

Maryland Behavioral Health Integration in Pediatric Primary Care (MD BHIPP)

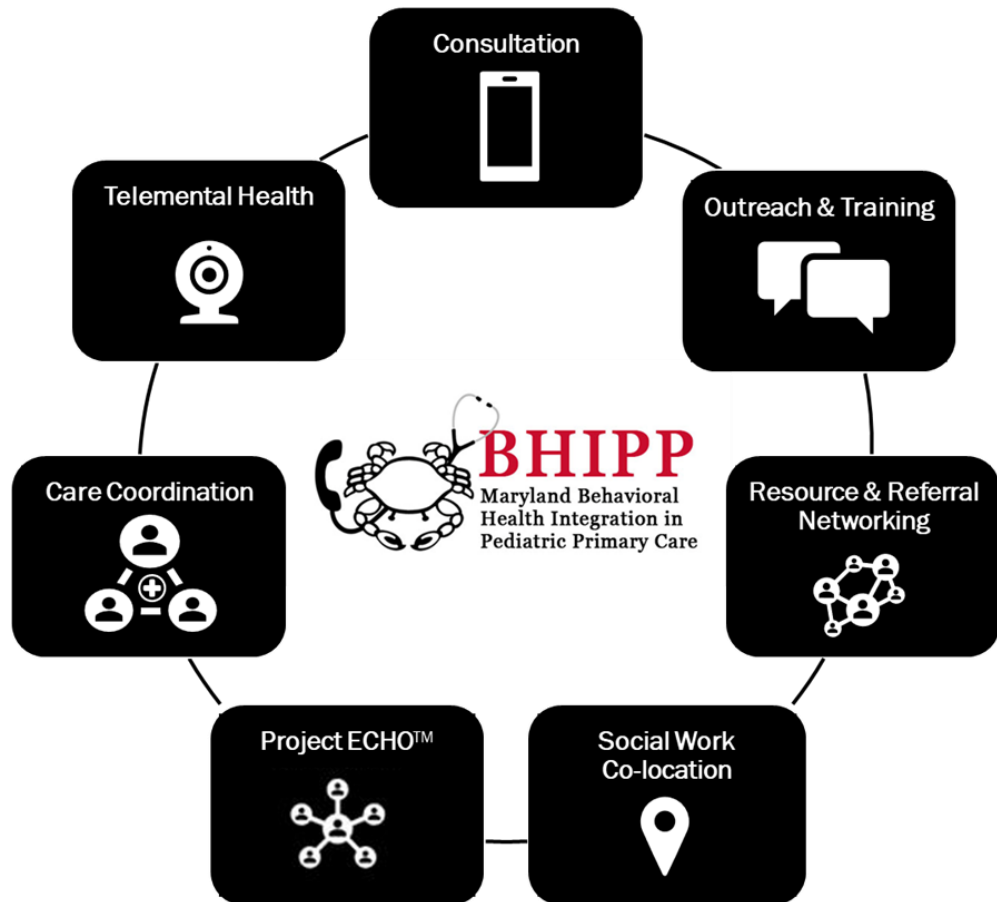


1-855-MD-BHIPP (632-4477)

www.mdbhipp.org

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Who We Are – Maryland BHIPP



Offering support to pediatric primary care providers through free:

- Telephone consultation (855-MD-BHIPP)
- Resource & referral support
- Training & education
- Regionally specific social work co-location (Salisbury University and Morgan State University)
- Project ECHO®
- Direct Telepsychiatry & Telecounseling Services
- Care coordination

Partners & Funding

- BHIPP is supported by funding from the **Maryland Department of Health, Behavioral Health Administration** and operates as a collaboration between the **University of Maryland School of Medicine**, the **Johns Hopkins University School of Medicine**, **Salisbury University** and **Morgan State University**.
- *This program is supported by the **Health Resources and Services Administration (HRSA)** of the U.S. Department of Health and Human Services (HHS) as part of an award totaling \$433,296 with approximately 20% financed by non-governmental sources. The contents of this presentation are those of the author(s) and do not necessarily represent the official views of, nor an endorsement, by HRSA, HHS or the U.S. Government. For more information, visit www.hrsa.gov.*



BHIPP Resilience Break: Prescribing Atypical Antipsychotics in Pediatric Primary Care

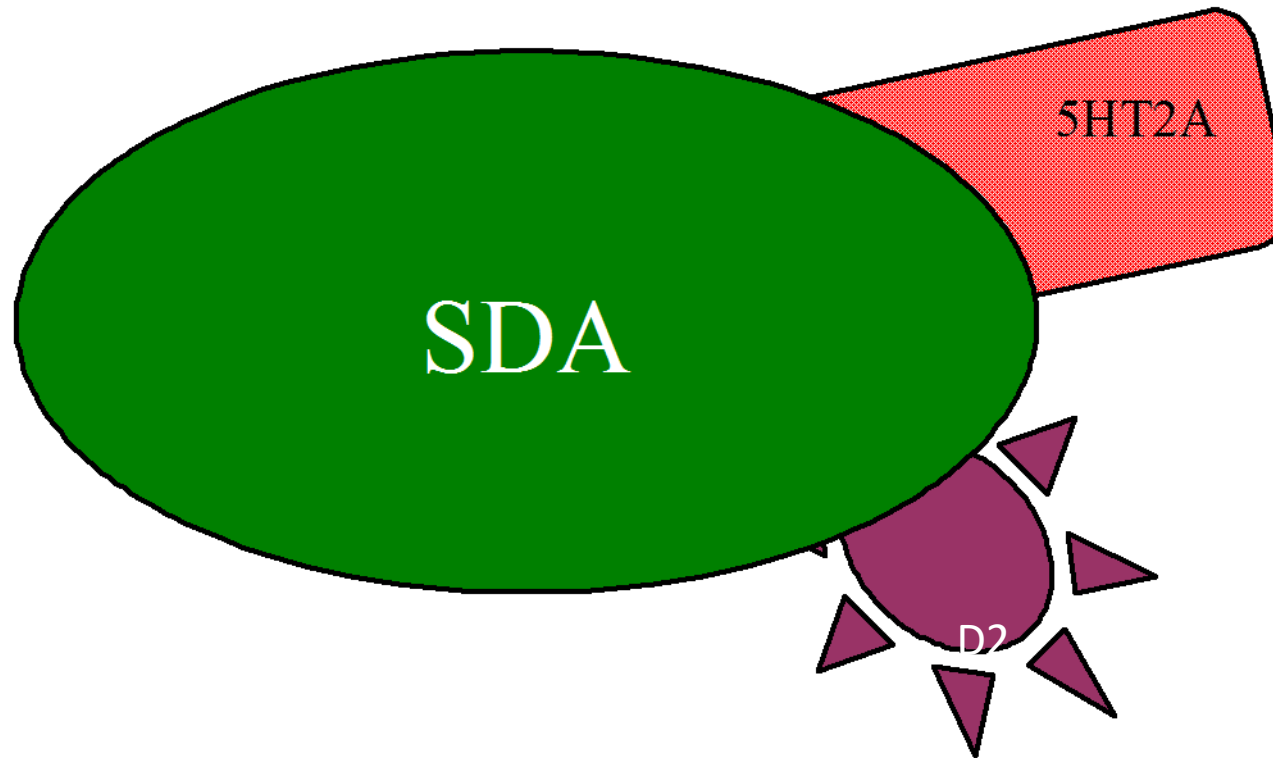


Atypical (second generation) Antipsychotics

Atypical Antipsychotics

- Aripiprazole (Abilify)
- Asenapine (Saphris)
- Brexpiprazole (Rexulti)
- Cariprazine (Vraylar)
- Clozapine (Clozaril, Fazaclo)
- Iloperidone (Fanapt)
- Lurasidone (Latuda)
- Olanzapine (Zyprexa, Zydys)
- Paliperidone (Invega)
- Quetiapine (Seroquel)
- Risperidone (Risperdal)
- Ziprasidone (Geodon)

Mechanism of Action



SDA = second generation antipsychotics; D2 = dopamine 2 receptors; 5HT2A = serotonin receptors

Atypical Antipsychotics

- Higher rate of metabolic disturbances
 - Weight gain
 - Diabetes
 - Dyslipidemia
- Reduced risk of causing extrapyramidal symptoms (EPS) or tardive dyskinesia
- Do not raise prolactin levels (as a group)

Atypical Antipsychotics

Ziprasidone
Risperidone
Paliperidone
Iloperisone
Lurasidone

-DONES

Asenapine
Clozapine
Olanzapine
Quetiapine

-PINES

Aripiprazole
Brexipiprazole
Cariprazine

2 PIPS AND A RIP

Aripiprazole (Abilify)

Dose	Initial: 2 mg daily for 2 days, followed by 5 mg daily for 2 days with a further increase to target dose of 10 mg daily Maximum daily dose of 30 mg/day.
Available formulations	Tablet, ODT, liquid solution, LAI
Metabolism	CYP3A4 and CYP2D6
Clinical Pearls	<ul style="list-style-type: none">• Headaches• Less sedation and anticholinergic effects• Low metabolic effects• More akathisia

* ODT = oral disintegrating tablet; LAI = long-acting injection

Brexpiprazole (Rexulti)

Dose	Initial: 0.5 mg once daily for 4 days (days 1 to 4); titrate to 1 mg once daily for 3 days (days 5 to 7), followed by 2 mg once daily on day 8 based on response and tolerability; target dose range: 2 to 4 mg once daily Maximum daily dose: 4 mg/day.
Available formulations	Tablet
Metabolism	CYP3A4 and CYP2D6
Clinical Pearls	<ul style="list-style-type: none">• Very long half-life (91 hrs)• Low metabolic syndrome• Headaches, N/V/D are common• Titrate slowly for hypotension• BBW for suicidal thoughts/attempts in pediatrics and young adults

Cariprazine (Vraylar)

Dose	Usual range: 1.5 mg to 6 mg once daily
Available formulations	Capsule
Metabolism	CYP3A4 and CYP2D6
Clinical Pearls	<ul style="list-style-type: none">• Low metabolic symptom risk and orthostasis/sedation• Moderate EPS• Possible cataract development

Asenapine (Saphris)

Dose	Initial: 2.5 mg twice daily; may titrate after 3 days to 5 mg twice daily, then after an additional 3 days to 10 mg twice daily based on tolerability; recommended daily dose range: 5 to 20 mg/day in 2 divided doses Maximum dose: 10 mg
Available formulations	SL, transdermal
Metabolism	CYP1A2
Clinical Pearls	<ul style="list-style-type: none">• Minimal effects on lipids and glucose• QTc prolongation• Do not eat/drink for 10 minutes after administration• FDA 9/2011 Warning- 52 cases of “serious” allergic reactions

Quetiapine (Seroquel)

Dose	<p>Immediate-release tablet: Oral: Initial: 25 mg twice daily on day 1; increase to 50 mg twice daily on day 2, 100 mg twice daily on day 3, then 150 mg twice daily on day 4, then continue at a target dose of 200 mg twice daily beginning on day 5. Usual dosage range: 200 to 400 mg twice daily; maximum daily dose: 800 mg/day.</p> <p>Extended-release tablet: Oral: Initial: 50 mg once daily on day 1; increase to 100 mg once daily on day 2, then increase in 100 mg/day increments each day until a target dose of 400 mg once daily is reached on day 5. Usual dosage range: 400 to 800 mg once daily; maximum daily dose: 800 mg/day.</p>
Available formulations	Tablet
Metabolism	CYP3A4
Clinical Pearls	<ul style="list-style-type: none">• Weight gain• Increased glucose and cholesterol• Sedation• Cataracts in animals with quetiapine• Titration with IR formulation• Relatively benign EPS profile (second behind clozapine)

Olanzapine (Zyprexa)

Dose	Oral: Initial: 2.5 to 5 mg once daily; increase dose in 2.5 or 5 mg increments at weekly intervals to target dose of 10 mg once daily Maximum dose: 20 mg/day.
Available formulations	Tablet, injection, ODT, LAI
Metabolism	CYP1A2 and CYP3A4
Clinical Pearls	<ul style="list-style-type: none">• Weight gain• Increased glucose levels• Increased cholesterol• High anticholinergic effects

Clozapine (Clozaril)

Dose	Children ≥ 6 years: Oral: 6.25 or 12.5 mg once daily. Adolescents: Oral: 12.5 mg once or twice daily.
Available formulations	Tablet, ODT, suspension
Metabolism	CYP1A2, CYP3A4, CYP2C19
Clinical Pearls	<ul style="list-style-type: none">• Drug of choice in treatment-resistant schizophrenia• Increased blood glucose and cholesterol• Weight gain !!!• High anticholinergic effects and orthostasis• Hypersalivation and drooling• Myocarditis and cardiomyopathy• Benign EPS and TD profile• Goal serum concentration: > 350 ng/mL (max concentration is unknown)

Clozapine (Clozaril)

- Seizure risk
 - < 300 mg/day 1% to 2%
 - 300 – 600 mg/day 3% to 4%
 - > 600 mg/day ~5%
- **Agranulocytosis**
 - Risk in clinical trials 1% to 2%
 - Register with TEVA clozapine registry before dispensing
 - Do not initiate in patients with
 - History of myeloproliferative disorder
 - Clozapine induced agranulocytosis or granulocytopenia
 - Initial WBC < 3500

Clozapine Monitoring: General Population

	General Population	
	Treatment Recommendation	ANC Monitoring
Baseline	ANC \geq 1500	<ul style="list-style-type: none"> Weekly x 6 months Biweekly x 6 months Monthly afterwards
Mild neutropenia (1000-1499)	Continue treatment	<ul style="list-style-type: none"> 3x/week until \geq 1500 Then resume
Moderate neutropenia (500-999)	Interrupt tx Resume ANC \geq 1000 Consider hematology consult	<ul style="list-style-type: none"> Daily until \geq 1000 3x/week until \geq 1500 Weekly x 4 weeks Then resume
Severe neutropenia (<500)	Interrupt therapy Do not rechallenge until determining benefits > risks	<ul style="list-style-type: none"> Daily until \geq 1000 3x/week until \geq 1500 If rechallenged, restart monitoring frequency

- Absolute neutrophil count (ANC) = Total WBC count X (total % of neutrophils)
- ANC = Total WBC count X (segs plus bands)

Ziprasidone (Geodon)

Dose	Children 5 to 11 years: IM: 10 mg Children ≥12 years and Adolescents: IM: 10 to 20 mg
Available formulations	Capsule, injection
Metabolism	Aldehyde oxidase, CYP3A4
Clinical Pearls	<ul style="list-style-type: none">• Minimal weight gain and effect on metabolic profile• Contraindicated in QTc prolongation• Capsule must be taken with food to increase GI absorption• More akathisia

Risperidone (Risperdal)

Dose	<ul style="list-style-type: none">• Oral: Initial: 0.5 mg once daily; dose may be adjusted if needed, in increments of 0.5 to 1 mg/day at intervals ≥ 24 hours, as tolerated, to a dose of 3 mg/day.
Available formulations	Tablet, ODT, liquid soln, LAI
Metabolism	CYP2D6
Clinical Pearls	<ul style="list-style-type: none">• Hyperprolactinemia• Sexual dysfunction• Dose dependent EPS (> 6 mg)• Moderate weight gain and metabolic disturbances

Paliperidone (Invega)

Dose	<ul style="list-style-type: none">• Invega Usual dose: 3 – 9 mg/d (max 12 mg/d)• Invega Sustenna Usual dose: 39 – 234 mg/d (max 234 mg/d)
Available formulations	ER, LAI
Metabolism	CYP2D6, CYP3A4, some dealkylation and hydroxylation
Clinical Pearls	Side effect profile similar to risperidone Hyperprolactinemia Dose dependent EPS (> 6 mg) Tablet eliminated in stool QTc prolongation

Iloperidone (Fanapt)

Dose	Usual dose: 2 – 24 mg/d (max 24 mg/d)
Available formulations	Tablet
Metabolism	CYP2D6, CYP3A4
Clinical Pearls	<ul style="list-style-type: none">• Orthostasis• QTc prolongation• Moderate metabolic effects

Lurasidone (Latuda)

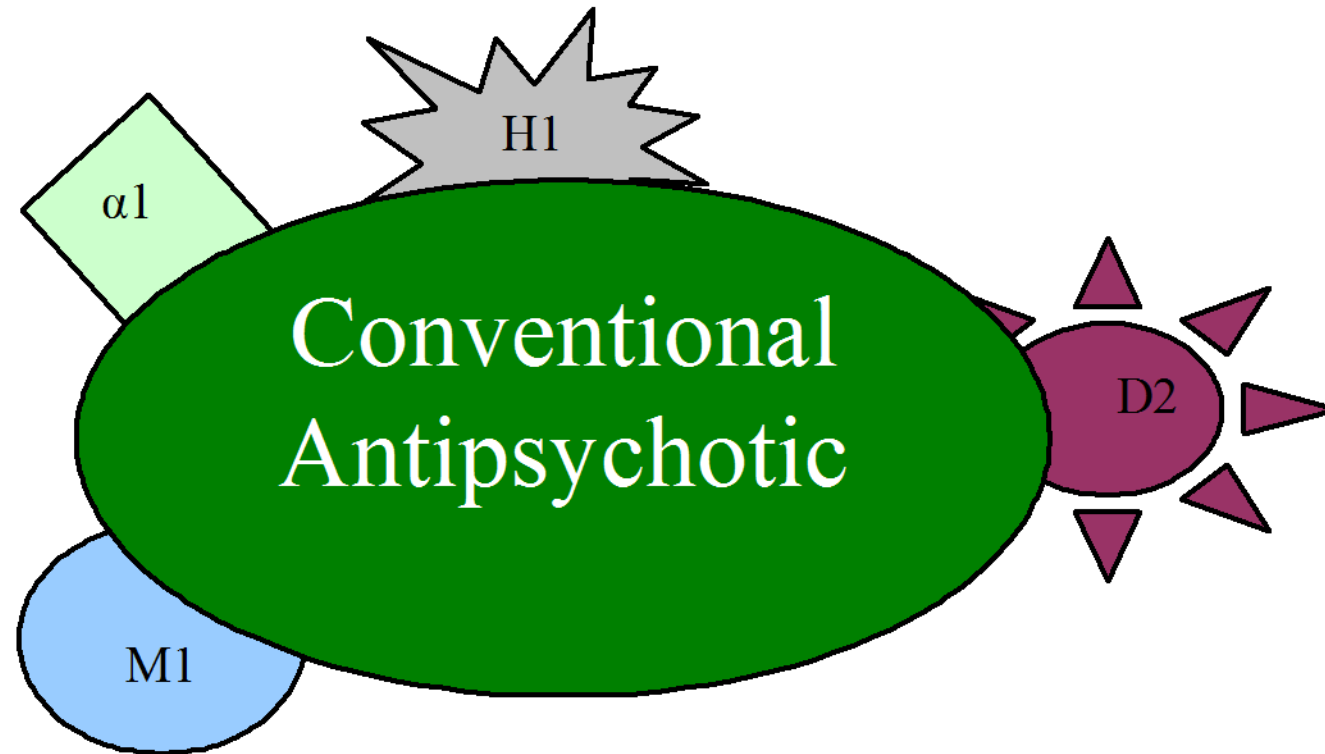
Dose	Oral: Initial: 40 mg once daily; may increase dose further based on response and tolerability; age-dependent maximum recommended daily dose: for ages <18 years: 80 mg/day; for ages ≥18 years: 160 mg/day.
Available formulations	Tablet
Metabolism	3A4
Clinical Pearls	<ul style="list-style-type: none">• Neutral effects on glucose, lipids, cardiac conduction• Dose-dependent akathisia, somnolence, nausea, parkinson, and agitation• Take with food (at least 350 calories)• Black Box Warning for suicidal thoughts and behavior in pediatrics and young adults

Typical (traditional, conventional, or first generation) Antipsychotics

Typical Antipsychotics

- Phenothiazines
 - **Chlorpromazine (Thorazine)**
 - **Fluphenazine (Prolixin)**
 - Thioridazine (Mellaril)
 - Mesoridazine (Serentil)
 - **Perphenazine (Trilafon)**
 - Trifluoperazine (Stelazine)
- Dibenzepines
 - **Loxapine (Loxitane)**
- Butyrophenones
 - Haloperidol (Haldol)
- Diphenylbutylpiperadine
 - Pimozide (Orap)
- Thioxanthene
 - Thiothizene (Navane)
- Indolones
 - Molindone (Moban)

Mechanism of Action



$\alpha 1$ = alpha-1 receptor; H1 histaminic receptor; and M1 = muscarinic receptor

Dose Equivalencies

Generic Name	Equivalent Doses (mg)	Usual Dose Range (mg/d)	Maximum Dose (mg/d)
Chlorpromazine	100	100 - 800	2,000
Fluphenazine	2	2 - 20	40
Haloperidol	2	2 - 20	100
Loxapine	10	10 - 80	250
Molindone	10	10 - 100	225
Perphenazine	10	10 - 64	64
Thioridazine	100	100 - 800	800
Thiothixene	4	4 - 40	60
Trifluoperazine	5	5 - 40	80

Typical Antipsychotics

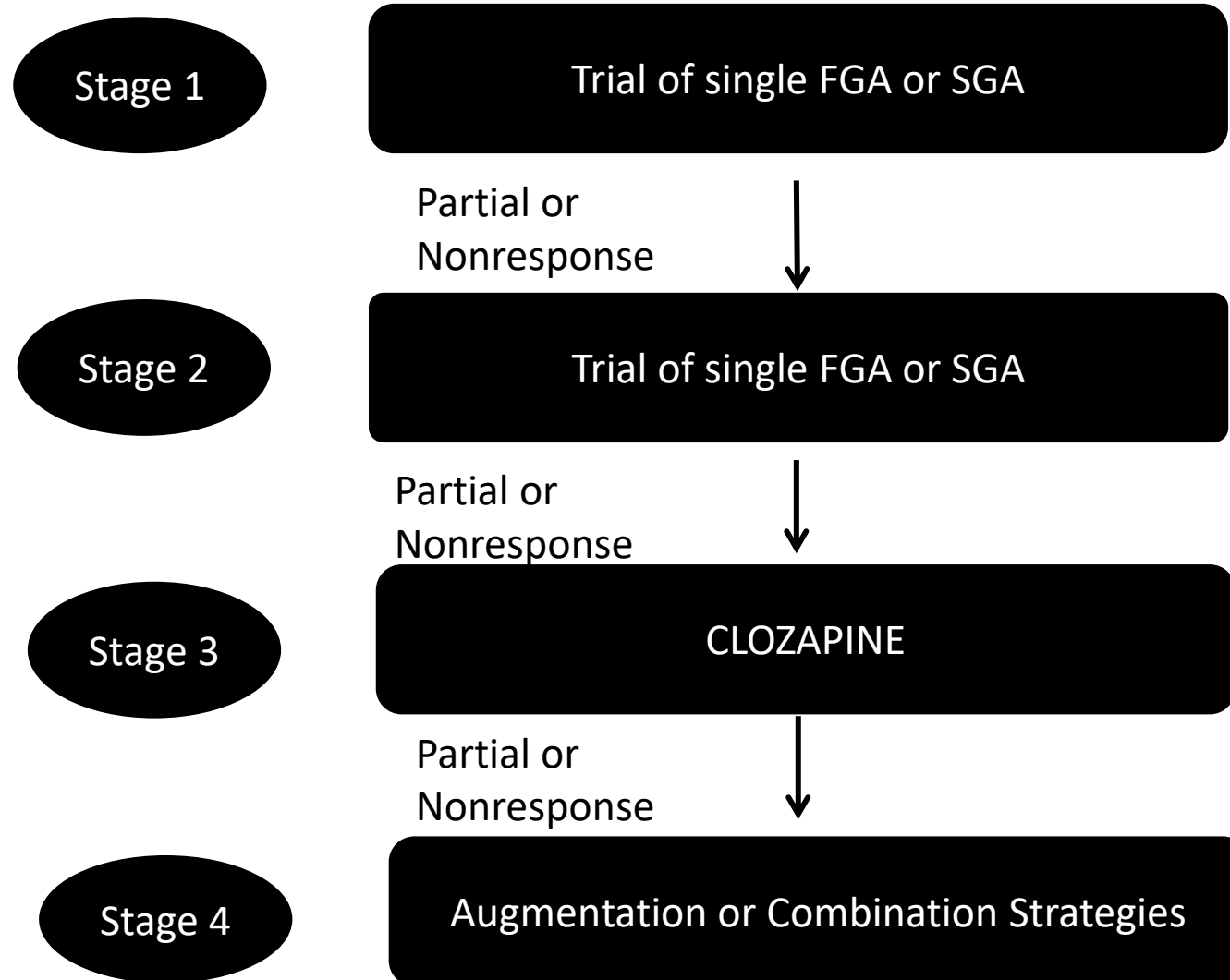
- High-potency (**haloperidol**, fluphenazine)
 - High risk of EPS
 - Low risk of orthostatic hypotension, tachycardia, and anticholinergic effects (HAM)
- Low-potency (chlorpromazine, thioridazine)
 - Low risk of EPS
 - High risk of sedation, orthostatic hypotension, tachycardia, and anticholinergic effects
- Medium-potency (loxapine, perphenazine, molindone)
 - Medium EPS and anti-HAM

Side Effects

- Higher risk of extrapyramidal symptoms (EPS)
 - Dystonia
 - Parkinsonism
 - Akathisia
 - Tardive dyskinesia (potentially permanent)
- Neuroleptic Malignant Syndrome
- Anti-HAM side effects
- Hyperprolactinemia
- QT prolongation

Treatment Algorithm

APA Practice Guidelines (2020)



Treatment Considerations

- When choosing an antipsychotic medication, consider:
 - Patient preferences
 - Past responses to treatment
 - Medication's typical side effect profile
 - Presence of physical health conditions that may be affected by medication side effects
 - Other medication related factors such as available formulations, potential for drug-drug interactions, receptor binding profiles, and pharmacokinetic considerations

Antipsychotic Medication Prescribing Tips for Children and Adolescents

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Fictional Case

10 year old male with ADHD and Autism Spectrum Disorder (high functioning /level 1) who has no PMH. On 75th percentile BMI. Has been increasingly aggressive at school and at home (for the past year with a gradual increase in frequency and intensity). Has difficulty functioning at school despite an Individualized Educational Plan (IEP). Also noted to demonstrate irritability and obsessional ,rigid thinking. Has difficulty with transitions. No imminent SI or HI currently. No clear AVH but at times talks to his friends who are not present and seems to think his video games are real and he is inside them. Takes guanfacine ER 4 mg at night and Vyvanse 40 mg daily for ADHD. Has had multiple prior medication trials but no antipsychotic medication. No reported side effects from current ADHD medication; adherent and appears to help with ADHD symptoms including impulsive behavior. Gets behavioral therapy services in school.

Antipsychotic Prescribing Principle #1



A working diagnosis provides the most effective
medication treatment plan

Diagnosis --with Target Symptoms

- Do not prescribe an antipsychotic medication if there is no working diagnosis/clear indication
- What symptoms are being targeted?
- Prior psychotropic treatment trials?
- What other medications currently?

Antipsychotic medications are NOT typically indicated for:

- Insomnia
- Developmental delays or learning disabilities
- Language/communication problems
- Adjustment disorders
- ADHD alone without comorbidity (particularly if no prior medication trials)
- Anxiety disorders
- Medical somatic conditions (e.g. asthma, migraine headaches)
- Very young children (especially if no other prior medication trials)

Considering at Risk/ Safety Concerns Related to the Working Diagnosis

- At risk to self or others?
- At risk for placement?
- At risk for suspension from school?
- *Utilize crisis services/higher level of care to increase safety monitoring and accelerate completion of evaluation as needed*

Principle #2:



Prescribing should follow evidence- based practice and standard of care

Pediatric Evidence-Base for Antipsychotic Use?

- Pediatric Studies: the younger the age, less studies available
- Adult Studies: May differ in terms of physiology or co-occurring illnesses
- Food and Drug Administration (FDA) Approval specific for medication, age, and indication
- Expert Consensus Practice Guidelines: AAP, AACAP, APA, Primary Care Guidelines
- Expert Consultation: Often for subspecialty areas or less common conditions

Pediatric Approved Antipsychotics

	<u>Irritability due to autism</u>		
Risperdal (risperidone)	5-17*		
Abilify (aripiprazole)	6-17		
	<u>Schizophrenia</u>	<u>Bipolar I</u>	
Risperdal (risperidone)	13-17 *	10-17 *	
Abilify (aripiprazole)	13-17	10-17	
Zyprexa (olanzapine)	13-17	13-17	
Seroquel (quetiapine)	13-17	10-17	
Invega (paliperidone)	12-17		
Saphris (asenapine)		10-17	
Latuda(lurasidone)	13-17	10-17 (depressed)	

*age in years



Avoid Outlier Prescribing

- Utilize medication options that have the most pediatric data for first-line treatment
- Treatment refractory illness: Seek consultation/second opinion for high dose treatment (above FDA guidelines) and complex regimens
- Re-assess the diagnosis and adherence if child is not responding to standard treatment

Antipsychotic (AP)	Typical initial doses:
Abilify (Aripiprazole)	2 - 2.5 mg daily
Quetiapine (Seroquel)	25 or 50 mg daily
Olanzapine (Zyprexa)	2.5 mg daily
Risperidone (Risperdal)	0.5 mg daily (if over 20 kg) 0.25 mg daily (if under 20 kg)
Ziprasidone (Geodon)	20 mg daily
Asenapine (Saphris)	2.5 mg daily
Paliperidone (Invega)	3 mg daily
Lurasidone (Latuda)	20 mg daily

Typical Examples of AP Pediatric Start Doses

Psychosocial therapy

- Recommend psychosocial therapy with AP use.
- Psychosocial therapy in conjunction with AP is particularly important with the younger patients

Antipsychotic Prescribing Principle #3



Discussion about and monitoring for Side Effects

Weight gain

- Youth are more vulnerable to this side effect than adults
- Active counseling on health lifestyle and behavioral changes
- Often excess of 7% baseline weight within first 3 months of treatment
- Need to assess for “silent” side effects (e.g. increased cholesterol)
- Olanzapine>quetiapine>risperidone> abilify/Latuda

AACAP Practice Parameter Atypical Antipsychotic Medication

- Recommendation 3:

Obtain a personal and family history of diabetes and Hyperlipidemia, seizures and cardiac abnormalities as well as a family hx of previous response or adverse effects with AP

Dyslipidemia

- Less consistently reported in RCT's
- Analysis of pediatric short term trials (3-12 weeks) – ½ received aripiprazole or risperidone
- Olanzapine/quetiapine – 20 mg/dL increase in triglycerides

Metabolic Syndrome

- Olanzapine has direct hepatic effect
- Generally same propensity for Metabolic Syndrome as for weight gain:
 Olanzapine > quetiapine > risperidone >
 abilify/Latuda/ ziprasidone

Monitor weight/BMI

Lab monitoring

Systematic review

- Galling et al., 2016
- T2DM incidence among antipsychotic tx youth (3 month after med initiated), clinical comparison, and healthy controls
- Risk among antipsychotic tx – 3 X and clinical comparison 1.8 times compared to health control

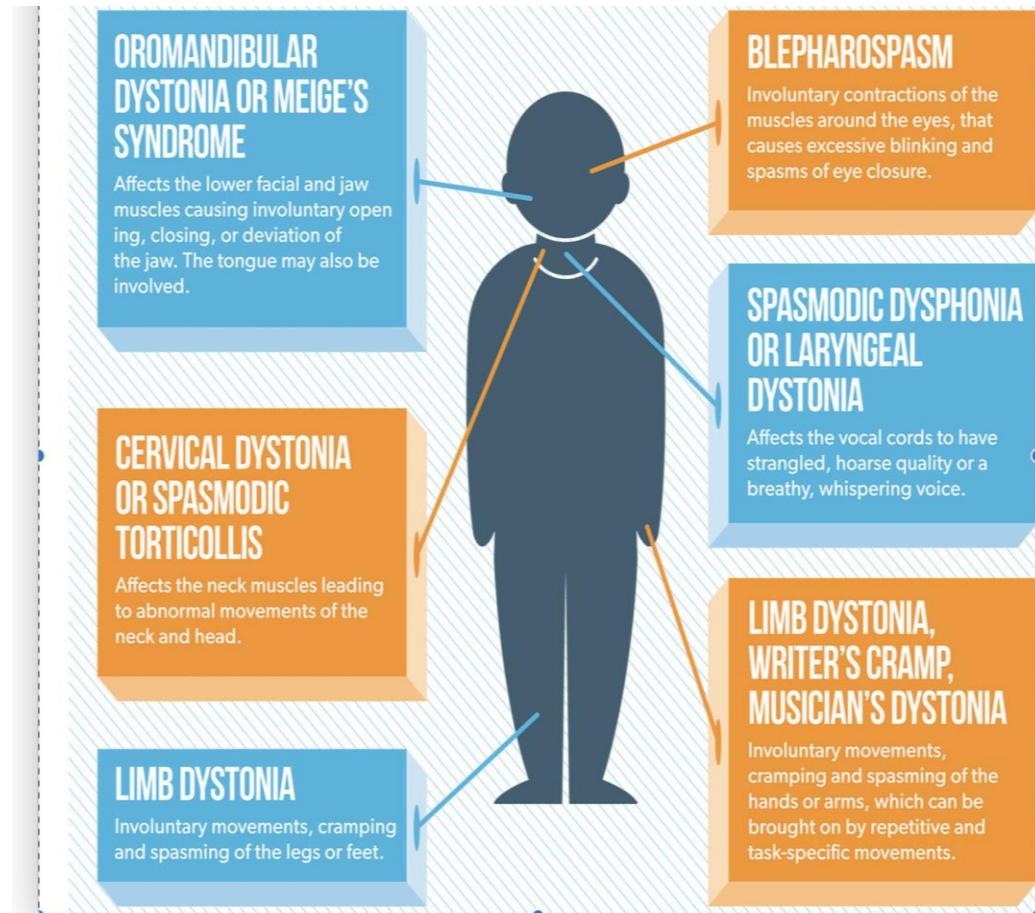
Specific Side Effects of Antipsychotic Medications

- Early or late onset extrapyramidal side effects
 - Dystonia
 - Cogwheel and Parkinsonism
 - Akathisia
 - Tardive dyskinesia

Dystonia

- Acute
- Particularly higher start doses or with dose increases
- Danger of respiratory/laryngeal dystonia
- Treat with diphenhydramine or benztropine

<https://www.michaeljfox.org/news/dystonia>



Extrapyramidal/ Parkinsonism

- Cogwheel
- Mild tremor

Akathisia

- Feeling of internal restlessness or jitteriness
- In youth often found with new hyperactivity or fidgetiness.
- Suspect when report these symptoms or if symptoms get worse as you increase the antipsychotic medication.

Tardive Dyskinesia

Symptoms May Range from Mild to Severe



Movements of the Mouth

Such as frowning, sticking out tongue, lip smacking, puckering, and pursing



Rapid Movements of the Body

Commonly in the arms, legs, and trunk



Face

Disfigured facial features such as drooping of the mouth or eyes



Eyes

Rapid blinking



Difficulty Breathing



Difficulty Swallowing



Difficulty Speaking

Abnormal Involuntary Movement Scale

ABNORMAL INVOLUNTARY MOVEMENT SCALE (AIMS)

Public Health Service
Alcohol, Drug Abuse, and Mental Health Administration
National Institute of Mental Health

NAME: _____
DATE: _____
Prescribing Practitioner: _____

CODE: 0 = None
1 = Minimal, may be extreme normal
2 = Mild
3 = Moderate
4 = Severe

INSTRUCTIONS:
Complete Examination Procedure (attachment d.)
before making ratings

MOVEMENT RATINGS: Rate highest severity observed. Rate movements that occur upon activation one <u>less</u> than those observed spontaneously. Circle movement as well as code number that applies.		RATER
		Date
Facial and Oral Movements	1. Muscles of Facial Expression e.g. movements of forehead, eyebrows periorbital area, cheeks, including frowning blinking, smiling, grimacing	0 1 2 3 4
	2. Lips and Perioral Area e.g., puckering, pouting, smacking	0 1 2 3 4
	3. Jaw e.g. biting, clenching, chewing, mouth opening, lateral movement	0 1 2 3 4
	4. Tongue Rate only increases in movement both in and out of mouth. NOT inability to sustain movement. Darting in and out of mouth.	0 1 2 3 4
Extremity Movements	5. Upper (arms, wrists, hands, fingers) Include choreic movements (i.e., rapid, objectively purposeless, irregular, spontaneous) athetoid movements (i.e., slow, irregular, complex, serpentine). DO NOT INCLUDE TREMOR (i.e., repetitive, regular, rhythmic)	0 1 2 3 4
	6. Lower (legs, knees, ankles, toes) e.g., lateral knee movement, foot tapping, heel dropping, foot squirming, inversion and eversion of foot.	0 1 2 3 4
Trunk Movements	7. Neck, shoulders, hips e.g., rocking, twisting, squirming, pelvic gyrations	0 1 2 3 4
Global Judgments	8. Severity of abnormal movements overall	0 1 2 3 4
	9. Incapacitation due to abnormal movements	0 1 2 3 4
	10. Patient's awareness of abnormal movements. Rate only patient's report No awareness 0 Aware, no distress 1 Aware, mild distress 2 Aware, moderate distress 3 Aware, severe distress 4	0 1 2 3 4
Dental Status	11. Current problems with teeth and/or dentures	No Yes
	12. Are dentures usually worn?	No Yes
	13. Edentia?	No Yes
	14. Do movements disappear in sleep?	No Yes

Final: 9/2000

This information is available in the public domain and has not been modified.



AIMS sample



<https://aapp.org/ed/movement-disorders>

Neuroleptic Malignant Syndrome

- Rigidity
- change in mental status
- CK elevation
- vital sign / autonomic instability

QTC Prolongation

- High risk :
 - Ziprasidone
 - Lower risk:
 - Aripiprazole & Latuda
- *Use of other meds

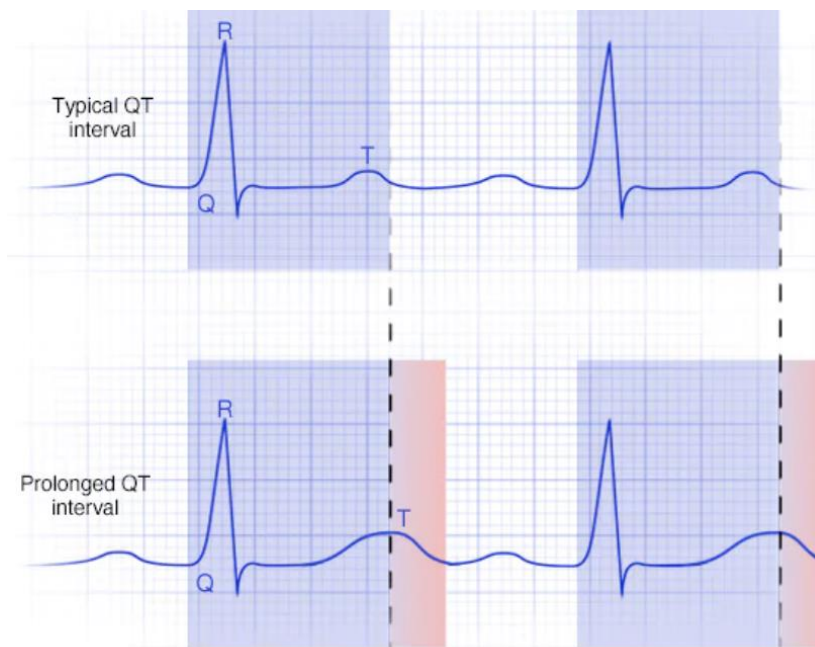


Table 3: Normal QTc Values by Age and Gender (Bazget formula)

QTc value (msec)	1–15 years	Males	Females
Normal	<440	<430	<450
Borderline	441–460	431–450	451–470
Prolonged	>460	>450	>470

QTc = corrected QT. Note absence of gender difference until early adolescence. Bazget formula adapted from Goldenberg, et al., 2006¹⁰³

OPEN ACCESS

Table 3: Normal QTc Values by Age and Gender (Bazget formula). QTc Women and Men.

Christos-Konstantinos Antoniou, Polychronis Dilaveris, Panagiota Manolakou, Spyridon Galanakis, Nikolaos Magkas, Konstantinos Gatzoulis, Dimitris Tousoulis

Normal QTc Interval range calculation/duration by Age in Child, Female & Male patients on ECG. QTc women and men.

Citation: European Cardiology Review 2017;12(2):112–20

Torsades de pointes



<https://first10em.com/torsades-de-pointes/>

Antipsychotic Prescribing #4

Follow up



New Psychiatric Medication on Board? What to Watch for:

- Sedation
 - Impaired concentration
 - GI disturbance
 - Headache
 - Restlessness
 - Muscle spasm/tics
 - Activation
 - Jitteriness
 - Dry mouth
 - Blurred vision
 - Constipation or diarrhea
- Which side effects should remit over time?
 - Which side effects need to be reported to parent/prescriber?
 - Which, if any, would warn of potential medical emergency?

Every Medical Visit

- Adherence
- Side effects
- Benefits
- Psychosocial issues– Team work

Follow up?

- Monthly BMI first three months than quarterly
- Repeat blood pressure
- Fasting labs (glucose, lipids, LFT) at 6 months and again at 1 year
- Annual monitoring of waist circumference
- More frequent monitoring as clinically indicated

Polypharmacy Issues

- Step-wise adjustments whenever possible
- Attention to contraindications (ex. Clarithromycin and Ziprasidone)
- Optimize before adding (dose and duration)
- Re-assess ineffective medication
- Consider if partial response vs treatment refractory

Non-Responses to AP

- Reassess the diagnosis and treatment plan.
- Seek psychopharm consultation (e.g. from BHIPP or a medical director etc...)
- When switching to another antipsychotic it is typically advantageous to go slowly if clinically possible
- A cross-over titration/tapering is typical for antipsychotic switches.



Medication Administration Tips

- Certain medications should be given with food: Geodon (ziprasidone), Latuda (lurasidone), etc.
- Others should be taken without food or drink: Saphris (asenapine); dissolve under tongue
- When switching AP may taper and titrate to switch
- Close attention should be paid to formulation: longer-acting vs immediate release, rapidly dissolving formulations, etc.
- Some tablet or capsule shells may be seen in feces: (Invega etc.)

Overview

- Indications for various SGAs for schizophrenia and Bipolar1 (except Latuda's approval is for BPAD depressed)
- Safety monitoring: weight/height, fasting labs (glucose, cholesterol/lipids, liver function) at baseline and follow up; ECG for some medications
- Risk of new onset diabetes, metabolic syndrome and weight gain; less commonly tardive dyskinesia (irreversible)
- Non-adherence is common (consider restart dosing)
- Medication titration often necessary
 - Watch for early onset side effects: sedation, constipation, dry mouth, movement disorders
 - Medication trial usually 4-6 weeks to see greatest response

Summary

- Many steps to prescribing
- Collaborative biopsychosocial evaluation and diagnosis
- Follow evidence-based standards of care
- Establish baseline symptoms and monitor side effects and adherence

Thank you!

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