

Antipsychotic prescription rates and implications for children and adolescent pop...



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As the United States enters one of the worst drug crises in its history, children and adolescents are being prescribed medication at younger and younger ages and at faster and faster rates (Vitiello, 2012). The use of antipsychotic medication in the treatment of various disorders in both children and adolescents has been on the rise despite the strong side effects affiliated with these medications and the controversy surrounding diagnosing young children with psychiatric illnesses. This paper will look at the high level of variability that accompanies diagnosing children with psychotic disorders as well as the rates of prescriptions for non-psychotic conditions and the implications of using such medications at young ages.

The issue that is important to the discussion surrounding antipsychotic prescription rates for children is the ambiguity that accompanies the diagnostic criteria for psychiatric illness in children and adolescents. Currently, the boundaries for diagnosis are unclear and between health professionals and there is a lack of consistency in how to consider the presentations of psychotic disorders in the developmental trajectory. Unlike with adults who have lived longer and who have had longer time to establish their “normal” functioning it becomes difficult to discern developmental issues of behavior and conduct with the symptoms of mental illness. How does one establish that the belief that a monster is at the bottom of the stairs is a delusion as opposed to a normal childhood worry?

The difficulties in forming a consensus about the epidemiology of childhood schizophrenia has to do with the rarity of the disorder, hindrances in describing symptoms due to developmental constraints in children as well

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as the difficulty of discerning childhood experiences present in normal developmental trajectories from abnormal psychopathological symptoms (e. g. fantasies from delusions) (Russell, 1994). Childhood-onset schizophrenia (COS) is marked by the manifestation of psychotic symptoms before the age of 13. Schizophrenia is rarely diagnosed until adulthood (Gochman, 2011). When comparing prevalence rates, in the United States, 1 in 40, 000 children are diagnosed with schizophrenia when compared to 1 in 1, 000 adults (Gochman, 2011). The conversation surrounding this disorder centers on if schizophrenia with onset in childhood is clinically different from schizophrenia with a later onset. Additionally, little research has been conducted from a longitudinal perspective on the stability of this diagnosis over time. Prognoses for children with schizophrenia are worse than adults (Gochman, 2011). In a study conducted looking at the clinical presentation of child-onset schizophrenia, auditory hallucinations were found to be the most common symptom present in the sample, all of which were hearing voices (Russell, 1994). Most of these voices were also found to be negatively-centered with violent content such as “ shut up” as opposed to positive or affirming content. About 37% of the sample also endorsed visual hallucinations. In the sample, 63% of children suffered from delusions with no singular classification being predominant. The complexity of the delusions was found to vary by age and often times the delusions seen in children with schizophrenia reflect a child-like theme not seen in adults with the disorder (Russell, 1994). A large portion of the sample was also found to have met the criteria of disorganization that is marked by illogical thought or speech patterns. This study also found a large instance of comorbid

psychopathology in the subjects such as attention deficit hyperactivity

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disorder (ADHD), depression, dysthymia and bipolar disorder, whose incidence in childhood is also controversial and will be discussed further in the paper. The issue for determining the age of onset of COS, or when behavioral symptoms first emerge, is that it is highly dependent on subjective interpretation of the symptoms based on interviews with children and parents. The average age of onset found by the paper was determined to be 9.5 years, with a confidence interval being from 4.9 years to 13.3 years.

There have been issues surrounding comparing the presentation of child and adult-onset schizophrenia due to the variance of the samples to represent the populations. Regardless, preliminary studies have shown that the distribution for delusions and both visual and auditory hallucinations are similar for both of these populations. These symptoms in younger populations, however, can give rise to multiple, alternative diagnoses by professionals which plays into the idea of the unclear boundaries surrounding this disorder in children. COS is commonly misdiagnosed as an autism spectrum disorder or a different type of developmental disorder (Bartlett, 2014). According to a study looking at the difficulties diagnosing children with schizophrenia the clinical rating scales are in place for diagnoses have “limited usefulness ...when used to screen severely ill, medicated children with psychoses” (Gochman, 2011).

Bipolar disorder in children is also accompanied by controversy as the manifestation of its symptoms occurs at this critical period of development where behavior and mood patterns can be somewhat erratic.

The accompanying rollercoaster of emotions in adolescence and the sporadic
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nature of mood in childhood can be difficult to distinguish from hypomania or volatile mood swings. In order to be diagnosed with the disorder, it must be found that the symptoms and the malfunctioning in emotion regulation must be significantly impairing. What was formerly known as pediatric bipolar disorder is now diagnosed as disruptive mood dysregulation disorder (DMDD) which is characterized by intense temper tantrums and abrupt mood swings as well as periods of hyperactivity followed by lethargy (American Psychiatric Association, 2013). There appears to be great overlap in the presentation of bipolar disorder and other disorders such as ADHD and so the detectable features of this disorder often become masked. As a consequence of this, the prevalence rates of this disorder become difficult to determine (Copeland, 2013). The heavy comorbidity of psychiatric illnesses in youth who are prescribed antipsychotics may reflect the “ degree of diagnostic uncertainty in children and adolescents with behavioral health problems” (Penfold, 2013). To conclude, the validity of diagnosing young populations is highly unknown and so the use of antipsychotics to treat these disorders becomes muddled in this controversy as now the question becomes, “ what illnesses are these treatments actually being used for?”

Antipsychotics are divided into two classifications according to their development, first-generation antipsychotics (FGAs), otherwise known as “ typical” antipsychotics and second-generation antipsychotics (SGAs) or “ atypical” antipsychotics. FGAs are marked by their side effects that often affect motor ability and can be marked by restlessness, contractions, inability to move muscles or repetitive, involuntary movements (Seida, 2012). To contrast, SGAs are thought to have less severe side effects in

terms of motor impairment but can be accompanied with significant weight gain, the development of diabetes as well as elevations in blood sugar and cholesterol levels (Seida, 2012). Increased motor impairment with SGA treatment has been seen at higher doses, however. According to one study, there appears to be no difference in efficacy between these two types of antipsychotics in pediatric populations with psychotic disorders (Fraguas, 2011). Despite this finding however, SGAs have been prescribed at higher rates in children and adolescents as opposed to FGAs. The perceived safety of using these newer antipsychotics can be attributed to the increased use rate trends. These drugs also do not need to closely be monitored for neurotoxicity such as with lithium or antiepileptic medication (Vitello, 2012). This creates an image of feasibility of use and acceptability for the use of SGAs and the transition of these medications for treating non-psychotic disorders (Olfson et al., 2006).

The FDA has approved four atypical antipsychotics for pediatric bipolar disorder and schizophrenia however antipsychotics are used less often for psychotic disorders and more for other problems. In a study looking at pediatric use of antipsychotics, these medications have been increasingly prescribed “ off-label” to treat behavior problems such as defiant disorder or conduct disorder, ADHD and sleep disorders in children (Penfold, 2013). The American Psychiatric Association in its recommendations has explicitly stated that antipsychotics should not be prescribed to treat “ behavioral and emotional symptoms of childhood mental disorders.” According to a paper looking at the trends for prescription rates, there has been a “ twofold to fivefold increase” for the use of antipsychotic medication in preschool

children (Harrison, 2012). In the United States, from 2004-2005 the use of antipsychotics in individuals under 19 constitutes 15% of total antipsychotic use. This is an 8% increase from 1996-1997 (Domino and Swartz, 2008). Not only are the rates of antipsychotic prescriptions in pediatric populations increasing but there have also been significant increases in the rates of mood and anxiety disorders, psychoses, developmental disorders, and disruptive behavioral disorders in younger populations (Paus et al., 2008).

A factor in the increase in antipsychotic use for the treatment of emotional and behavioral problems in children can be attributed to the conceptualization of these problems from a medical perspective and the necessity of pharmacological intervention as the appropriate treatment. This phenomenon is reflected in the fact that the rates for all types of psychiatric medication and not just antipsychotics have seen increases in the past 20 years (Vitiello, 2012). This increase may contribute to an “environment of acceptability” for prescribing adolescents antipsychotics and decrease the preventative stigma that may hinder the use of these medications for this population. Additionally, in the U. S. there is limited availability of mental health treatment as well as access to inpatient services and thus the widespread availability of antipsychotics and their ability to stabilize patients could account for the rise of antipsychotics (Case et al., 2007).

Antipsychotic medication is noncurative and thus an individual with schizophrenia remains on antipsychotics for the duration of their life to stabilize the symptoms of their illness. The weight gain associated with SGAs persists throughout the entirety of treatment (Vitiello, 2012). Because child-onset schizophrenia occurs earlier in life and is thought to have worse

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prognoses than adult-onset schizophrenia, these individuals remain on medication for longer durations and this exposure could be implicated with higher mortality rates (Arango, 2004). Some studies have shown that children, when compared to adults, have a higher sensitivity to the metabolic side effects of SGAs and the extrapyramidal effects of FGAs (Correll et al., 2006). With regards to weight gain, children gain proportionately more weight and gain that weight at a faster pace when compared to adults on the same medication (Correll and Carlson, 2006). Adolescents have a heightened susceptibility to the psychological adverse effects of antipsychotics as well (Arango, 2004). This is due to this particular stage of life where adolescents are particularly vulnerable because of their physical development and the sensitivity to the perception of peers (McCracken et al., 2002). Individuals who are on SGAs and experience weight gain may feel socially isolated or further stigmatization as a result of adverse effects on medication. This social rejection can also have profound effects due to adolescents' heightened desire to fit in and for acceptance from their peers.

The abundance of the use of antipsychotic medications for treating a wide breadth of conditions in pediatric populations has outpaced the research to support the efficacy of these medications long-term. According to an article in *Pediatric Health Care*, younger populations have an increased likelihood of being on multiple psychotropic medications with 80% of preschoolers being prescribed another psychotropic medication in addition to their antipsychotic (Olfson, 2015). The side effects of medications can also be exacerbated when those drugs share common effects. This means that there are potentials for exacerbations of side effects in children which can have an

immense influence on their behaviors as well as physiology. There is rapid brain development during puberty and adolescence however little review on the cognitive effects of antipsychotics or research on the long-term effects on brain development (Aman et al., 2012). The implications of this are profound as off-label prescription rates could continue to rise despite a dearth of knowledge of long-term consequences and thus populations of children could continuously be exposed to serious adverse effects that have life-long consequences.

It can be concluded that further research needs to be conducted in order to fully understand the implications of medicating children with antipsychotics for behavioral or emotional disorders. More data needs to be conducted on other intervention methods that can supplement pharmacological interventions such as cognitive behavioral therapy (CBT) or other forms of psychological therapies that don't have such severe side effects. Overall, more support for inpatient and outpatient mental health services to promote accessibility for treatment with specialists can potentially counter the over-reliance on antipsychotics as a way to treat behaviors rather than the underlying illness.

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