ANTIPSYCHOTIC USE IN INDIVIDUALS WITH INTELLECTUAL AND DEVELOPMENTAL DISABILITIES IN MISSISSIPPI MEDICAID

CARRIED OVER FROM JULY 2017 DUR BOARD MEETING WITH APPENDIX ADDED

BACKGROUND

At the April 27, 2017, DUR Board Meeting Dr. Escude', the Board Co-chair, asked MS-DUR to research antipsychotic use among beneficiaries diagnosed with intellectual and development disabilities (IDD). He indicated that in this population antipsychotics are sometimes prescribed to treat behaviors that actually may be attempts by the patient to communicate about other underlying health problems. Some underlying health issues of the IDD population could be misinterpreted as behavioral issues; therefore, the patient could be treated with antipsychotics instead medications for the physical or neurological health problem.

The use of antipsychotic medications in individuals with IDD is common due to the significantly higher rate of psychosis among adults with IDD when compared with the general population[1]. These medications are used to not only treat functional psychiatric illnesses such as schizophrenia but also may be used to treat problem behaviors in the IDD population. However, not all problem behaviors have a psychopathology origin. Some problem behaviors, such as aggression and self-injury, could be a symptom of a health-related disorder or other circumstance where certain needs of the individual are not being met. Since beneficiaries with IDD often cannot verbally express their health problem, they sometimes exhibit behaviors that may signal underlying health problems. Thus, it is important to carefully assess the possible cause(s) of problem behaviors before prescribing antipsychotics. Adults with IDD have a higher rate of physical conditions such as sensory impairments, cerebral palsy, epilepsy, and cardiovascular or gastrointestinal problems that can influence the choice of medication. The lack of careful assessment may lead to unnecessary prescribing of antipsychotic medications and the failure to correctly identify and address the underlying health issue causing the problem behavior.

Antipsychotic medications are effective for individuals with a functional psychiatric diagnosis but their use can be problematic in the IDD population and should be used judiciously. Some adults with IDD may have atypical responses or side effects at low doses to antipsychotic medications. Some patients may be taking multiple medications and be at increased risk of adverse medication events[2]. The goal of treatment should not only be symptom control but improvement in the quality of life of the individual with IDD.

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[1] Deb S, Thomas M & Bright C. Mental Disorder in Adults with Intellectual Disability. Journal of Intellectual Disability Research 2001; 45 (6): 506-514.

[2] Vanderbilt Kennedy Center for Excellence in Developmental Disabilities. Health Care for Adults with Intellectual and Developmental Disabilities. Psychotropic Medication Issues. http://vkc.mc.vanderbilt.edu/etoolkit/mental-and-behavioral-health/psychotropic-medication-therapy/. Accessed 6/27/2017.

METHODS

A retrospective study was conducted using Mississippi Medicaid medical and pharmacy claims for the period January 2016 – June 2017. The analysis included data from the fee-for-service (FFS) and coordinated care organizations (CCOs). Beneficiaries with any outpatient or inpatient medical claim having an IDD diagnosis were identified as the target population. The ICD-10 codes used to identify beneficiaries with IDD are listed in Table 1. Beneficiaries were identified using both a "limited" set of codes and a broader set of codes, referred to as "any" diagnosis in the results.

TABLE 1: ICD-10 Codes Used to Identify ANY IDD Diagnosis and LIMITED IDD Diagnosis

ICD-10 Code	Description	Any	Limited
F84.0	Autistic disorder	X	X
F84.2	Rett's syndrome	X	X
F84.3	Other childhood disintegrative disorder	X	X
F84.5	Asperger's syndrome	X	X
F84.8	Other pervasive developmental disorders	X	X
F84.9	Pervasive developmental disorder, unspecified	X	X
F70	Mild intellectual disabilities	X	X
F71	Moderate intellectual disabilities	X	X
F72	Severe intellectual disabilities	X	X
F73	Profound intellectual disabilities	X	X
F78	Other intellectual disabilities	X	X
F79	Unspecified intellectual disabilities	X	X
Q86.0	Fetal alcohol syndrome	X	
Q87.1	Congenital malformation syndromes predominantly associated with short stature (Prader-Willie syndrome)	X	
Q90	Down syndrome	X	
Q91.3	Trisomy 18, unspecified (Edward's syndrome)	X	
Q93.4	Deletion of short arm of chromosome 5 (Cri-Due-Chat syndrom)	X	
Q91.7	Trisomy 13, unspecified (Patau's syndrome)	X	
Q98.4	Klinefelter syndrome, unspecified	X	
Q99.2	Fragile X chromosome	X	

TABLE 2: Codes to Identify Primary Indications for Antipsychotic Medication Use

ICD-10 Code	Description
F20	Schizophrenia
F22	Delusional disorders
F23	Brief psychotic disorder
F28	Other psychotic disorder not due to a substance or known physiological condition
F29	Unspecified psychosis not due to a substance or know physiological condition
F30	Manic episode
F31	Bipolar disorder
F32.3	Major depressive disorder, single episode, severe with psychotic features
F33.3	Major depressive disorder, recurrent, severe with psychotic symptoms
F44.89	Other dissociative and conversion disorders
F84	Pervasive developmental disorders
F95	Tic disorder

Draft Document for NCINQ 2013 Public Comment.
http://www.chcs.org/media/NCINQ_2013_Public_Comment_4-30-13.pdf

All prescriptions for antipsychotic medications filled during the observation period were extracted for the beneficiaries identified as potential IDD patients. Medical claims were extracted for beneficiaries with IDD and taking antipsychotics to determine whether the beneficiaries had diagnoses that were identified as being primary indications for antipsychotic medication use (Table 2). Codes to identify primary indications for antipsychotic medication use were determined based on the technical specifications for the "Use of Antipsychotics in Children without a Primary Indication" quality measure proposed in 2013 by the National Collaborative for Innovation in Quality Measurement.[3]

[3] AHRQ-CMS CHIPRA National Collaborative for Innovation in Quality Measurement. Antipsychotic Medication Use Measures for Children and Adolescents – Draft Document for NCINQ 2013 Public Comment. http://www.chcs.org/media/NCINQ_2013_Public_Comment_4-30-13.pdf. Accessed 5/7/2013.

RESULTS

Prevalence of IDD and Treatment with Antipsychotics

Using the broader any IDD related diagnosis, 17,183 beneficiaries were classified as having IDD. The number decreased to 16,031 when the more limited IDD diagnosis classification was used (Table 3). Overall, 22-23% of beneficiaries with IDD were treated with an antipsychotic. The percentage using antipsychotics was highest among beneficiaries 12-20 years of age and dropped significantly for beneficiaries ≥ 46 years of age.

TABLE 3: Characteristics of Beneficiaires With IDD Diagnosis* and Treatment With Antipsychotic Medication
(January 2016 - June 2017)

		Any IDD Related Diagnosis*		Limited IDD Diagnosis*	
		Number With IDD Diagnosis	Treated With Antipsychotic	Number With IDD Diagnosis	Treated With Antipsychotic
TOTAL		17,183	3,794 (22.1%)	16,031	3,739 (23.3%)
Age	< 12 years	4,716	1,005 (21.3%)	4,069	983 (24.2%)
	12-20 years	3,474	1,213 (34.9%)	3,231	1,192 (36.9%)
	21-45 years	5,332	1,172 (22.0%)	5,146	1,161 (22.6%)
	46-64 years	2,870	399 (13.9%)	2,804	398 (14.2%)
	65+ years	791	5 (0.6%)	781	5 (0.6%)
Pharmacy Program	FFS	9,763	1,666 (17.1%)	9,272	1,644 (17.7%)
	UHC	3,797	1,099 (28.9%)	3,488	1,087 (31.2%)
	MAG	3,623	1,029 (28.4%)	3,271	1,008 (30.8%)

** See Table 1 for list of diagnosis codes classified as any and limited IDD diagnosis.*

Beneficiaries with IDD were disproportionately enrolled in the FFS program. Despite each CCO having almost twice as many enrollees as the FFS program, there were ~2.5 times as many beneficiaries with IDD in the FFS program as in either CCO. The percentage of beneficiaries with IDD being treated with antipsychotics was lower in FFS (17%) than in the CCOs (28-31%). A detailed analysis within each pharmacy program found that the percentage of beneficiaries with IDD receiving antipsychotics was similar across programs for beneficiaries less than 21 years of age. Use of antipsychotics among adults in the FFS program decreased with age but increased in the CCOs.

Prevalence of Primary Indications for Antipsychotics Use

Approximately two-thirds of beneficiaries that were treated with antipsychotics had diagnoses in their medical claims that were primary indications for the use of antipsychotics (Table 4). ICD-10 code F84 – pervasive developmental disorders- is one of the primary diagnoses for which antipsychotics are indicated. This ICD-10 code was included in the primary diagnosis set for identifying IDD patients. The use of an antipsychotic with primary indications was examined using the full list of primary indication codes (referred to as "Any Primary Diagnosis") and the primary diagnosis list excluding F84. The results of the beneficiaries with IDD can be summarized as follows:

- Approximately 37% appear to be treated with antipsychotics to manage behaviors that are related to pervasive developmental disorder,
- Approximately 31% are being treated with antipsychotics to manage conditions that are primary indications for use excluding pervasive developmental disorder,
- Approximately 32% are being treated with antipsychotics without a diagnosis that is a primary indication for it use.

These treatment patterns were consistent across the three pharmacy programs.

FIGURE 1: Use of Antipsychotics Among Beneficiaries With IDD

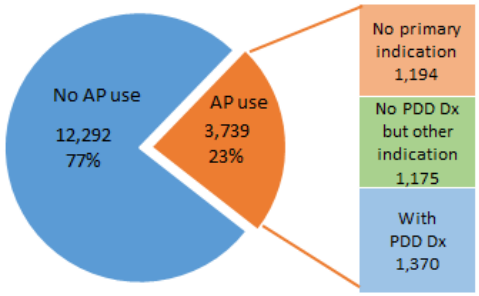

TABLE 4: Prevalence of Primary Indication for Antipsychotic Use Among Beneficiaires With IDD Diagnosis* Being Treated With Antipsychotic Medication
(January 2016 - June 2017)

		Any IDD Related Diagnosis*			Limited IDD Diagnosis*		
			Having Primary Indication for Antipsychotic Use**			Having Primary Indication for Antipsychotic Use**	
		Treated With Antipsychotic	Any Primary Diagnosis	Primary Diagnosis Other Than F84	Treated With Antipsychotic	Any Primary Diagnosis	Primary Diagnosis Other Than F84
TOTAL		3,794	2,554 (67.3%)	1,184 (31.2%)	3,739	2,545 (68.1%)	1,175 (31.4%)
Age	< 12 years	1,005	721 (71.7%)	67 (6.7%)	983	717 (72.9%)	64 (6.5%)
	12-20 years	1,213	835 (68.8%)	312 (25.7%)	1,192	833 (69.9%)	309 (25.9%)
	21-45 years	1,172	731 (62.4%)	543 (46.3%)	1,161	728 (62.7%)	540 (46.5%)
	46-64 years	399	263 (65.9%)	258 (64.7%)	398	263 (66.1%)	258 (64.8%)
	65+ years	5	4 (80.0%)	4 (80.0%)	5	4 (80.0%)	4 (80.0%)
Pharmacy Program	FFS	1,666	1,095 (65.7%)	452 (27.1%)	1,644	1,092 (66.4%)	449 (27.3%)
	UHC	1,099	769 (70.0%)	371 (33.8%)	1,087	767 (70.6%)	369 (34.0%)
	MAG	1,029	690 (67.1%)	361 (35.1%)	1,008	686 (68.0%)	357 (35.4%)
Provider Type for Initial Antipsychotic Prescription	Psych	1,284	917 (71.4%)	493 (38.4%)	1,271	913 (71.8%)	489 (38.5%)
	NP-Mental	733	525 (71.6%)	309 (42.2%)	726	524 (72.2%)	308 (42.4%)
	MD-Other	1,443	901 (62.4%)	279 (19.3%)	1,420	898 (63.2%)	276 (19.4%)
	NP-Other	285	177 (62.1%)	87 (30.5%)	276	176 (63.8%)	86 (31.2%)

** See Table 1 for list of diagnosis codes classified as any and limited IDD diagnosis.*
*** See Table 3 for list of diagnosis codes considered to be primary indications for antipsychotic medication use.*

Table 4 also shows the prevalence of a primary indication for antipsychotic use by the type of provider writing the initial antipsychotic prescription filled during the observation period. Approximately half of the beneficiaries had their initial antipsychotic prescription written by a provider other than a mental health specialist. There were significant differences in the prevalence of primary indications for antipsychotics by type of provider.

When mental health providers wrote the initial antipsychotic prescription, ~32% of the time IDD was the primary indication, ~40% of the time other mental health conditions were the primary indication, and ~38% of the time no primary indication was found. When other providers wrote the initial antipsychotic prescription, ~63% of the time IDD was the primary indication, ~17% of the time other mental health conditions were the primary indication, and ~20% of the time no primary indication was found.

Analysis of Providers Writing Initial Antipsychotic Prescriptions for IDD Patients

Although the number of initial prescriptions for antipsychotics were similar between mental health providers and other providers, there were more than twice as many non-mental health providers writing these prescriptions (Table 5).

TABLE 5: Provider Types Writing Initial Antipsychotic Prescriptions for IDD Patients

Provider Type for Initial Antipsychotic Prescription	Number of Providers	Number of Beneficiaries With Any IDD Diagnosis* Prescribed Antipsychotic	
		Average for Provider Type	Total for Provider Type
Psych	152	8.4	1,284
NP-Mental	77	9.5	733
MD-Other	402	3.6	1,443
NP-Other	112	2.5	285

** See Table 1 for list of diagnosis codes classified as any and limited IDD diagnosis.*

CONCLUSIONS AND RECOMMENDATIONS

The major findings from this analysis include:

- There are a large number of Medicaid beneficiaries with diagnoses of IDD.
- Almost one-fourth of these beneficiaries are being treated with antipsychotics.
- More than one-third of the beneficiaries with IDD being treated with antipsychotics have pervasive developmental disorder as the primary indication for their use of antipsychotics.
- Almost one-third of the beneficiaries taking antipsychotics have no primary indication for the use of an antipsychotic.
- More than half of these beneficiaries are being prescribed antipsychotics by non-mental health providers.

The IDD population is difficult to treat appropriately due to communication issues that frequently exist. The frequent use of antipsychotics in this population without mental health diagnoses and without primary indicators for the use of antipsychotics could signal inappropriate use of antipsychotics.

MS-DUR recommends that an educational intervention be initiated to provide education to providers initiating therapy with antipsychotics for IDD patients who do not have other mental health diagnoses that are primary indicators for use. MS-DUR would work with Dr. Escude' to develop the educational materials for this intervention.

APPENDIX

DRAFT EDUCATION MAILING