication at any time (n = 59, 11%). From admission to discharge there was a 62% decrease in the number of assaultive incidents as well as a 72% decrease in the use of physical restraints. These results support the view that residential treatment can provide a treatment milieu that allows for thoughtful reassessment of the clinical basis for behavioral disorders in children that can achieve the dual goals of medication reduction and behavioral stabilization.

1. Introduction

According to national estimates, residential treatment settings throughout the United States serve approximately 200,000 youth annually between the ages of 6 and 21 years with significant and complex health care needs (Child Welfare League of America, 2009). Over the past decade, the level of clinical needs of youth in residential treatment has increased significantly (Duppong Hurley et al., 2010). As the needs of youth (for the purposes of this paper this refers to children and adolescents) in residential settings have increased, so have the rates of psychotropic medication use (Connor & McLaughlin, 2005; Duppong Hurley et al., 2010). Research has shown that 76% to 91% of youth entering intensive residential treatment settings are on one or more psychotropic medications (Hussey & Guo, 2005; Lyons et al., 2004; Page, Perrin, Tessing, Vorndran, & Edmonds, 2007; Ryan, Reid, Gallagher, & Ellis, 2008), up to 55% of medicated youth have three or more psychotropic prescriptions (Griffith, Huefner, Epstein, Thompson, & Singh, in press), and that psychotropic medications may or may not be indicated for the particular diagnoses the youth have (Lyons et al., 2004). Research also has suggested that psychotropic medication rates tend to increase while youth are in out-of-home treatment settings, with youth who have been in care longer or who have had multiple placements having higher rates of psychotropic medication use (Najjar et al., 2004; Pathak et al., 2004; Warner, Fontanella, & Pottick, 2007; Zakriski, Wheeler, Burda, & Shields, 2005).

Although psychotropic medication rates of youth with behavioral disorders in general have greatly increased since the early 1990s (Heflinger & Humphreys, 2008; LeFever, Arcona, & Antonuccio, 2003; Najjar et al., 2004), evidence for the effectiveness of pediatric pharmacotherapy remains rather limited (Correll, Kratochvil, & March, 2011; Koelch, Schnoor, & Fegert, 2008; Mehler-Wex et al., 2009). This is particularly true for youth whose complex treatment needs could not be met by single or overlapping interventions, resulting in a history of multiple treatment failures that leads to residential placement. These youth present with more intense or chronic mental health and behavioral problems than youth in community-based settings (Griffith, Epstein, & Huefner, 2012).

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While evidence of the effectiveness of pharmacotherapy in youth remains limited, there have been an increasing number of studies trying to establish the evidence base (Vitiello, 2008). Several studies have indicated that psychotropic medications have effectively reduced mental health and behavioral symptoms. For example, research on the use of psychostimulants for youth with ADHD has demonstrated their effectiveness in reducing symptoms with moderate to large effects (Schachter, Pham, King, Langford, & Moher, 2001); positive effects also have been found when medications and psychosocial treatments were combined for youth with depression (March, Silva, Vitiello, & The TADS Team, 2006; Vitiello et al., 2006); and second generation antipsychotics have been effective for youth with behavioral disturbances and cognitive delay or autism spectrum disorders (Stigler & McDougle, 2008; Van Bellinghen & De Troch, 2001). These research gains showing positive effects of some psychotropic medications for specific target populations or clinical symptoms have been associated with the exponential growth in the popularity of these medications for aggressive behaviors in youth (Najjar et al., 2004; Naylor et al., 2007).

Although there has been increased research suggesting positive effects of some psychotropic medications on the mental health and behavior of youth, there remains a gap between research and practice. Specifically, there is controversy over the use of many psychotropic medications (especially antipsychotic medications which carry a high side-effect burden) for youth due to the relative lack of efficacy research for this population and existing evidence that there is an increased risk for adverse effects in youth (Correll, 2008). While the basic research on pediatric psychopharmacology is growing, it is not adequate to fully understand and support the current level of psychotropic prescribing for youth (Correll et al., 2006; Greenhill et al., 2003; Vitiello, 2007), and it does not answer the research needs presented by actual day-to-day practice for the specific and highly vulnerable population of youth in residential treatment (Griffith et al., 2012).

The high levels of emotional and behavioral impairment that qualify youth for out-of-home treatment often occur in spite of the high rates of psychotropic medication they are receiving at the time of admission (Connor & McLaughlin, 2005; Duppong Hurley et al., 2009). Youth in out-of-home settings typically experience higher levels of psychotropic medication use than their peers living at home, even when controlling for the severity of clinical issues (Raghavan et al., 2005). Additionally, few emotional or behavioral differences have been found between youth in residential treatment with or without psychotropic prescriptions, or for those on one versus multiple psychotropic prescriptions (Griffith et al., 2010; Griffith et al., in press).

Due to the limited knowledge available about the use of psychotropic medications for youth and the high risks for adverse effects, experts in the areas of children's mental health and psychopharmacology have suggested that psychotropic medications should be prescribed cautiously and as part of a treatment plan that includes evidence-based psychosocial approaches (Connor & Meltzer, 2006; Olfson, Marcus, Weissman, & Jensen, 2002). However, due to the limited knowledge about efficacy and safety, it can be difficult for physicians to make informed judgments about the risks and benefits of psychotropic medication options when making treatment decisions (Greenhill et al., 2003; Spellman et al., 2010). This difficulty is compounded for physicians working in residential treatment centers who frequently are presented with youth who have complex and often unknown diagnostic and treatment histories, one or more active psychotropic prescriptions, and significant impairments in emotional and behavioral functioning.

Physicians need to evaluate youth to identify reasons for emotional and behavioral impairment, tease apart influences of medication on behavior, evaluate the benefits and risks of existing psychotropic prescriptions, and make ongoing decisions about the need for and effectiveness of psychotropic medications (Spellman et al., 2010). While algorithms and guidelines have been developed to assist physicians in their decision-making processes for youth in the general population, many physicians have reported that these resources do not adequately address the issues presented by youth in residential treatment (e.g., high rates of existing psychotropic medication use, unknown treatment histories, comorbidity) (Griffith et al., 2012). Additional approaches are needed to effectively and safely treat these youth.

Although currently no evidence-based methods exist for managing psychotropic medications for youth in residential care, clinicians have begun to develop best practice guidelines for working with other youth populations (e.g., Pappadopulos et al., 2003; Pliszka et al., 2006; Walkup, 2009). Similarly, physicians working in the two residential treatment programs that are the focus of this study have developed an approach that they use to improve the psychotropic medication management process, resulting in both reductions in the use of psychotropic medication and in rates of problem behavior and psychological impairment for youth in residential care (Huefner, Griffith, Smith, Vollmer, & Leslie, 2012). Both of the physicians hold the same basic philosophy about medication management, believing that youth should only be on the medications necessary to meet their treatment needs and no more (the principle of sufficiency).

Upon admission to either of the residential treatment programs examined here, a request is made for all past treatment records including hospital discharge summaries, outpatient records, psychological test reports, lab studies, educational testing, child welfare reports, etc. Once admitted, the youth is then observed in the school and treatment setting by a multi-disciplinary team including learning disability specialists, speech and language therapists, occupational therapists, child behavioral specialists, nurses, and psychiatrists; with each discipline also using information from the youth's history as a context for understanding current clinical needs. The residential team then convenes an initial treatment planning meeting which includes key stakeholders such as the youth, parents or guardians, local school district representatives, child welfare or mental health workers. The resulting formulation takes into account the biological, psychological, social, and educational contributors to the youth's behavior and is the cornerstone upon which the treatment plan is developed. A medication plan, often involving a taper of the admission medications, follows and is an integral part of the overall treatment plan. The team then identifies specific measures that will inform whether the formulation is accurate and the treatment plan is resulting in the desired outcomes. Parents are asked to provide informed consent and youth are involved in this process in a developmentally appropriate manner and are asked to assent to the treatment recommendations, including any medication changes.

The approach to decision making about medications is not a uniform one. The psychiatrists in these programs do not automatically take all youth admitted off all medications as part of a standard admission protocol. Instead, based on the formulation made by the multi-disciplinary team, the residential stay is seen as an opportunity to reassess the efficacy of each medication the youth has been taking at the time of admission to the residential program. Each youth's medication is evaluated for efficacy based on reports of past benefit:risk ratio. Frequently this information is not available to the psychiatrists in these programs so known risk factors of the medications are considered in the benefit:risk equation. In cases where there is support for the medication's efficacy, the medication may still be reassessed over the course of the residential stay as the youth develops new skills to better manage the symptoms for which the medication is prescribed. This allows the program to support the resiliency of youth, develop competency in managing affect and tolerate frustration, practice newly developing skills and minimize exposure to side-effects of medications. For more information see Spellman et al. (2010).

The process of behavioral data monitoring and decision making is continuous. Data are used for all initial decision making and are continually monitored over time to examine the effects of decisions on youth health and behavior. When medication changes are made, an increased frequency of reviewing clinical data occurs to assess how each change affects the youth. Monitoring by behavioral staff plays an important role between regularly scheduled meetings to ensure both youth safety