

# Prescribing Psychotropic Medications in Patients with Intellectual Disability: Review and Clinical Pearls

David Dixon<sup>1\*</sup> and Julie P Gentile<sup>2</sup>

<sup>1</sup>Wright Patterson Air Force Base, Dayton, Ohio, USA

<sup>2</sup>Department of Psychiatry, Boonshoft School of Medicine, Wright State University, USA

\*Corresponding author: David Dixon, Wright Patterson Air Force Base, Dayton, Ohio, USA, Phone: +937-223-8840; E-mail: david.dixon@wright.edu

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## Abstract

Individuals with intellectual disability (ID) are the most medicated patient population, whether in institutions or in the community. They are also more vulnerable to side effects of neuroleptic medications, especially in the presence of muscular disorders such as cerebral palsy. Many individuals with ID have multiple medical conditions, which complicate the use of prescription drugs. Mental illness is also more prevalent in this specialized population; psychiatric and behavioral problems occur in ID three to six times the rate relative to the general population (World Psychiatric Assn, 2010). The diagnostic process can be difficult due to communication difficulties, highly variable behavioral presentations, and a lack of universal training for clinicians. Acknowledged experts agree that there is a need for evidence-based medicine, and until this is available, consensus based knowledge will suffice in conjunction with evidence-based principles for the general population. The medication regimens for a patient with ID should look no different than the regimen for any other patient.

**Keywords:** Stimuli; Psychiatric; Diagnosis; Stereotyped motor activity

(patient, provider and caregiver) in the room, and collecting collateral data from a knowledgeable caregiver, will be key before making clinical decisions. When there is less subjective data, the psychiatrist should seek more objective data, including; expanded lab work, thorough physical exam by a primary care physician, and any imaging required to assure an accurate diagnosis.

Many patients with ID with undiagnosed or under-treated medical conditions present to psychiatry as opposed to a primary care physician due to a chief complaint of aggression or other behavior change (See table for some common causes of aggression and problem behavior). Problem behavior is the most frequent reason for psychiatric hospitalization, the biggest cause for morbidity and mortality, and the major reason that many physicians feel the only interventions available are antipsychotic medications (Cooper et al.). This is especially prevalent in mental health delivery systems in which no behavior support services are available, or where managed care restrictions (i.e. short office visits, infrequent follow up) are the standard of care. For instance, if a patient has repetitive behavior, such as biting the side of his hand, considering gastro esophageal reflux (GERD), other pathology of the hand (gout, neuropathy), or pathology of the upper respiratory tract (third molar eruption, dental abscess, asthma, rumination, nausea, and anxiety) may uncover the true etiology of the behavior. A patient presenting with head banging should be considered for sinusitis, Eustachian tube pathology, GERD, or headache syndromes before the commonly associated psychiatric diagnoses of depression or anxiety disorders. Patients who whip their heads forward should always be evaluated for atlanto-axial subluxation (very common in Down syndrome). Much like narrowing down the cause for delirium in a medical patient, solidifying the etiology of behavior is a vital requirement in accurate diagnosis and treatment in ID. See **Table 1** for the most common causes of aggression and problem behavior.

**Table 1:** Common Etiologies for Aggression/Problem Behaviors in ID.

## Introduction

### Challenges in diagnosis

Accurate psychiatric diagnosis may be especially difficult due to a patient's limited expressive language skills. In the patient with ID who has limited speech, it is important in the mental status examination to be aware of non-verbal behavior signs, such as responding to internal stimuli, changes in attention span/concentration, level of arousal, personal space, and any repetitive or stereotyped motor activity. Managing the triangle

Means of expressing frustration	Dementia
Learned problem behavior	Loss of independence and/or physical function
Expression of physical pain or acute medical condition	Trauma: grief and loss; abandonment (recent or remote)
Means of communication or inability to communicate	Escape or avoidance of unwanted demands or situations
Signal of acute psychiatric condition	Attention seeking
Regression due to stress, pain, or change in routine	Self stimulatory behavior

## Non-pharmacologic interventions

Before initiating treatment with psychotropic medications, consider other common, non-pharmacologic interventions

**Table 2:** Adaptations for Psychotherapy in Persons with ID.

Flexible Sessions	Length of therapy sessions should match the individuals attention span. For some patients, this may be no longer than 30 minutes
Simplification of interventions	Break down intervention into smaller segments and reduce the complexity of the techniques being utilized.
Adjust language	reduce level of Vocabulary, Sentence structure and length of thought to match the cognitive ability of the patient
Augment interventions with activities	Use of activities can help to deepen change and learning and may include the use of drawing, therapeutic games, role play and homework assignments
Involve Caregivers	Important source of Collateral information necessary to ascertain progress between sessions.
Increased length of Care	Most research indicates that a longer length of treatment (1 to 2 years) is a best practice with this population. This allows the psychotherapy to move at a slower pace so that the clinician can spend additional time on each intervention utilized, ensuring that the skills being taught are internalized. It also allows for the inclusion of additional treatment stages which may be necessary.

Over thirty percent of people with ID have a co-morbid psychiatric disorder. The World Psychiatric Association (2010) designated that there are a number of scenarios in which a psychiatrist may consider using indicated medications: (a) failure of non-medication based interventions, (b) risk of harm/distress to the patient, (c) risk of harm to others/property, (d) high frequency of problem behaviors, (e) treating target symptoms known to respond to medication (i.e. dangerousness to self or others, hyperactivity, etc), (f) treating an underlying psychiatric disorder, (g) providing acute relief of symptoms so that non-medication strategies can be adequately tried, or (h) recreating a state of stability using previously successful medication regimens.

In order to ensure the principle of "first doing no harm," regular encounters with the patient and the family, as well as conducting serial mental status and physical examinations are vital. Monitoring protocols should not be overlooked or abbreviated in patients with ID. In fact, it may be crucial to increase the use of standardized, measurable instruments in such instances as in assessing for extrapyramidal side effects in those patients with muscular disorders (cerebral palsy, muscular dystrophy, etc.). Start with the lowest starting dose, titrate slowly, and avoid off label prescribing. Due to the high prevalence of seizure disorders in ID, use extra caution with any medications that affect seizure threshold (clozapine,

adapted for ID populations: psychotherapy, positive behavioral interventions, or addressing social and environmental factors. Psychotherapy is an evidenced based practice with proven efficacy in the ID patient population. **Table 2** to review adaptations for therapy to better fit ID populations. Consultation with a Behavioral Support Specialist will help caregivers and patients devise strategies to support patients by incentivizing suitable behaviors, and de-emphasizing those that are inappropriate. Just as medical concerns can result in behavior change, so can social or environmental concerns, so these should be addressed. It is important to always consider non-pharmacological management strategies and continuation of investigative measures (i.e. collecting of behavior support data, collateral data across environments/caregivers, performing physical examination, obtaining laboratory values, etc.), especially in the context of acute behavioral changes.

anticholinergics, antihistamines, phenothiazines, bupropion, etc.).

## Guidelines for antipsychotic medication use in ID patients

The majority of the medications utilized in patients with ID are from the antipsychotic medication class. Generally, when used appropriately they can reduce repetitive or compulsive behavior and self-injury, with some studies reporting reduced agitation, increased social awareness, and improved sleep hygiene (Deb et al.). There are some specific precautions to take when using antipsychotics for patients with ID, however. In general, it is best to avoid use of long term 'as needed' orders (especially if the patient lives in a supported residential setting with multiple direct care professionals making decisions about when to administer PRNs), use of anticholinergics without signs of EPS, use of higher than usual doses of antipsychotic medications, and off-label prescribing. Psychosis occurs in ID at rates slightly higher than the general population (Fletcher et al.). If psychosis is indeed diagnosed, practitioners should be aware that the ID patient population is more prone than the general population to develop serious adverse reactions, including extrapyramidal side effects, to antipsychotic medications. Also, prescribers should use extra caution in prescribing first generation antipsychotics (such as haloperidol, fluphenazine and thioridazine) to patients with ID

because these medications are more likely to lower seizure threshold, decrease cardiac conduction, induce orthostatic hypotension, cause an elevation in serum prolactin, and lead to anticholinergic side effects. Patients with ID are more vulnerable to neuroleptic malignant syndrome (NMS) and the fatality rate for NMS is higher in ID.

Although second generation antipsychotics are generally recommended, there are many metabolic effects that can arise from the use of both first-generation antipsychotic (FGA) and second-generation antipsychotic (SGA) psychotropic medications. Weight gain, for example, is a common problem with both FGAs and SGAs and patients with ID often have functional limitations that prevent or limit physical activity. This underscores the importance of utilizing antipsychotic medications judiciously, and to actively seek opportunities to reduce or discontinue the antipsychotic burden whenever appropriate. Antipsychotic withdrawal studies of patients with ID suggest that in approximately one third of cases, medication can be successfully withdrawn with no re-emergence of behavior problems, in another third of cases, a reduction in dose can be achieved and, in only one third of cases can no reduction in dose be achieved without re-emergence of behaviors/symptoms.

### Other medications for ID patients

Expert Consensus for ID supports the use of mood stabilizers and anticonvulsants for bipolar disorder, self-injurious or aggressive behavior, agitation, and psychiatric or behavioral problems that occur in individuals with epilepsy. In these cases, a psychiatrist should collaborate with the patient's neurologist to decide the best course of treatment with any anticonvulsant and /or mood stabilizer. Antidepressants, in general, are under-utilized in patients with ID. Unfortunately, even with medications that seem relatively benign, such as the selective serotonin reuptake inhibitors (SSRIs) or other antidepressants, it has been estimated that approximately 20% of patients with ID will experience adverse drug reactions (Fletcher et al., Stahl). This is further complicated by the patient's inability to self-report side effects due to limited communicative capabilities. To lower the incidence of serious or life-threatening side effects of psychotropic medications in this patient population, it is best to start low and go slow. In comparison to the general patient population, it is recommended to use the same (or lower) FDA recommended maintenance and maximum doses, and to periodically consider a gradual dose reduction based on clinical assessment. The prescribing physician should see the patient at every appointment (not just the caregiver), and collateral data should be collected from a reliable source.

Patients with ID are more vulnerable to develop anxiety disorders for a variety of reasons. Patients with ID often have limited internal resources to deal with stress, and therefore have circumscribed problem-solving skills. Furthermore, they may be more vulnerable to embarrassment, worry, or physical symptoms. SSRIs can often target and combat these symptoms. Benzodiazepines should be avoided or used with caution in ID patients; often these medications can negatively

impact the patient's memory (both anterograde and retrograde), cognitive sensorium, and suppress respiratory function. Benzodiazepines can lead to sedation, and may have a paradoxical effect on patients with ID, leading to states of disinhibition or disorientation, which can increase the risk of impulse control problems, agitation, or problem behaviors. The benzodiazepines with longer half-lives can accumulate with long-term use in patients with ID. In general, when treating anxiety, SSRIs and other antidepressants (except bupropion due to effect on seizure threshold) are first-line anxiolytics; buspirone has also proven efficacy in the treatment of anxiety in patients with ID.

### Expert consensus recommends

Utilizing the same medications that are used to treat disorders in the general population for those with ID. Use of general evidence-based conclusions is appropriate and logical until more specialized research is available. Psychotic disorders are over-diagnosed and antipsychotics are over-prescribed, while anxiety and depressive disorders are under-diagnosed and antidepressants under-utilized. Psychotropic medications should improve cognitive function, not worsen it. Medication regimens for a patient with ID should look no different from that of the neurotypical patient. Medications should fully treat mental illness; we would expect no less for a patient in the general population **Table 3** [1-5].

**Table 3:** Clinical pearls.

Establish a baseline of target symptoms and behaviors before initiating therapy	Use caution with any medication that causes sedation or may impair memory/mental capacity
Use evidence-based medicine principles for the general population, with added conservatism	Be aware of paradoxical stimulation, disorientation, disinhibition and other risks with benzodiazepines
Have caregivers document symptoms and quantify (episodes per week, subjective scales from 0 to 10, etc.)	Use extra caution with medications that lower seizure threshold (bupropion, clozapine, antihistamines, anticholinergics, phenothiazines, etc)
Consider rating scales for patients with higher functioning communication skills (PHQ-9, GAD-7, HAM-D, etc.)	Obtain baseline lab testing when initiating medications, and follow all standard monitoring protocols; consider monitoring at more frequent intervals than recommended for the general population
Openly discuss medication side effects, medication adherence, staff changes, sleeping patterns, nutritional status, physical activity, medical conditions, or treatment expectations which may be contributing to poor response before making adjustments	Difficulty with pill swallowing and dysphagia are common; consider alternate preparations (liquid, dissolvable forms, etc.)
Utilize sedating medications at night to improve sleep; minimize the use of sedating medications during the day	Anxiolytic effects can sometimes be achieved with much lower daytime dosing without causing significant sedation
Symptoms may change throughout the course of the day and especially between changing environments; consider a mid-afternoon medication administration at transition time	Utilize baseline symptom data to evaluate changes to determine whether a medication adjustment is warranted (titrating medications to

	maximize improvements, tapering medications not having desired effects, etc.)
Be aware that self-report of side effects will be limited; utilize collateral data sources and discuss behavioral changes that may represent side effects (i.e. headaches, GI complaints, etc.)	Monitor for any changes in functional state (i.e. cognition, ability to participate in workshops, sedation, sleeping patterns, appetite, isolative behavior, non-adherence, etc.)
Opt for once daily dosing or extended release formulations when available	Avoid polypharmacy; start low and go slow, as with pediatric and geriatric populations
Discuss subjective and objective accounts of behaviors and symptoms from the past and present when discussing the efficacy of medications	Always integrate medications with other interventions (sensory assessments, OT, PT, speech therapy, behavioral supports, psychotherapy, etc.)
Extra attention to med-med interactions due to AED levels, MMP, fragile neurologic conditions	Patients are more vulnerable to both metabolic side effects and EPS

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