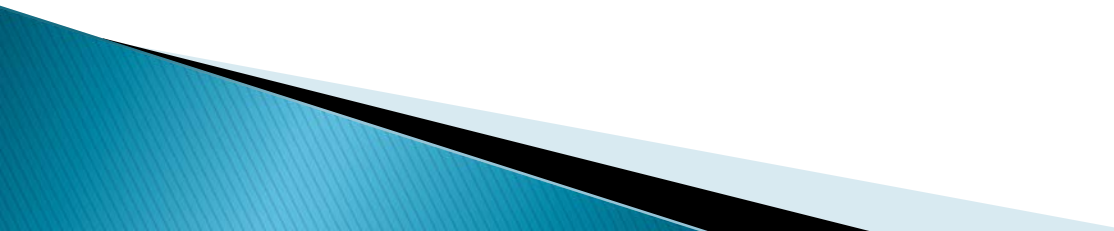
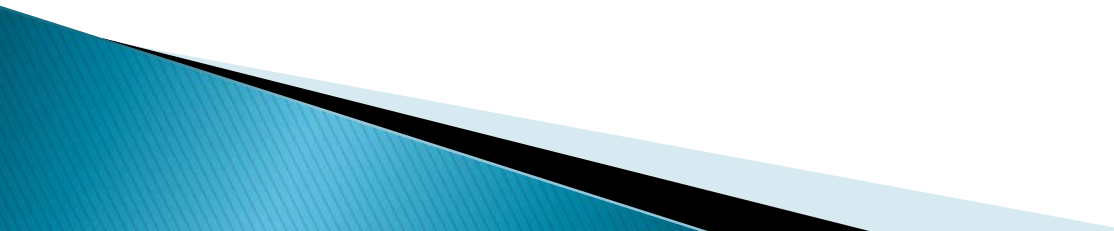


# Monitoring Psychotropic Medication

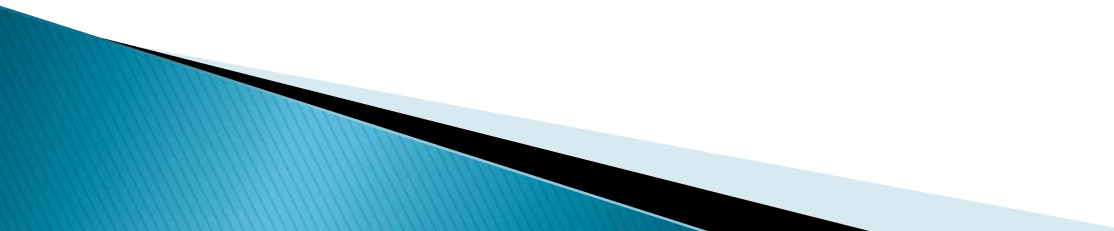
# Objectives For Participants

- ▶ To gain an understanding of psychotropic medication and its purpose
  - ▶ To gain an understanding of the roles that psychotropic medication may play in the assessment and intervention process
  - ▶ To gain an understanding of how side effects can contribute to behavioral issues
  - ▶ To gain an understanding of the role of the contracted behavior provider
  - ▶ To gain an understanding of the Best Practice Model for Psychotropic medication use
- 

## Behavior analysts DO NOT

- ▶ Prescribe medication
  - ▶ Make medication management decisions
  - ▶ Make recommendations about medications to clients, caregivers, or other professionals
- 

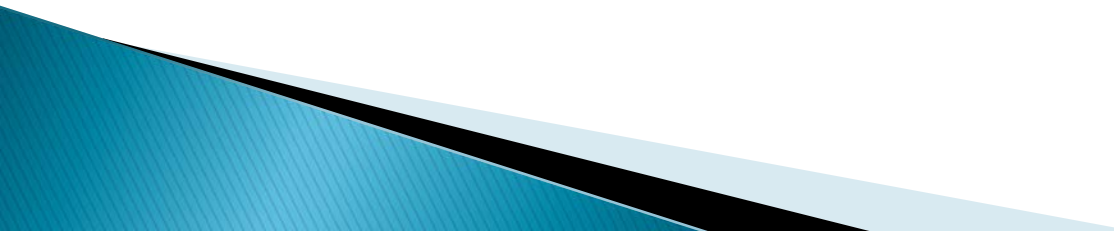
# Psychotropic Medication

- ▶ Medications that are being used to control behaviors.
  - ▶ Psychotropic medication is any medication that affects the mind, emotions, and behaviors.
- 

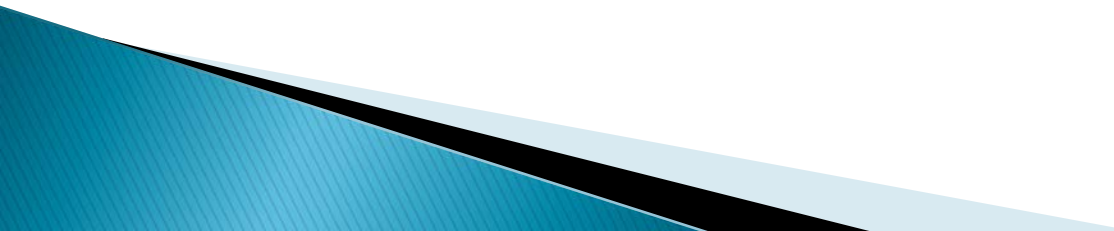
# Brief History of Psychotropic Medication

- ▶ 1940s and 1950s – Chemical interventions were introduced (Lithium and antipsychotics) and changes were observed in behavior.
- ▶ 1950s through 1980s – Following advent of “effective medications” that all illnesses would soon be effectively managed with medication”
- ▶ Today – Psychotropic medications are a primary treatment for mental illness and behavior problems

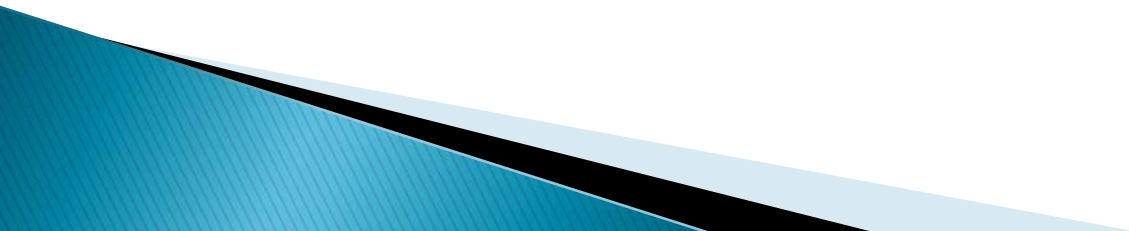
# Classes of Psychotropic Medication

- ▶ Antipsychotics
  - ▶ Anti-Anxiety
  - ▶ Mood Stabilizers
  - ▶ Sedatives/ Hypnotics
  - ▶ Antidepressants
  - ▶ Stimulants/Non-Stimulants
- 

# Commonly Used Medication In the Intellectually Disabled Population

- ▶ Antipsychotics
  - ▶ Anti-Anxiety
  - ▶ Mood Stabilizers
  - ▶ Antidepressants
  - ▶ Sedatives / Medications used for sleep
- 

# Define Psychotropic Medication





# Two Types of Antipsychotics

## Atypical and Typical

- ▶ Atypical Antipsychotics -are documented to produce little to no Extrapiramidal symptoms, may have greater efficacy than typical for treatment of negative symptoms, have minimal effect on prolactin levels.

Medication	Range	Possible Side Effects
Abilify –Aripiprazole	9.75mg-30 mg/day	Swallowing/choking issues, dizziness, weakness, sleep issues, constipation, weight
Risperdal –Risperidone	1mg -8 mg/day	feeling hot or cold, dry mouth, increased appetite, drowsiness, tired feeling
Zyprexa- Olanzapine	5.0mg- 30 mg/day	memory problems, numbness or tingly feeling; very stiff (rigid) muscles, tremors,
Latuda- Lurasidone	40mg-80 mg/day	Blurred vision, breast swelling or discharge inability to keep still
Invega - Paliperidone	6mg-12mg/day	Abnormal muscle movements, including tremor, abnormal movements of your eyes
Geodon- Ziprasidone	40mg-160 mg/day	mild skin rash, runny or stuffy nose, cough, sore throat, weight gain
Clozaril – Clozapine	200mg-900 mg/day	Drooling, drowsiness, dizziness, shaking (tremor),
Seroquel- Quetiapine	150mg-800mg/day	mood or behavior changes, constipation, stomach pain, upset stomach, nausea,
Saphris – Asenapine	10mg-30 mg/day	numbness or tingling inside or around your mouth, restless feeling

# Two Types of Antipsychotics

## Atypical and Typical

- ▶ Typical /Conventional antipsychotics these are sometimes called first-generation antipsychotics and they tend to block receptors in the brain's dopamine pathways

MEDICATION	DOSAGE RANGE	POSSIBLE SIDE EFFECTS
Hadol-Haloperidol	4mg-40mg/day	Dizziness, drowsiness, difficulty urinating, sleep disturbances, headache, and anxiety
Loxitane-Loxapine	40mg-225mg/day	(rigid) muscles, high fever, sweating, confusion, fast or uneven heartbeats,
Mellaril-Thioridazine	200mg-800mg/day	drowsiness; dry mouth, stuffy nose; vomiting, diarrhea; breast swelling
Navane-Thiothixene	10mg-120mg/day	agitated; (insomnia); breast swelling or discharge; changes in menstrual cycle
Prolixin-Fluphenazine	2mg-60mg/day	lethargy, dizziness, nausea, loss of appetite, sweating, dry mouth, blurred vision

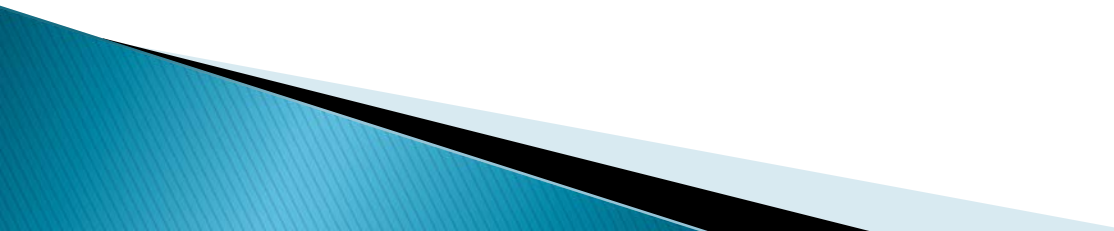
# Symptoms Treated Through Use of Antipsychotics

Positive Symptoms	Negative Symptoms	Cognitive Symptoms	Mood Symptoms
Delusions	Blunted Affect	Attention	Dysphoria
Hallucination A. Visual B. Auditory C. Tactile	Alogia	memory	Suicidality
Disorganized Speech	Avolition	Executive functions	Hopelessness
Catatonia	Anhedonia		Aggressive
	Withdrawal		

# Anti-Anxiety Medications

Agents	Dosage	Side effects
Ativan - Lorazepam	2 -6 mg/day	drowsiness, dizziness, tiredness, blurred vision
Klonopin - Clonazepam	1- 3 mg/day	slurred speech, drooling or dry mouth
Restoril - Temazepam	7.5 – 30mg/day	weak or shallow breathing, fast or pounding heartbeats
Valium - Diazepam	2- 10mg/day	memory problems; drowsiness, tired feeling; dizziness, spinning sensation; feeling restless
Librium - Chlordiazepoxide	100 – 300mg/day	Drowsiness , dizziness, nausea, constipation, blurred vision, headache

# Symptoms Treated Through Use of Anti-Anxiety Agents

- ▶ **Motor Tension**– Trembling, twitching, muscle tension, easy fatigability
  - ▶ **Autonomic Hyperactivity**– shortness of breath, sweating, cold clammy hands, dry mouth
  - ▶ **Vigilance and Scanning**– insomnia, difficulty concentrating, irritability
  - ▶ **Panic** – fear of dying, chest pain, fear of going crazy
- 

# Mood Stabilizers

Brand/Generic Name	Dosage Range	Side Effects
Eskalith- Lithium Carbonate	Lithium carbonate capsules or tablets - Eskalith®, and others (1 capsule or tablet = 300 mg = 8 mEq Lithium) Lithium carbonate time-released tablets - Eskalith SR (1 tablet = 450 mg = 12 mEq Lithium) Lithobid (1 tablet = 300 mg = 8 mEq Lithium) Lithium citrate syrup - Lithionate® (1 teaspoonful = 5 ml = 560 mg = 8 mEq Lithium)	Confusion, poor memory, or lack of awareness, fainting, fast or slow heartbeat frequent urination, increased thirst
*Depakote- Divalproex	<ul style="list-style-type: none"> <li>• 100, 250, 500 mg capsules (Depakene)</li> <li>• 125, 250, 500 tablets (Depakote)</li> <li>• 250mg/5 cc suspension</li> </ul> Depakote ER - 500 mg tablets	mild <i>drowsiness</i> or <i>weakness</i> ; <i>diarrhea</i> , <i>constipation</i> , upset stomach; changes in your menstrual periods; enlarged breasts, weight changes; <i>tremor</i>
Tegretol- Carbamazepine	<ul style="list-style-type: none"> <li>• 100 chewable tablets</li> <li>• 200 mg tablets</li> <li>• 100 mg/5cc suspension</li> </ul>	dizziness, drowsiness, nausea, vomiting, feeling unsteady; dry mouth, swollen tongue; or. loss of balance or coordination

# Symptoms Treated Through Use of Mood Stabilizers

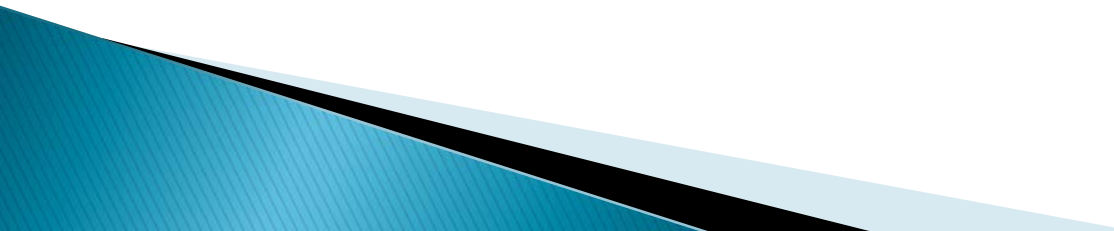
Mood Disorder	Hyperactivity
expansive	Sleep disturbance
labile	Assaultive/Threatening
Irritability	Hyperactive

# Anti-Depressants

Brand/Generic Name	Dosage Range	Side Effects
Elavil-Amitriptyline	150mg-300mg /day	Nausea increased appetite and weight gain loss of sexual desire and other sexual problems
Prozac-Fluoxetine	20mg-80mg /day	fatigue and drowsiness Insomnia dry mouth
Zoloft-Setraline	50mg-200mg/day	dry mouth, constipation, blurred vision,
Paxil-Paroxetine	20mg-50mg/day	mild headache, drowsiness, dizziness, sleep problems (insomnia), feeling restless or nervous
Luvox-Fluvoxamine	50mg-300mg/day	loss of appetite, nausea, diarrhea, gas, dry mouth, sore throat, dizziness, drowsiness, weakness, yawning, anxiety, sleep problems (insomnia or unusual dreams), sweating
Citalopram-Celexa	10mg-60mg/day	drowsiness, nausea, insomnia, xerostomia, and diaphoresis. Other side effects include diarrhea, ejaculatory disorder, anxiety, tremor, and vomiting
Cymbalta- Duloxetine	20mg-80mg/day	Nausea, Dry mouth, Sleepiness , Fatigue, Constipation



# Symptoms Treated Through Use of Anti-Depressants

- ▶ Prolonged periods of crying unrelated to sad events
  - ▶ Lack of motivation to be engaged in meaningful activities
  - ▶ Self-reports of suicidal thoughts
  - ▶ Self-reproach
  - ▶ Pro-longed periods of poor memory and concentration
- 

# Sedative / Hypnotics

Brand/Generic Name	Dosage Range	Side Effects
Ambien- zolpidem	5-20 mg/day	Burning or tingling in the hands, arms, feet, or legs, changes in appetite,
Ativan- lorazepam	0.5-10 mg/day	Difficulty keeping balance, Daytime drowsiness, Dry mouth or throat, Gas
Benadryl- diphenhydramine	25-50 mg/day	Difficulty keeping balance, Daytime drowsiness, Dry mouth or throat, Dizziness
Sonata- Zaleplon	5-20 mg/day	Impairment the next day, Mental slowing or problems with attention or memory
Restoril- temazepam	15-30 mg/day	Weakness, changes in appetite, Dizziness,
Dalmane- flurazepam	15-60mg /day	Stomach pain or tenderness, Unusual dreams, Dizziness,

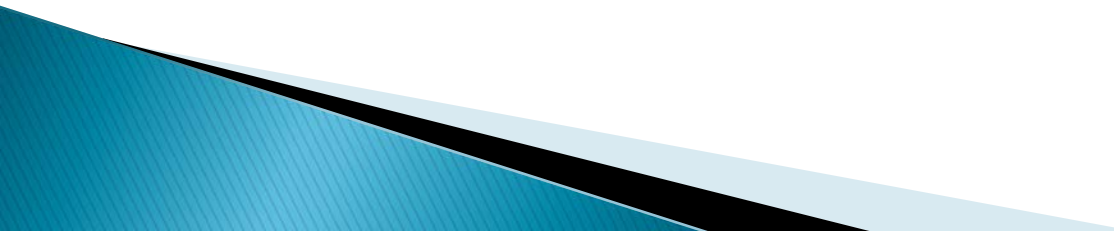
# Symptoms Treated Through Use of Sedatives / Hypnotics

- ▶ Prolonged patterns of lack of sleep less than 6.5 hours in a 24 hour period for multiple weeks

# Review of Side Effects

- ▶ **Swallowing/choking issues**
- ▶ **Dizziness**
- ▶ **Weakness**
- ▶ **Sleep Issues**
- ▶ **Constipation**
- ▶ **Mood Instability**
- ▶ **Memory Problems**
- ▶ **Agitation**
- ▶ **Aggression**
- ▶ **Loss of Appetite**
- ▶ **Dry Mouth**
- ▶ **Nausea**
- ▶ **Mood or Behavior Changes**
- ▶ **Head Aches**
- ▶ **Upset Stomach**

# Review of Significant Side Effects

- ▶ Death
  - ▶ Kidney Failure
  - ▶ Liver and Heart Disease
  - ▶ Diabetes
  - ▶ Increase in white blood count
  - ▶ Tardive Dyskinesia
  - ▶ Akathesia
- 



# Psychotropic Medication


- ▶ Malcom is 25 years old and takes Melatonin to aide with his insomnia. Is this a psychotropic medication?

# Examining Medication Usage

- ▶ In the state of Missouri from 9/1/2015 to 11/30/15 there were 2,350 people with an open episode of care with the Division of Developmental Disabilities who were prescribed 3 or more psychotropics for 60 or more days
- ▶ 649 people who were prescribed 2 or more antipsychotics for 60 or more days
- ▶ 425 people who were prescribed 5 or more antipsychotics for 60 or more days
- ▶ In 2017 a lawsuit charging Missouri officials for failing to properly oversee the administration of psychotropic medications to children in foster care. At least 23% of the 13,500 children in the care of the state's Children's Division were taking one or more psychotropic drug as of December 2017



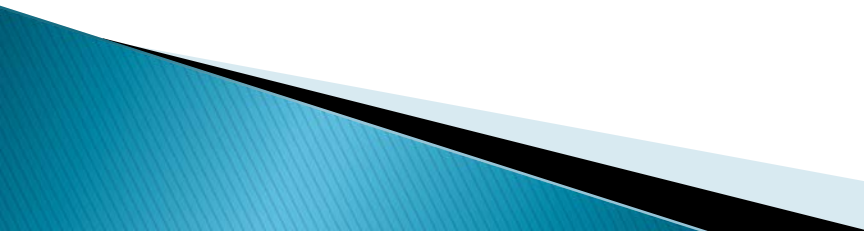
# Expectations for Department of Mental Health Contracted Behavioral Service Provider in Missouri

- ▶ Psychotropics are reviewed and included in the assessment process.
  - ▶ The Behavior Support Plan will include psychotropic medication(s) and the target behavior(s) related to the reasons for which medications were prescribed.
  - ▶ The Behavior Support Plan will describe how data will be collected and communicated with prescribing physician and team members.
- 

# Psychotropic Medication as a Discriminative Stimulus

- ▶ Results of numerous studies have demonstrated that drugs can serve as discriminative stimuli or impact the ability of other stimuli to serve as discriminative stimuli
- ▶ Two conditions must be met for a drug to be established a discriminative stimulus
  1. The drug must produce effects that can be detected by the organism receiving it
  2. The organism must have a history of differential reinforcement in the presence and absence of the drug
- ▶ Although the research which has examined this effect has been basic research, the concept is one that may extend outside the lab and that is worthy of clinical consideration

# Psychotropic Medication and Motivating Operations

- ▶ Research has also suggested that psychotropic medications can lead to the existence of differing motivating operations
  - ▶ Specifically, the administration or removal of psychotropic medication can lead to physiological effects which may make other stimuli more or less reinforcing, or punishing
  - ▶ Again, this is research which has been examined primarily in the lab, but the concept is one that may have ramifications for clinical practice
- 

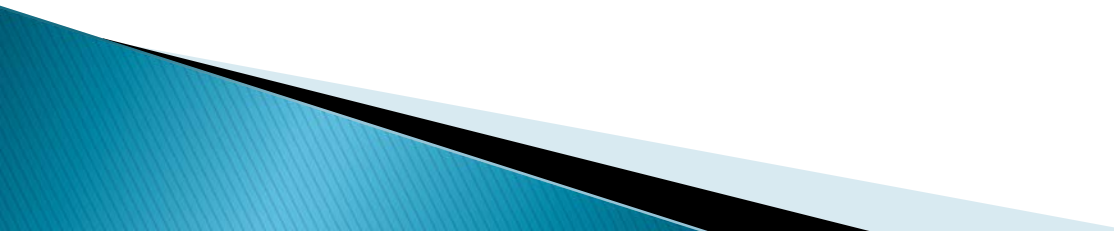
# Psychotropic Medication as Reinforcement

- ▶ Several studies have also determined that drugs can serve as reinforcers for behavior, which can exercise powerful control  
Some drug effects may serve as positive reinforcers and others may serve as negative reinforcers
- ▶ It is also interesting to note that additional research has suggested that some drug use may have little to do with the effects of a drug and more on the possibility that the drug became a conditioned reinforcer

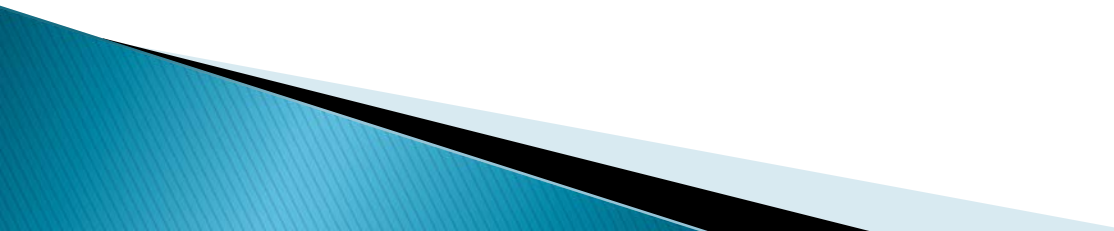
# Psychotropics as a Discriminative Stimulus

What two conditions must be met for a drug to be established a discriminative stimulus?

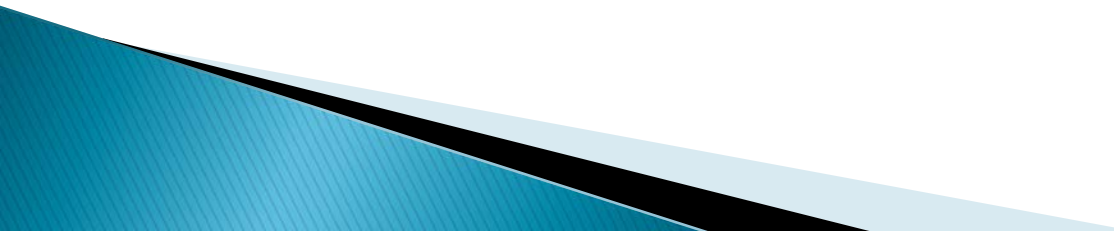
# How Psychotropic Medication Can Affect A Person

- ▶ Psychotropic medication can reduce a person's motivation to access reinforcement
  - ▶ Psychotropic Medication can reduce the value of reinforcement
  - ▶ Psychotropic medication can affect a person's ability to focus and retain information
  - ▶ Psychotropic medication can affect a person's medical status
  - ▶ All of the above will effect Individual and Positive Behavior Support Plans
- 

# What Needs to be Considered

- ▶ Eronda is a 30 year old with a diagnoses of Diabetes. Her Endocrinologist and Primary Care Physician discontinued her Seroquel and started her on a Heart Healthy Diet with no concentrated sugar and Abilify. After the discontinuation of Seroquel Eronda new behaviors emerged. She experienced confusion, the inability to complete her ADLs, and became verbally aggressive and physically aggressive.
- 

# What Is Role of the Behavioral Provider in relationship to

- ▶ Target behaviors
  - ▶ Data
  - ▶ Behavior Support Plan
  - ▶ Treatment Team
  - ▶ Prescribing physician
  - ▶ System Sustainability
- 



# Medicaid Waiver and Ethical Compliance Code

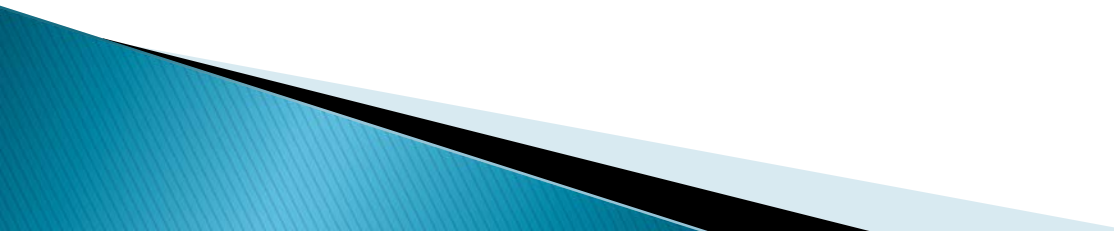
Missouri Department of Mental Health DD Medicaid Waiver Program Certification's states that there should be evidence that if medications are not being effective based on the intent of the prescription the individual should be supported in having the physician review the need for continuation of the medication. (Individuals' medications are regularly evaluated to determine their continued effectiveness 9CSR 45-5.010 (3) (D) 1. N. )

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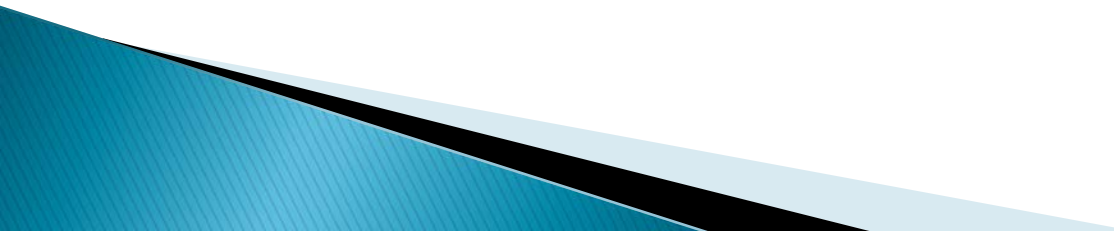
# Medicaid Waiver and Ethical Compliance Code

- ▶ The Professional and Ethical Compliance Code for Board Certified Behavior Analyst states that the effects of *any treatments* about which they are aware that might impact the goals of the behavior-change program, and their possible impact on the behavior change program, to the extent possible must be reviewed and assessed – that includes medication

# Recommendations for Improving Best Practices

- ▶ Use Best Practice Model for Psychotropic Medication Use
  - ▶ Plans that have a 4 or more psychotropic medications can be referred to the Regional Behavior Support Review Committee
  - ▶ Use the Psychotropic Medical Medication Checklist twice a year
- 

# Recommendations for Improving Best Practices

- ▶ Collect data and monitor side effects of psychotropic medication
  - ▶ Support staff, agencies, and families can be provided with data and documents to take to psychiatry appointments
  - ▶ Support staff, agencies, and families can look for opportunities to learn about psychotropics
- 

# Best Practices Model for Psychotropic Medication Use

1.

- Rule Out and Treat Medical Issues

2

- FBA and Behavioral Interventions

3

- Consider One Psychotropic Medication

4

- Measure Effects and Make Changes Based on Data

# Example of Medication Chart

<b>Zyprexa</b>	<b>Bipolar</b>	<b>250mg/day</b>	<b>Command Hallucination as defined in the ISP and BSP</b>
<b>Depakote</b>	<b>Bipolar</b>	<b>1000mg/day</b>	<b>Stripping clothes off and running into the street</b>
<b>Restoril</b>	<b>Anxiety</b>	<b>20mg/day</b>	<b>Pacing for 2 or more minutes followed by aggression</b>
<b>Zoloft</b>	<b>Major Depression</b>	<b>75mg/day</b>	<b>Crying for unidentified reasons at inappropriate times for 3 or more consecutive days</b>