


*Antipsychotic Medications for Patients with Dual Diagnosis*



*J.P. Gentile MD  
Wright State University  
Coordinating Center of Excellence in MI/DD*

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**Disclaimer**

- ▶ *Use of clinical vignettes to illustrate educational themes; at times with details altered to protect patients' confidentiality*
- ▶ *Names of specific medications are mentioned, but I have no affiliation with any pharmaceutical company*

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**Clinical Vignette**

- ▶ 44 year old Male, hospitalized at TVBH
- ▶ Presented with claims of having won the lottery (\$22 million)
- ▶ Had lottery ticket
- ▶ Also had Capgras syndrome, usually associated with schizophrenia

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## Definition

- ▶ **Capgras' syndrome** – The delusion that others, or self, have been replaced by imposters

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## Assessing for Psychosis

- ▶ *Remember it is less common than we think*
- ▶ *Use your observational skills*
- ▶ *Take your time*
- ▶ *Always consider medication side effects as etiology*

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## Assessing for Psychosis

- ▶ *Do your ears ever play tricks on you?*
- ▶ *Do your eyes ever play tricks on you?*
- ▶ *Do things ever smell funny?*
- ▶ *Do you get funny tastes in your mouth?*
- ▶ *Do people ever touch you... and you can't see them?*

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## Assessing for Psychosis

- ▶ *Awake or asleep?*
- ▶ *People you know or you don't?*
- ▶ *Nice or mean or just OK?*
- ▶ *Can you start and stop it?*
- ▶ *Do you get headaches or sick feelings at the same time?*
- ▶ *Does anything help? Or make it worse?*

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## Possible indicators of Psychosis

- ▶ *Stares to the (unoccupied) side and nods or gestures, as though in an interaction*
- ▶ *BUT this could be coping mechanism for anxiety or movement disorder (neuroleptic-induced)*

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## Possible indicators of Psychosis

- ▶ *Wears multiple layers of clothing; stuffs clothing with unusual substances or objects*
- ▶ *BUT remember to rule out endocrine or medication problems AND this is a frequent post-institution coping strategy*

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Possible indicators of Psychosis

- ▶ *Covers eyes or ears*
- ▶ *BUT this could also be expression of hypersensitivity, preferences, or fears*
- ▶ *Rule out pain and depression*

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Possible indicators of Psychosis

- ▶ *Places unusual wrappings around ankles, wrists, or other "openings"*
- ▶ *BUT this could be post-institutional coping, or temperature regulation, or sensory integration issues*

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Possible indicators of Psychosis

- ▶ *Glares with hostility at previously liked others OR strangers*
- ▶ *BUT this could be rage or paranoia secondary to abuse or trauma history*

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Possible indicators of Psychosis

- ▶ *Brushes unseen material off body*
- ▶ *BUT this could be dissociative or a neuropathy*

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Possible indicators of Psychosis

- ▶ *Inspects food with unusual intensity*
- ▶ *BUT some who have lived in situations where medication was hidden in food*

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Possible indicators of Psychosis

- ▶ *Grimaces or winces as though tasting or smelling something foul or nasty*
- ▶ *BUT this could be seizure activity or dissociation*

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### Usually NOT Psychosis

- ▶ *Self-injury*
- ▶ *Explosive aggression*
- ▶ *Phenomena the person can stop or start at will*
- ▶ *Self talk*

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### Support for Schizophrenia

- ▶ *Family history (?)*
- ▶ *Affective expressions incongruent with the conversation*
- ▶ *Problems with initiation*

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### Shirley

- ▶ *67 year old married female*
- ▶ *History of Mild Mental Retardation and Schizophrenia, paranoid type*
- ▶ *Lives in group home setting with her husband and 2 other housemates*
- ▶ *Medications: Tegretol (seizure disorder), Seroquel, and Klonopin*

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## Antipsychotic Medications

- ▶ *First Generation versus Second Generation*
- ▶ *First Generation are “tried and true”*
- ▶ *First Generation have multiple forms of delivery*

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## Antipsychotic Medications

- ▶ *Older medications are inexpensive (several are \$4/month supply)*
- ▶ *Antagonism of DA receptors (especially DA-2)*

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## Antipsychotic Medications

- ▶ *Standard to prescribe a medication to prevent EPS (extrapyramidal side effects)*
- ▶ *May be considered temporary*
- ▶ *Cogentin*
- ▶ *Artane*
- ▶ *Benadryl*
- ▶ *Benzodiazepines (in emergency situations)*
- ▶ *Take into consideration half life*

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## “Off Label” Antipsychotic Use

- ▶ “Off Label” use of antipsychotics is strikingly common and supported in the literature
  - There are also critics in the literature who caution against such use
- ▶ This presentation acknowledges the need for sound clinical judgment and the ability to practice the art of medicine
  - Primary focus will stay on “label” and “indicated” usage of antipsychotics

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## First Generation Antipsychotics

▶ Chlorpromazine	Thorazine	1954
▶ Trifluoperazine	Stelazine	1958
▶ Perphenazine	Trilafon	1958
▶ Thioridazine	Mellaril	1959
▶ Fluphenazine	Prolixin	1959
▶ Thiothixene	Navane	1967
▶ Haloperidol	Haldol	1967
▶ Mesoridazine	Serentil	1970
▶ Loxapine	Loxitane	1973

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## First Generation Antipsychotics

- ▶ *All lower seizure threshold*
- ▶ *All decrease cardiac contractility*
- ▶ *All cause orthostatic hypotension (dizziness upon standing)*
- ▶ *All cause elevated prolactin*
- ▶ *All cause anticholinergic side effects*

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## First Generation Antipsychotics

- › Haldol 2mg
- › Prolixin 2mg
- › Orap 1.5mg
- › Navane 4mg
- › Stelazine 5mg
- › Trilafon 8mg
- › Moban 10mg
- › Loxitane 10mg
- › Thorazine 100mg
- › Mellaril 100mg



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## Marissa

- › 27 year old female
- › History of Moderate Mental Retardation and Panic Disorder
- › Anger outbursts when out in community, unpredictable, decrease in ADLs
- › Depakote, Effexor XR trial (treats anxiety, depression, impulsivity/aggression)

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## Atypical Antipsychotics

- › Clozapine (Clozaril) - 1990
- › Risperidone (Risperdal) - 1994
- › Olanzapine (Zyprexa) - 1996
- › Quetiapine (Seroquel) - 1997
- › Ziprasidone (Geodon) - 2001
- › Aripiprazole (Abilify) - 2002
- › Paliperidone (Invega) - 2006
- › Iloperidone (Fanapt) - 2009
- › Asenapine (Saphris) - 2009

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## Mechanism

- ▶ Postsynaptic DA Block: D-1 and D-2
- ▶ Typical (First Generation):
  - Mesolimbic DA block: reduces positive symptoms
  - Nigrostriatal DA block: EPS
- ▶ Atypicals: (Second Generation) also block 5HT > DA
  - Mesolimbic DA block: reduces positive symptoms
  - Less nigrostriatal block: less EPS
  - Also effective on mesocortical: negative symptoms

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## Polypharmacy

- ▶ *Intraclass polypharmacy is rarely justified*
- ▶ *Interclass polypharmacy requires rationale*
  - *Mood and psychotic symptoms both present*
  - *Partial response to single medication*
  - *Co-morbid conditions*
- *AJMR, Expert Consensus Guideline Series, 2000*

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## David

- ▣ *35 year old male*
- ▣ *Mild Mental Retardation, Schizoaffective Disorder, bipolar type*
- ▣ *Frequent hospitalizations at state hospital*
- ▣ *Well known to staff*
- ▣ *Recurrent suicidal ideation*
- ▣ *Poor programming plan/integration in the community/no wrap around services*

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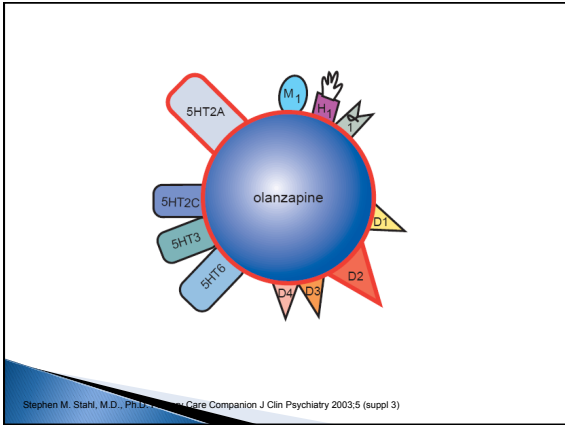
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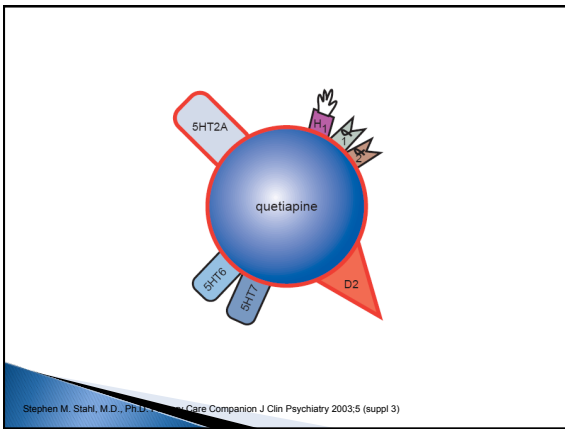
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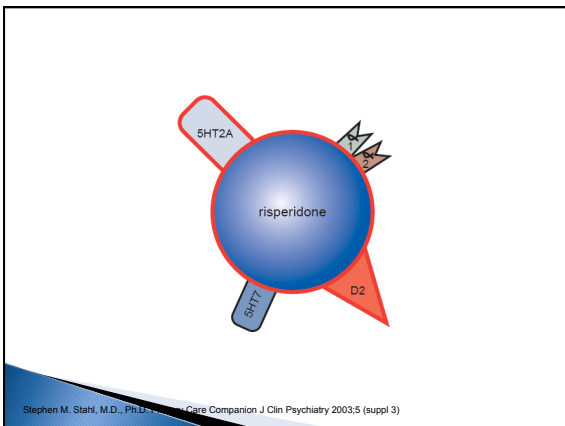
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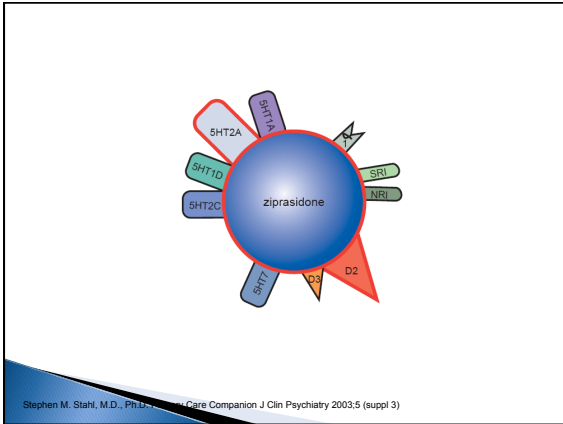
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**Using the Formulation**

- ▶ *When using the Bio-Psycho-Social Formulation, you first investigate biological (or organic/medical) cause for the behavioral presentation*
- ▶ *Thorough physical examination, laboratory values, and screening for the most common medical conditions missed in dual diagnosis patients is essential*

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**Eric**

- ▶ *21 year old male*
- ▶ *Severe Mental Retardation, ADHD*
- ▶ *Aggressive, impulsive, non-verbal*
- ▶ *Family history of ADHD (sister)*
- ▶ **ADR: all antipsychotics**

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*Eric*

- **Medications:**
- Depakote
- Strattera
- Lamictal
- Buspirone
- Topomax
- Effexor XR

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*Eric*

- **Medications:**
- Depakote
- Strattera     **XXX**
- Lamictal     **XXX**
- Buspirone    **XXX**
- Topomax     **XXX**
- Effexor XR
- **ADD: Concerta**

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**General principles–  
Antidepressants**

- Probably under-utilized
- Bupropion (Wellbutrin, Zyban): **caution in this specialized population which has high prevalence of seizure disorders**
- Poly-pharmacy common
- Receptor systems/side effect profiles
- Compliance, half-lives

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## Melissa

- ▶ 23 year old female
- ▶ No mental health history
- ▶ Lives with parents
- ▶ Acute onset aggression, anger, verbal outbursts
- ▶ **Mother noted this is cyclic in nature**
- ▶ Diagnosis: Late Luteal Phase Dysphoric D/O

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## Liver function

- ▶ Laboratory values at least annually
- ▶ Liver enzymes: GGT (acute or short term changes) and ALT/AST (longer term changes)
- ▶ In poly-pharmacy situations, all medications are competing to be metabolized or broken down
- ▶ May alter the blood levels of medications, making them less effective

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## Extrapyramidal Side Effects

- ▶ Acute EPS present in 50–90% of patients receiving typical antipsychotics
  - akathisia
  - dystonia
  - parkinsonism
- ▶ Chronic EPS present in 15–20% of patients receiving typical antipsychotics
  - tardive dyskinesia

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## Consequences of EPS

- *Noncompliance*
- *Mental clouding*
- *Secondary depression*
- *Cognitive impairment*
- *Potentially irreversible and disfiguring (in the case of Tardive Dyskinesia)*

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## Dystonias

- *Involuntary muscle contraction, many variations* oculogyric crisis/torticollis/laryngospasm
- *Usually occurs within days*
- *Rare in elderly, esp. high risk in young AA males*
- *Leads to noncompliance, watch half-lives*
- *Treatment: cogentin, benadryl, benzo IM/IV*

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## Akathisia

- *Internal restlessness, subjective muscle discomfort (usually trunk/legs)*
- *Pacing, sit/stand, dysphoric*
- *If untreated leads to poorer outcome and higher risk of TD*
- *Treatment: beta blockers, lower dose or change medications, benzodiazepines or anticholinergics, space intervals*

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## Parkinsonism

- ▶ *Resting tremor, cogwheel rigidity, bradykinesia, masked facies, shuffling gait*
- ▶ *Especially elderly women, early in tx*
- ▶ **Bilateral/symmetrical**
- ▶ *Mental clouding/ Secondary dysphoria*
- ▶ *Treatment: decrease or d/c med; cogentin/ benadryl; **NO dopamine replacement***

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## Tardive Dyskinesia

- ▶ *Abnormal involuntary irregular choreoathetoid movements of head/limbs/trunk*
- ▶ *Perioral most common tongue/jaw/lips/ facial/hands*
- ▶ *Usually irreversible*

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## Tardive Dyskinesia

- ▶ *Especially elderly, esp. females*
- ▶ *>= 6 months into treatment*
- ▶ *Treatment: Decrease DA activity, change med, lower dose, no anticholinergic, vitamin E, consider clozaril/olanzapine*

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## Antipsychotics – “Atypical” or Second Generation

- ▶ *Serotonin–Dopamine Antagonists*  
**clozapine, risperidone, olanzapine, quetiapine, ziprasidone, aripiprazole**  
More selective for mesolimbic dopamine pathway  
Less active at nigrostriatal pathway  
Less likely to cause extrapyramidal side effects

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## Antipsychotics – Atypical

- ▶ *Can be expensive but cost-effective*
- ▶ *More effective for treatment of negative symptoms, cognitive symptoms, and affective symptoms*
- ▶ *Superior long-term outcomes*
- ▶ *Less sexual side effects compared to typicals*

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## Antipsychotics – Atypical

- ▶ *Ten-fold decrease in tardive dyskinesia risk*
- ▶ *Less acute EPS*
- ▶ *“New” side effects:*
  - *Hyperglycemia (high blood glucose)*
  - *Hyperinsulinemia*
  - *Type 2 Diabetes*
  - *Cataract formation*
  - *QT Prolongation*

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## Diabetes

- › *Use of Metabolic Monitoring Tool*
- › *Baseline chemistry panel with fasting blood glucose before treatment*
- › *Serial laboratory work*
- › *Patient education*
- › *Family history (psychiatric and medical)*
- › *Be alert for associated symptoms...*

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## Diabetes

- › *Thirst*
- › *Frequent urination*
- › *Increased appetite, especially with no weight gain*
- › *GI complaints*
- › *Dizziness, lightheadedness*

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## Weight Gain

- › *Baseline body weight and vital signs*
- › *Serial body weight at each appointment*
- › *Patient education regarding healthy diet and regular exercise*
- › *Always weigh the risks and benefits as part of informed consent*
- › *Motivation by treatment team*

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## Increased Side Effects

- ▶ Individuals with developmental disability may be at higher risk for specific side effects:
  - **Weight gain**
    - Hellings JA, Zarcone JR, Crandall K, et al. Weight gain in a controlled study of risperidone in children, adolescents and adults with mental retardation and autism. *J Child Adolesc Psychopharmacol.* 2001;11:229-238.
    - Janowsky DS, Barnhill LJ, Davis JM. Olanzapine for self-injurious, aggressive, and disruptive behaviors in intellectually disabled adults: A retrospective, open-label, naturalistic trial. *J Clin Psychiatry* 2003; 64:1258-1265.
  - **Antipsychotic-induced movement disorders**
    - Friedlander R, Lazar S, Klancnik J. Atypical antipsychotic use in treating adolescents and young adults with developmental disabilities. *Can J Psychiatry* 2001;46:741-745.
    - Wszola BA, Newell KM, Sprague RL. Risk factors for tardive dyskinesia in a large population of youths and adults. *Exp Clin Psychopharmacol* 2001;9:285-296.

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## Antipsychotics in MI/DD

- ▶ “Antipsychotics are the most widely prescribed medications in individuals with intellectual disability even if schizophrenia and other psychotic disorders do not affect more than 3% of such population”

- La Malfa G, Lassi S, Bertelli M, Castellani A. Reviewing the use of antipsychotic drugs in people with intellectual disability. *Hum Psychopharmacol Clin Exp.* 2006; 21:73-89.

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## Rational Pharmacotherapy

- ▶ Often, “cleaning up” a long list of psychotropics by judiciously tapering off unnecessary medications is the most helpful intervention
- ▶ Minimal medications for maximal benefit is our goal
- ▶ Improvement of psychiatric symptoms and behavioral problems can have wide-ranging and long-lasting benefits for the patient, loved ones, caretakers, and everyone involved

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## Bobby

- ▶ 52 year old nonverbal male with history of Profound ID, Autistic Disorder, cerebral palsy, and complete vision impairment
- ▶ For 4 months has exhibited agitation, verbal/ physical aggression, chanting, kicking, SIB and property destruction; has also begun gagging himself, and has shown a decrease in ADLs
- ▶ Decrease in appetite and weight loss of 13 pounds; began consuming inedible items, such as pieces of blankets, attends, and clothing
- ▶ Upon examination, rocking

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## Intense rocking

- ▶ **Not “normal” for the patient with ID**
- ▶ Visceral pain
- ▶ Headache
- ▶ Depression
- ▶ Anxiety
- ▶ Medication side effects

Ryan, 2003

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## Bobby

- ⊙ Mother deceased 06/08 (history of CAD)
- ⊙ Brother/guardian reportedly has CA
- ⊙ **Medications:**
- ⊙ Baclofen 10mg TID
- ⊙ Diazepam 5mg QHS
- ⊙ Naproxen 500mg BID
- ⊙ Evaluated for admission to DC

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## Head Banging

- This is not “normal” for anyone
- DEPRESSION
- Headache
- Dental
- Seizure
- Otitis/Mastoiditis
- Sinus problems
- Tinea capitus

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## Montgomery County Board of DD: A CMHC within a Board of DD

- ▶ Approval received from Superintendent and the Internal Review Board of WSU
- ▶ Chart review completed on 159 patients with MI/ID
- ▶ Information collected: Axial diagnoses, medications at intake, current medications

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## Montgomery County Board of DD: A CMHC within a Board of DD

Level of Intellectual Disability	General Population of ID	Montgomery County Board of DD MHC
Mild	85	45
Moderate	10	25
Severe	3	16
Profound	2	5
NOS		9

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## Prevalence of Medical Conditions

Medical Condition	Prevalence in General Population	Prevalence in Montgomery County CMHC
Sleep apnea	2%	5%
GI/GERD	3-7%	32%
Seizure Disorder	3% (10% >1 sz)	30%
Thyroid disease	3.7%	5%

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## Consensus Guidelines

- ▶ Rush AJ, Frances A. *The Expert Consensus Guidelines™: Treatment of Psychiatric and Behavioral Problems in Mental Retardation*. **American Journal on Mental Retardation 2000;105:159-228.**
- ▶ Aman MG, Crismon ML, Frances A, et al.: Treatment of psychiatric and behavioral problems in individuals with mental retardation: an update of the expert consensus guidelines. **Expert Consensus Guidelines, 2004.**
- ▶ International Guide for Using Medication. The **World Psychiatric Association (WPA):** Section on Psychiatry of Intellectual Disability (SPID)1\* **September 2008**
- ▶ CLINICAL BULLETIN of the DEVELOPMENTAL DISABILITIES DIVISION. **International guide** to prescribing psychotropic medication for the management of problem behaviours in adults with intellectual disabilities. **World Psychiatry Assn 2010**

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## Strategies for addressing grief and loss in patients with ID

- ▶ Identify approximate stage of dealing with loss/ probable Piagetian developmental stage
  - Accepting reality of loss (define in developmentally appropriate way)
  - Experiencing the pain (giving permission to express emotions)
  - Readjusting to environment (re-define the environment)
  - Re-investing emotion energy (developing new meaning and interests in environment)

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## Chris

- ▶ 52 year old male with Moderate ID and history of loss of both parents
- ▶ Living in group home following loss of last remaining parent
- ▶ Thus far no medications for symptoms of depression

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## Chris...Life Story



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## Chris...Mother's Day



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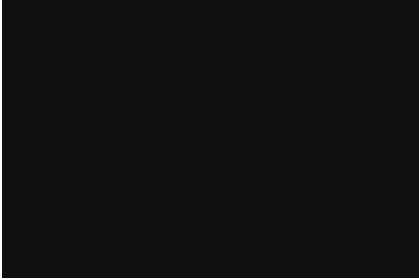
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## Chris...Reinvesting



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## Summary

- ▶ Medications prescribed should improve cognitive function (or at least not cause decline)
- ▶ Thorough informed consent process and metabolic monitoring is a must
- ▶ Should treat conditions fully
- ▶ Should be similar to medications offered to anyone else with the same disorder

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## Contact Information

- Julie P. Gentile, M.D.
- Associate Professor, Wright State University
  
- julie.gentile@wright.edu
- Project Director, Ohio Coordinating Center of Excellence in Dual Diagnosis (Mental Illness/ Developmental Disabilities)
  
- [www.midd.ohio.gov](http://www.midd.ohio.gov)

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- › J Intellect Disabil Res. 2006 Sep;50(Pt 9):652–61. Prevalence and types of aggressive behaviour among adults with intellectual disabilities. Crocker AG, Mercier C, Lachapelle Y, Brunet A, Morin D, Roy ME.
- › J Intellect Disabil Res. 2001 Dec;45(Pt 6):506–14. Mental disorder in adults with intellectual disability. 2: The rate of behaviour disorders among a community-based population aged between 16 and 64 years. Deb S, Thomas M, Bright C.

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- › J Intellect Disabil Res. 2002 Oct;46(Pt 7):537–47. Sleep problems and daytime problem behaviours in children with intellectual disability. Didden R, Korzilius H, van Aperlo B, van Overloop C, de Vries M.
- › J Intellect Disabil Res. 2001 Apr;45(Pt 2):130–8. Challenging behaviour in community services. Joyce T, Ditchfield H, Harris.
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