



# Clinical Guide To Pharmacological Management Of Schizophrenia In The Adult Patient With Mental Retardation and Developmental Disabilities (MR/DD)

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## 1. OVERVIEW

Schizophrenia occurs four times more often in the population with developmental disability or mental retardation (MR/DD) than in persons of normal intellect and the management of this disorder resembles that described for persons with normal intellect (1), (2), (3). The first step in management of schizophrenia in the person with MR/DD is an accurate diagnosis and a comprehensive medical evaluation to identify risk factors for potential side effects of antipsychotic medications that may be prescribed for this patient (3). The management of schizophrenia requires a biomedical psychosocial approach. The prescription of psychotropic medications only manages the biological features and the choice of medication depends upon the patient's age, intellect, function, and associated neurological or medical problems (4, 5). No specific type of antipsychotic medication is identified as superior for persons with MR/DD and a limited number of medication efficacy studies are available in this population (6, 7). All female patients of childbearing age should be screened for pregnancy prior to initiation of any pharmacological agent. The treatment of children or adolescents is not described in this text and these patients should be referred to a child psychiatrist for management.

## 2. PHARMACOLOGICAL MANAGEMENT OF ACUTE PSYCHOSIS

The management of acute psychosis may require an injectable antipsychotic for short-term stabilization. Olanzapine (8), ziprasidone (9), and the older antipsychotics such as haloperidol can be used to reduce psychotic agitation (**See Table 1**). Like persons with normal intellect, the patient with MR/DD may not have improvement of psychotic symptoms such as hallucinations or delusions for several weeks after initiation of antipsychotic therapy. Benzodiazepines (BDZ) such as lorazepam can be used as a short-term therapy in conjunction with antipsychotic medications to reduce anxiety and increase sedation. Benzodiazepines may increase risk for sedation, falls, aspiration, and worsening of confusion in selected patients. Adjunctive therapy, with benzodiazepines in acute psychosis should be limited to situations where monotherapy with antipsychotic medications and behavioral interventions have failed to appropriately control the patient's symptoms. The dosing range for acute behavior stabilization is

included in table two (page 3) for both typical first generation and atypical second or third generation antipsychotics. While beneficial for some acutely agitated patients, benzodiazepines have no antipsychotic effect.

**Table 1**  
**Common Dosing Ranges of Injectable Medications for Acute Psychosis in the Adult Patient with MR/DD**

(Dosing Range in Milligrams) See PDR for details (6, 7, 10, 16, 23)

Medication	Frail or Elderly Patients (mg.)	Healthy, Younger Patients (mg.)	Caution See PDR
haloperidol (Haldol) <sup>1</sup>	0.5 to 2.5	1 to 5	Acute EPS (58)
olanzapine (Zyprexa) <sup>2</sup>	2.5 to 10	2.5 to 10	Hypotension (29.8, 34)
ziprasidone (Geodon) <sup>3</sup>	5 to 10	10 to 20	Cardiac Toxicity (14)
<p>1. Maximum frequency of Haldol is every two hours for a total of four doses.</p> <p>2. Maximum dosing for Zyprexa is a total of three doses over 24 hours. Second dose may follow first by 2 hours and the third dose may follow the second by four hours.</p> <p>3. Maximum dose of Geodon allows a repeat dose once in two to four hours in any given 24-hour period.</p> <p>These values are suggested guidance. Each patient should be individually assessed and dosing adjusted to that individual's clinical circumstances. Consult PDR for complete description. Consult with a child psychiatrist for prescription to children and adolescents.</p>			

The intra-muscular preparations of ziprasidone (Geodon), olanzapine (Zyprexa), and haloperidol (Haldol) can be used in the population with MR/DD when injectable medications are required (Table 1, pg. 2). Geodon is safe and effective; however, this drug may adversely affects the QT<sub>c</sub> interval on EKG's of patients with preexisting cardiac disease. Ziprasidone should be used with care in persons with congenital heart disease or preexisting acquired heart disease such as atherosclerotic coronary artery disease. Ziprasidone should be used with caution in combination with other medications, which may cause prolongation of the QT<sub>c</sub> interval, and all preparations of this medication are contraindicated with at least 13 other drugs (see PDR for details) (23). Olanzapine (Zyprexa) is also available in an injectable dose form and this medication is effective in quieting the acutely agitated, psychotic patient. Intra-muscular olanzapine can be sedating and the medication is effective in persons with all severities of intellectual disabilities. Intra-muscular Haldol is also effective but this medication may produce acute dystonic reactions such as acute spasm of neck or back muscles.

Acutely psychotic patients who are willing to take oral medications can be given dissolvable medication wafers containing either olanzapine or risperidone. These medications dissolve on contact with mucosa and these drugs are difficult to chew or spit. Patients can also receive liquid dosage forms of many other antipsychotics.

### 3. MANAGEMENT OF ACUTE SCHIZOPHRENIA

The non-compliant patient with acute schizophrenia may require some injectable medications while the oral dose is titrated; however, compliant patients should be treated with oral medications. The standard initial dose and target dosage of antipsychotic medication in the frail or older MR/DD patient is one-quarter to one-half of the standard dose for a healthy adult. Young, healthy, mildly retarded adults may require the full adult dosage. (See Table 2). The patient should receive a slow dose titration over a two to six week period into the anticipated target dose range.

**TABLE 2**  
**Summary of Common Oral Dose Ranges of Antipsychotic Medications Prescribed for the Adult Population with MR/DD (6, 7, 10, 16)**

Drug	Healthy/Adult Daily Oral Dose	Frail or Elderly Daily Dose	Major Advisory See PDR
<b>1<sup>st</sup> Generation</b>			
Chlorpromazine	25-1000mg	10-500mg	Anticholinergic Side Effects
Thioridazine	25-500mg	10-250mg	Blackbox Cardiac Warning
Haloperidol	1.0-30mg	0.5-5.0mg	High Potential for EPS/TD
Fluphenazine	1-20mg	1-5mg	High Potential for EPS/TD
<b>2<sup>nd</sup> Generation</b>			
Clozapine	100-600mg	25-300mg	Black Box for Agranulocytosis
Risperidone	1-4mg	0.25-3.0mg	Dose-related EPS
Olanzapine	5-20mg	2.5-10mg	Sedation and Metabolic Issues
Quetiapine	25-800mg	25-200mg	Sedation and Hypotension Possible
Ziprasidone	20-160mg	20-80mg	Cardiac Warning
<b>3<sup>rd</sup> Generation</b>			
Aripiprazole	5-30mg	5-20mg	akathisia and/or withdrawal Dyskinesia Possible
<p><b>Abbreviations:</b> EPS – Extrapyramidal Symptoms TD- Tardive Dyskinesia            These values summarize typical dose ranges used for adults with MR/DD. Each patient should be carefully assessed and dosing adjusted to his or her clinical circumstances. See the PDR for a complete description of possible side effects. Consult with a child psychiatrist for prescription to children and adolescents.</p>			

Medications may require six to eight weeks of sustained therapy to reduce psychotic symptoms. Medication should be switched when the patient exhibits unacceptable side effects or toxicity. Baseline laboratory and neurological examination to include AIMS or the DISKUS should be concluded on all patients prior to initiation of therapy in order

to document pretreatment extrapyramidal disorders. Patients should be evaluated for extra pyramidal side effects including Parkinsonism and observed for akathisia on a regular basis throughout the course of therapy. Baseline laboratory may include liver enzymes, blood count with platelets and electrolytes, lipid profile, and blood sugar. The patient should be routinely weighed and assessed for risk of obesity including waist measurements. Abnormalities in any laboratory set or clinical examination may impact clinical decision-making. For instance, olanzapine may produce more obesity and hyperglycemia associated with chronic administration over months to years. Individuals with elevated blood sugars may need different antipsychotic therapy by switching to medications with less reported effect on blood sugars and lipids (9). Among the new second or third generation antipsychotic medications, aripiprazole and ziprasidone may exert the least effect on weight, glucose, and lipid agents.

#### **4. CHRONIC THERAPY FOR SCHIZOPHRENIA IN PERSONS WITH MR/DD**

The long term pharmacological treatment of schizophrenia often requires the long term prescription of antipsychotic medications (6, 7). First generation high potency antipsychotics such as haloperidol (Haldol) and fluphenazine (Prolixin) or low potency older medications such as thioridazine (Mellaril) and chlorpromazine (Thorazine) may produce a range of cognitive, neurological and metabolic complications that can limit their value in the patient with MR/DD (**See Table 3**). Patients who are presently stabilized on older first generation medications should be considered for cross titration to newer antipsychotic medications that may have better side effect profiles, tolerability, and effectiveness. The proper selection of the second or third generation medications depends on the clinical features of the individual patient. Non-compliant individuals may be best treated with medications that are available in long acting injectable or dissolvable preparations. Fully compliant individuals have a broader range of choices including oral preparations.

The new, second or third generation antipsychotic medications are effective for both positive and negative symptoms of schizophrenia. Positive symptoms include hallucinations or delusions while negative symptoms include apathy and affective blunting. The old antipsychotic medications are effective at suppressing positive symptoms but these drugs have minimal effect on the negative symptoms. The old medications are far cheaper than the new medications; however, the old drugs produce more neurological and cognitive side effects than the new drugs. The newer drugs may produce more obesity and metabolic syndromes. Obesity, dietary problems, and poor exercise are common problems in the MR/DD population (**See Table 5**).

**Table 3**  
**A Partial Summary of Common Side Effects Produced by Antipsychotic Medications in Persons with MR/DD**

		<b>FIRST GENERATION ANTIPSYCHOTICS</b>		<b>SECOND GENERATION ANTIPSYCHOTICS</b>		
<b>CATEGORY OF SIDE EFFECT</b>	<b>SYMPTOM OF SIDE EFFECT</b>	<b>MEDICATIONS AT GREATER RISK</b>	<b>RISK LEVEL</b>	<b>MEDICATIONS AT GREATER RISK</b>	<b>RISK LEVEL</b>	<b>COMMENTS</b>
<b>COGNITIVE</b>	Confusion or slowing	Low potency, e.g., chlorpromazine	H	All Equal	L	All medications at high dose
	Sedation	Low Potency e.g., chlorpromazine	H	Quetiapine	L	All medications at high dose
<b>NEUROLOGICAL</b>	Parkinsonism	High potency haloperidol	H	Risperdal	L	Quetiapine Quite Low
	Dystonia	High potency, e.g., haloperidol	H	All Equal	L	
	Tardive Dyskinesia	All Medications	H	All Equal	I	
	Akathisia	High potency e.g., Haloperidol	H	Aripiprazole	I	
<b>METABOLIC</b>	Obesity	Some Reported In All	L	Olanzapine & Clozapine	H	Monitor weight
	Hyperglycemia	Some Reported In All	I	e.g., olanzapine Clozapine	H	Aripiprazole and ziprasidone with low risk
	Dyslipidemia	Some Reported In All	L	?	?	Monitor lipids with all meds
<b>AUTONOMIC</b>	Orthostatic hypotension	Low potency, e.g., chlorpromazine	H	All equal	L	---
	Tachycardia	Low potency	I	All equal	L	---
<b>NEUROLEPTIC MALIGNANT SYNDROME</b>	Hypertension, Tachycardia, Hypothermia, Muscular Rigidity	All High potency, e.g., haloperidol	L	All equal	L	Rare in second generation meds
<b>OTHER Drug-Specific</b>	Cardiac QTc Prolongation	e.g., thioridazine only	H	Ziprasidone only	I	Most have no effect
	Agranulocytosis	All equal	L	Clozapine only	H	
	Black box for mortality in elderly with dementia	All equal	?	All	?	No specific cause death

L=low risk level      I=intermediate      H=high risk level      ?=unknown

See PDR for full description of all side effects and advisories. More advisories are available for some antipsychotics.

Patients receiving anti-epileptic drugs may be at risk for drug-drug interactions with antipsychotic medications. Clinicians should consult with the pharmacists when possible to determine possible adverse interactions and any special monitoring required to assure safe and effective therapy.

The overall efficacy of the antipsychotic medications in treating schizophrenia in persons with MR/DD is unclear and the biology of schizophrenia in this patient population may differ from the biology in persons with normal intellect (11, 12). One particular antipsychotic medication has not been consistently demonstrated to be more effective in persons with MR/DD than other medications. Risperidone has been studied in individuals with Autism and shown to have beneficial affects for some behavioral problems.

## **5. MANAGEMENT OF REFRACTORY OR THERAPY-RESISTANT SCHIZOPHRENIA**

Patients who fail to respond to the initial prescribed antipsychotic medication should be cross titrated to a second antipsychotic medication and provided a second drug trial with monotherapy. Noncompliance is a common cause of therapeutic failure and the clinician should always monitor adherence to medication by the patient as well as the family or staff who may administer the medication. The clinician should minimize the use of adjunctive therapy such as benzodiazepines, as this medication class can produce adverse effects. Anti-cholinergic medications like Cogentin or Artane can produce confusion in the patient with MR/DD and these medications may be avoided by using new second or third generation antipsychotics that produce less risk for inducing Parkinsonism or other extra pyramidal side-effects (15).

Clozapine is a medication that may be effective for therapy-resistant patients with schizophrenia (13) (15). Clozapine requires regular monitoring of blood counts and metabolic indicators. This drug should be used as a last resort because of compliance and potential side effects issues. Clozapine is effective and safe in the MR/DD population; as long as the patient is compliant with therapeutic blood monitoring and side effects are tolerable and acceptable.

Behavioral therapy should be included in any management strategy for schizophrenia or psychosis in persons with MR/DD. Behavioral analysis procedures can be included with pharmacological management for a person who has both psychosis and intellectual disabilities. Behavioral specialists can determine appropriate training strategies to assist a person with intellectual disabilities to gain better coping skills for

dealing with their psychiatric symptoms. Triggers for the symptoms can be identified and strategies taught to staff, family, members, and the individual to prevent escalation of the behavioral symptom. Counseling can be provided, keeping in mind that discussions need to be geared toward the level of understanding of the individual. Most counseling should take the form skill-building and include the chance for positive reinforcement during the learning process. For example, if an individual becomes angry easily due to an impulse control problem, anger management training may be successful when presented in simplistic terms, modeled by the clinician, and practiced repeatedly by the individual in more than one or two sessions. As the person learns the management techniques, positive reinforcement should be delivered to assist with the acquisition and maintenance of the skills.

Polypharmacy is the use of more than one drug from the same pharmacological class and this practice is discouraged for the treatment of schizophrenia or psychosis in the MR/DD population. Randomized controlled studies are not published indicating that two antipsychotics are more effective than one. Antipsychotic monotherapy is highly effective for schizophrenia in persons with normal intellect. Therapeutic failures in persons with MR/DD could suggest some other problem such as non-compliance, intervening new medical problems, unrecognized psychosocial stressors or other conditions that worsen psychiatric symptoms. Two antipsychotic medications can be prescribed when the patient has failed to improve with multiple sequential trials of second generation antipsychotic medications at therapeutic doses (6, 7).

## 6. CROSS-TITRATION

Patients receiving older first generation antipsychotic medications, such as Haldol, Prolixin, Thorazine, Mellaril, and others should be considered for cross-titration to newer drugs in order to lessen the risk for side effects and long term complications such as tardive dyskinesia or drug-induced pseudo-parkinsonism (**See Table 3**). The cross titration process requires careful reassessment of the initial diagnosis and determination that antipsychotic medications are truly necessary for the patient's effective management. For instance, a patient who receives Haldol, Prolixin, or Mellaril for "behavior management" can undergo a downward titration along with the implementation of a structured behavior management program to assess the need for ongoing psychotropic medications. If the patient manifests previous symptoms, a new medication could be added and upward titrated.

Certain new antipsychotic medications have qualities similar to older drugs. Risperidone has slightly greater D<sub>2</sub> receptor occupancy than other second-generation

drugs and this medication may be an acceptable substitute for the “high potency” antipsychotics such as Haldol or Prolixin. Seroquel has low D<sub>2</sub> receptor binding that allows cross titration for the “low potency” medications such as Mellaril, Moban, and Thorazine (15, 16).

Many patients with MR/DD were treated with thioridazine (Mellaril) because of its’ sedating quality and its’ supposed lower risk for developing extra pyramidal symptoms. Thorazine can produce confusion, and orthostatic hypotension. Mellaril now contains a “black box” warning from the FDA because of risk factors associated with an increase in the QT<sub>C</sub> interval that may produce cardiac arrhythmias, and sudden death. Clinicians can cross-titrate patients from Mellaril to Seroquel or other atypicals to avoid potential complications and liability. The QT<sub>C</sub> prolongation issue is particularly relevant in patients with a seizure disorder, as this group already has an increased risk of sudden unexplained death. Some patients cannot tolerate discontinuation of the Mellaril, and if so, this fact should be carefully documented in the medical record. The family or guardian should be advised about potential problems involved with cross titration.

Patients receiving high doses of old first generation antipsychotic medications should be considered for dose reductions and monitoring for re-emergent psychiatric or behavioral problems. Once the target symptom or behavior re-emerges, a new antipsychotic can be initiated in gradually increasing doses to replace the old antipsychotic, which will be decreased. Specific indisputable milligram to milligram equivalencies are not available for the MR/DD population. The clinician must use their best judgement and initiate appropriate dosing for the new antipsychotics. The cross titration process generally requires at least three to six months for completion. During the course of cross titration, the clinician is not practicing polypharmacy. Cross titration should not extend for over a year except perhaps in the case of Clozapine.

### **CLINICAL EXAMPLE OF CROSS TITRATION**

Example: A 24 year old male with moderate retardation has received Haldol 6mg per day for 3 years for hostile behavior and schizophrenia and Cogentin 1 mgm twice per day for drug induced pseudo-parkinsonism. The treatment team drops the Haldol dose in increments of 0.5mg per month. At 1.5mg Haldol, the patient exhibits evidence for auditory hallucinations and menacing behaviors. The staff adds 0.5mg of Risperdal with gradually increasing doses to 2mg per day while slowly reducing the dose of Haldol. Staff monitors for effectiveness over the next year and Cogentin is discontinued following the cessation of Haldol. Eighteen later months the patient is successfully managed with 2 mgs of Risperdal per day.

## 7. TOXICITY OF OLD VERSUS NEW ANTIPSYCHOTIC MEDICATION

The old first generation antipsychotic medication produce high risks for complications including (1) extra pyramidal symptoms, (2) impaired cognitive problems, (3) other associated problems (17) (Table 3). Among the extra pyramidal symptoms, pseudo-parkinsonism, akathisia, and tardive dyskinesia are important complications (15). Drug induced Parkinsonism can resemble depression or present as increased rigidity in a patient (19). Akathisia can present as agitation or behavioral problems. Tardive dyskinesia can be seen in a schizophrenic person who does not receive antipsychotic medications as well as in those individuals receiving antipsychotic medication. Tardive dyskinesia occurs in about one-third of persons with MR/DD receiving antipsychotics and many individuals develop withdrawal dyskinesia during drug discontinuances (20). Young patients who receive high potency first generation medications for the first time are at risk for acute dystonic reaction manifested by spasm of the neck muscles.

The new second or third generation antipsychotic medications appear to have smaller risk for producing extra pyramidal symptoms (EPS) because these drugs have less effect on the dopaminergic system and other receptors that may mediate EPS. Among the new second-generation antipsychotic medications, Risperidone may have a greater risk for producing EPS. Abilify and Seroquel may have the least risks based on the limited available clinical data. However, the new second generation antipsychotic medication may produce greater risks for metabolic syndromes including obesity, hyperglycemia, and hyperlipidemia (9). Olanzapine and Clozapine appear to have greater risks of inducing these metabolic syndromes (18, 12). Recently all antipsychotics have been required by the FDA to include warnings about the potential involvement of these newer agents with increased mortality for elderly patients with dementia and behavioral problems (**See Table 3**).

## 8. THE THERAPEUTIC END POINT

The clinical efficacy of antipsychotic medications is unclear for patients with MR/DD and schizophrenia (21). The therapeutic end point is reduction of symptoms as described by the patient and caregiver or as measured by behavioral monitoring. Mildly retarded patients can describe psychotic symptoms. The clinician must depend on behavioral symptoms to determine efficacy in severely retarded persons. Minimal behavioral monitoring requires consistent measurements over a minimum of several days of observation (**See Table 4**).

**TABLE 4**  
**Methods of Assessing Therapeutic Benefit of Antipsychotic of Medications**

Severity of Mental Retardation	Self-Reporting	Caregiver Reporting	Behavioral Monitoring
Mild	R	R	H
Moderate	H	R	R
Severe/Profound	U	R	R

**R**=Required

**H**=Helpful, but not always required

**U**=Unreliable

Individuals with intellectual disabilities are more likely to have behavioral manifestations of psychiatric symptoms and these patients are less likely to be able to verbalize in a sophisticated way about what they are experiencing. Some assessment tools designed for aiding the identification of psychiatric symptoms in individuals with intellectual disabilities include the DASH-II (Diagnostic Assessment for the Severely Handicapped – II), the ADD (Assessment of Dual Diagnosis), and the REISS Screen. These instruments have taken symptoms for the various diagnostic categories in the DSM and translated them into descriptions of behaviors that have been associated with particular diagnostic categories. This kind of assessment can also help sort out which behaviors are manifestations of a psychiatric disorder and which behaviors are a result of learning. Functional behavioral assessments need to be conducted for the latter when identified. Results can be used to assess the efficacy of medications (7).

## 9. MANAGEMENT OF MEDICATION NON-COMPLIANCE

Non-compliance with medication is a common reason for schizophrenic relapse. Non-compliant patients should undergo mouth checks, and medication preparations should be customized to reduce the risk of cheeking or spitting. Dosage forms such as liquids, dissolvable tablets, immediate release injection, and delayed release injections (depot) may improve compliances (**See Table 5**).

TABLE 5

**Common Dosing Ranges for Injectable Long-Acting Preparations of (Depot) Preparations for Antipsychotic Medications for the Adult Patient with MR/DD.**

*All dose ranges expressed as milligrams given every two weeks (6, 7, 16, 22).*

MEDICATION	IM DOSE FOR FRAIL OR ELDERLY (MG)	IM DOSE FOR HEALTHY YOUNGER (MG)
Haloperidol, (Haldol Deconoate) every two weeks	12.5 to 25 mg	12.5 to 75
Perphenazine, (Prolixin, Deconoate) every two weeks	2.5 to 25 mg	12.5 to 50
Risperdal Consta every two weeks	25 mg	25 to 37.5
Dose frequency may be decreased to every three or four weeks. Each patient should be carefully assessed and dosing adjusted to his or her clinical circumstances. These values are general guidance. Consult with a child psychiatrist for prescription to children or adolescents.		

Risperidone (M-tabs) and Olanzapine (Zydis) have dissolvable wafers, which are difficult for the non-compliant patient to cheek. The dose range for Soltabs is the same as regular forms such as pills. Risperidone also comes as injectable preparation (Risperdal Consta) that lasts for approximately two weeks. The Risperdal Consta can be used in conjunction with the oral medications to assure compliance. Standard starting dosage for Risperdal Consta is 25mg administered every 2 weeks for healthy patients and 12.5 mg for frail patients. Consta injections require sufficient muscle bulk to tolerate the needle injection. Patients receiving Depot preparations of older first generation medications can be cross-titrated to “Risperdal Consta” to reduce potential side effects. Patients should be monitored for 20 minutes following dose injection for signs and symptoms of intolerability.

## 10. ANTIPSYCHOTIC MEDICATIONS FOR BEHAVIORAL SYMPTOMS

Antipsychotic medications may be prescribed for severe stereotypic behavior (1); Tourette’s syndrome and behaviors that are dangerous to the patient or other individuals. Antipsychotic medications have been demonstrated as effective and safe in treating some individuals with self-injurious behaviors (SIB) as well as certain types of aggressive or agitated behaviors (7), (14), (18). These drugs can be used when behavioral interventions fail to control symptoms. Medications should not be

prescribed in circumstances where behavioral interventions eliminate the dangerous behaviors. Annoying behaviors such as yelling, spitting, cursing, fecal smearing etc., are not appropriate target symptoms for antipsychotic medications because of the potential for serious side effects for the drugs. Dosing ranges for behavioral problems are similar to doses for psychosis.

## 11. MANAGEMENT OF SCHIZO-AFFECTIVE DISORDER

The diagnostic criteria for schizo-affective disorder in persons with MR/DD are not defined. Patients who meet criteria for both a mood disorder and schizophrenia may suffer from schizo-affective disorder. If patients are experiencing major depressive symptomatology, it may be necessary to co-administer antidepressant and antipsychotic medications. Patients experiencing manic symptomatology may require co-administration of both antipsychotics and mood stabilizing agents like lithium, Valproic acid, carbamazepine, or selected other anticonvulsant agents. Treatment guidelines have not been published for this disorder in persons with MR/DD, but a common sense approach would be to add a mood stabilizing agent if a patient is experiencing significant mood components to their illness. If the patient is also experiencing psychotic features of their illness, an antipsychotic could be added to their pharmacotherapeutic regimen. If both mood and psychosis are present, it may be necessary to use both antipsychotics and mood stabilizing agents concomitantly. Another approach to treatment would be to choose second or third generation antipsychotic medications with mood stabilizing properties, in an attempt to control symptoms using monotherapy (22).

Depressive symptoms are common in intellectually normal persons with schizophrenia, but the frequency of these symptoms in the MR/DD person is unknown (15). Antidepressant medications can be co-administered with antipsychotic medications in psychotic patients with depressive symptoms. No particular type of antidepressant has been consistently shown superior, but the SSRI's are a reasonable first option due to efficacy, safety, and tolerability of this class of antidepressants (See DDMED 51).

## 12. CONSENT AND MEDICAL LEGAL ISSUES

Federal survey guidelines tightly regulate the use of antipsychotic medications in the long term care setting. Community standards of care require careful documentation of diagnosis, target symptoms, and necessity for the administration of antipsychotic medications. The antipsychotic drugs have traditionally been considered chemical

restraint when used for purposes other than psychosis or dangerous life threatening behaviors. The prescription of antipsychotic medications for behavioral problems is the last option after all other interventions have failed to control dangerous or harmful symptoms.

The consent of competent patients or responsible family caregivers is essential when prescribing antipsychotic medications. Antipsychotic medications can be prescribed on an emergency basis without consent when the patient is a threat to self or others; however, long-term administration of the drugs requires appropriate informed consent. Consent information must include possible adverse metabolic and extrapyramidal symptoms. Clinicians who fail to obtain and document adequate informed consent may assume serious liability risks. Consent should be addressed on an annual basis during regular re-evaluation and reconsideration of therapy.

## REFERENCES

1. Bouras N, Drummond C. Behavior and psychiatric disorders of people with mental handicaps living in the community. *Journal of Intellectual Disability Research* 1992;36:349-357.
2. Deb S, Thomas M, Bright C. Mental disorder in adults with intellectual disability. I: Prevalence of functional psychiatric illness among a community-based population aged between 16 and 64 years. *Journ of Intellec Dis Research* 2001;45(6):495-505.
3. Eaton LF, Menolascino FJ. Psychiatric disorders in the mentally retarded: types, problems, and challenges. *Am J Psychiatry* 1982;139:1297-1303.
4. Summers J, Boyd K, Morgan J. Evaluating patients with intellectual disabilities and comorbid mental health problems. *Psychiatric Annals* 2004;34(3):215-220.
5. Silka VR, Hauser MJ. Psychiatric assessment of the person with mental retardation. *Psychiatric Annals* 1997;27(3):162-169.
6. Reiss S, Aman MG. The international consensus process on psychopharmacology and intellectual disability. *Journal of Intellectual Disability Research* 1997; 41(6):448-455.
7. Special Issue. Expert Consensus Guidelines Series: Treatment of psychiatric and behavioral problems in mental retardation. *American Journal on Mental Retardation* 2000;105(3):165-188.
8. McDonough M, Hillery J, Kennedy N. Olanzapine for chronic, stereotypic self-injurious behavior: a pilot study in seven adults with intellectual disability. *Journal of Intellectual Disability Research* 2000;44(6):677-684.
9. Cohen S, Fitzgerald B, Okos A, et al. Weight, lipids, glucose, and behavioral measures with ziprasidone treatment in a population with mental retardation. *J Clin Psychiatry* 2003;64(1):60-62.
10. Farber JM. Psychopharmacology of self-injurious behavior in the mentally retarded. *J. Amer. Acad. Child Adol. Psychiatry* 1987;26(3):296-302.
11. Doody GA, Johnstone EC, Sanderson TL, et al. Pffropfschizophrenie' revisited. Schizophrenia in people with mild learning disability. *British Journal of Psych* 1998;173:145-153.
12. Gogtay N, Giedd J, Rapoport JL. Brain development in healthy, hyperactive, and psychotic children. *Arch Neurol* 2002;59:1244-1248.
13. Antonacci DJ, de Groot CM. Clozapine treatment in a population of adults with mental retardation. *J Clin Psychiatry* 2000;61(1):22-24.
14. Antochi RM, Stavrakaki C. Determining pharmacotherapy options for behavioral disturbances patients with developmental disabilities. *Psychiatric Annals* 2004;34(3):205-211.
15. Kaplan HI, Sadock BJ, eds. *Comprehensive Textbook of Psychiatry/V*, Baltimore: Williams & Wilkins, 1989.

16. Selma TP, Beizer JL, Higbee MD. Geriatric dosage handbook (10<sup>th</sup> ed.). ISBN: 1-59195-104-6. Hudson, OH: Lexi-Comp.
17. Kastner T, Walsh KK, Fraser M. Undiagnosed medical conditions and medication side effects presenting as behavioral/psychiatric problems in people with mental retardation. *Mental Health Aspects of Developmental Disabilities*, July/August/September 2001;4(3):101-107.
18. Mikkelsen EJ, McKenna L. Psychopharmacologic algorithms for adults with developmental disabilities and difficult-to-diagnose behavioral disorders. *Psychiatric Annals* 1999;29(5):300-314.
19. Rao JM, Cowie VA, Mathew B. Neuroleptic-induced parkinsonian side effects in the mentally handicapped. *Journal of Mental Deficiency Research* 1989;33:81-86.
20. Campbell M, Armenteros JL, Malone RP, et al. Neuroleptic-related dyskinesias in autistic children: a prospective, longitudinal study. *J. AM. ACAD. Child Adolesc Psychiatry* 1997;36(6):835-843.
21. Duggan L, Brylewski J. Effectiveness of antipsychotic medication in people with intellectual disability and schizophrenia: a systematic review. *Journal of Intellectual Disability Research* 1999;43(2):94-104.
22. Tasman A, Kay J, Lieberman JA (Eds.), (2003). *Psychiatry therapeutics* (2nd Edition). London: Wiley.
23. *Physician's Desk Reference (PDR)*, (58th Edition). Montvale, NJ: Thompson PDR, 2004.