

Determining the physician and patient characteristics influencing the use of atypical antipsychotics in children



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OBJECTIVES

- To determine how patient-level factors, such as age, race, sex, BMI, disease severity, or attitude about consent from parent/guardian influence the physician's decision to prescribe atypical antipsychotics in children.
- To determine how physician characteristics, such as specialization or mental health patient volume influence physician's decision to prescribe atypical antipsychotics in children.

METHODS

102. Elizabeth:

Doctor, please assume that Elizabeth is a patient you have newly diagnosed with mild psychosis. Her history and your current evaluation notes are summarized below.

The patient's diagnosis is consistent with family history. You have informed the parent about the use of atypical antipsychotics. The patient can afford her drugs.

Demographics	Lab values	Symptoms
Age: 15 Gender: Female Height: 63.7 inches Weight: 119.5 pounds BMI: 20.7 (Normal) Pubescent Caucasian	WBC: 7300 (Normal) ANC: 1300 (Low) Fasting glucose: 85mg/dL	Patient has displayed symptoms of mild psychosis: <ul style="list-style-type: none"> Occasional uncontrollable agitation Minimally intrusive auditory hallucinations Mild lack of age-appropriate grooming

During the visit you determine that:

- The parent is willing to sign an informed consent and hasn't expressed any concerns about the use of antipsychotics.
- The patient has no history of alcohol abuse.
- The parent mentions that the patient takes his medications on time.

Treatment options: (Please check all that apply)

Atypical Antipsychotics

- Aripiprazole (Abilify®)
- Asenapine (Saphiris®)
- Clozapine (Clozaril®, generic)
- Iloperidone (Fanapt®)
- Lurasidone (Latuda®)
- Olanzapine (Zyprexa®, Zyprexa Relprevv®, generic)
- Olanzapine & Fluoxetine (Symbyax®, generic)
- Paliperidone (Invega®, Invega Sustena®)
- Quetiapine (Seroquel®, Seroquel XR®, generic)
- Risperidone (Risperidal, Risperidal Consta®, generic)
- Ziprasidone (Geodon®, generic)

Conventional Antipsychotics

- Perphenazine (Trilafon®, generic)
- Chlorpromazine (generic)
- Others

Anti-convulsants

- Lithium (Lithobid®, generic)
- Alpha agonists
- Other

Anti-depressants

Anxiolytics

Mood stabilizers

Stimulants

Other (Please specify _____)

Psychosocial Intervention

Refer to another physician with experience in dealing with pediatric mental health

Refer to non-medical practitioner

Other non-pharmaceutical treatment

Figure1: Sample patient profile

Study design: A cross-sectional patient simulation survey was used to meet the objectives.

Data was collected from a stratified quota sample of 129 primary care physicians and 63 psychiatrists through an on-line survey collected using a commercial vendor.

Survey components:

- A short screener
- Demographics
- 10 Patient profiles with varying combination of selected attributes
- Product ratings
- Evidence supporting use of antipsychotics

Analysis:

An extension of a modified Poisson regression model to accommodate binary data was run using IBM SPSS (Chicago, IL).

RESULTS

Table 1: Comparison of factors influencing physician prescription of second-generation antipsychotics

Characteristic	Primary Care Provider			Psychiatrist		
	RR	95% CI	p	RR	95% CI	p
Physician factors:						
Physician's belief about evidence supporting use						
Labelled indication	2.16	1.56 - 2.98	< 0.001	1.11	0.93 - 1.33	0.230
Medically accepted use	1.88	1.33 - 2.67	<0.001	1.11	0.93 - 1.32	0.240
Physician Race						
Asian American	1.07	0.95-1.20	0.270	1.07	0.95-1.20	0.270
Caucasians	0.98	0.88 - 1.10	0.773	0.98	0.88 - 1.10	0.773
Percentage of patients diagnosed with psychosis	1.00	0.99 - 1.00	0.273	1.00	0.99 - 1.00	0.273
Percentage of patients using antipsychotics	1.00	1.00 - 1.00	0.031	1.00	1.00 - 1.00	0.031
Years spent in active practice	1.01	1.00 - 1.01	0.170	1.01	1.00 - 1.01	0.170
Patient factors:						
Patient severity						
Severe	1.11	1.04 - 1.18	< 0.001	1.11	1.04 - 1.18	< 0.001
Moderate	1.10	1.05 - 1.17	< 0.001	1.10	1.05 - 1.17	< 0.001
Patient age						
4 years	0.75	0.68 - 0.84	< 0.001	0.75	0.68 - 0.84	< 0.001
10 years	0.94	0.91 - 0.99	0.016	0.94	0.91 - 0.99	0.016
Patient WBC Count (Normal range)	1.11	1.05 - 1.17	< 0.001	1.00	0.96 - 1.04	0.877
Patient ANC count (Normal range)	0.99	0.96 - 1.03	0.776	0.99	0.96 - 1.03	0.776

RESULTS

- Patients' foster status, parental concern and BMI were not significant predictors.
- PCPs and psychiatrists differed with respect to the influence of beliefs in evidence for use, and patient WBC counts.
- Up to 19% of physicians reported being unaware of evidence supporting AP use. More than 50% of patient profiles were also recommended multiple APs.

RECOMMENDATIONS

- MCOs should consider providing education programs to physicians regarding treatment guidelines, evidence for use of APs, importance of patients' BMI levels and metabolic monitoring.
- Educating physicians on the evidence, providing or facilitating appropriate clinical use of APs and limiting unwanted AP polypharmacy may lead to lower costs for the patients and MCOs.