

#### **Our Fundamental Task**

#### To build rapport with the Psychiatrist (or other prescribing physician) to improve the long term <u>Clinical Team Process</u>



#### The Ultimate Outcome

To Help the Individual Recipient of Clinical Services To Become as Functional, Independent, and as Free of the Need for Any Psychotropic Medication as Possible

#### What We Will Discuss

#### • Section 1:

- The Big Picture

#### • <u>Section 2</u>:

- Common Terms in Behavioral Pharmacology (psychopharmacology)
- 5<sup>+</sup> Main Classes of Psychotropic Medication:
  - Main Effects
  - Side Effects, and Secondary Effects
  - · Other Important Issues and Considerations

#### What We Will Discuss

- <u>Section 3</u>:
  - History & current status of drug use
  - Research findings/issues
    - Current prevalence of use
    - Research issues (e.g., assessment, singlesubject versus group design)
- <u>Section 4</u>:
  - The Role of The Behavior Analyst:
    - Assisting in evaluating medication effects, & integrating services for optimal clinical outcomes.

## Section 1

The Big Picture

#### The Behavior Analyst's Job

- Psychotropic means, essentially, *behavior changing*
- As such, behavior analysts have a deep and profound responsibility to be involved in the medication management process.

### Serious Business

- We are dealing with the most complex systems in the human body.
- In a real sense, they define us what we think, what we like or don't like, how we perceive and interact with the world.
- These medications affect the WHOLE person, not just the behavior of interest to the behavior analyst or doctor











## The Human Brain

Dr. Sebastung Seung, Professor of Computational Neuroscience at MIT:

"Your brain contains 100 billion neurons and 10,000 times as many connections"

(from The Astronomist Website, July 27, 2011)

Dr. Stephen Smith, Professor of Molecular Physiology at Stanford:

"In a human, there are more than 125 trillion synapses just in the cerebral cortex alone."

(Ibid)

What is That Number Again? 10<sup>(15)</sup> synapses -OR – 1,000,000,000,000,000 synaptic connections

#### An Analogy

□ If each synaptic cleft were the width of a thin pencil lead – about 1mm – or the height (not the length) of the line below..

## An Analogy

□ If each synaptic cleft were the width of a thin pencil lead – about 1mm – or the height (not the length) of the line below..

And 10<sup>(15)</sup> of those flat lines were stacked up, how high would the stack go?

#### What Distance?

• As far as Punxsutawney, PA? That's 59 miles

## What Distance?

 As far as Punxsutawney, PA? That's 59 miles Farther

#### What Distance?

Maybe New York City?
 244 Miles

## What Distance?

Maybe New York City?
 244 Miles

Farther

#### What Distance?

- Los Angeles? 2249 Miles
- Beijing China? 6804 Miles

## What Distance?

- Los Angeles? 2249 Miles
- Beijing China? 6804 Miles

A little Farther

What Distance?

The South Pole, maybe?
 9,022 Miles



#### How Far is 1 Quadrillion Millimeters?

• The stack of millimeters would reach *at the very least* ...

# How Far is 1 Quadrillion Millimeters?

• The stack of millimeters would reach *at the very least* ...

#### One **Billion** kilometers

# How Far is One Billion Kilometers?

How Far is One Billion Kilometers?

600 *Million* miles

How Far is One Billion Kilometers?

600 *Million* miles Well beyond Jupiter... closing in on Saturn



## How Many?

□Put another way...





#### Our Responsibility

- When we mess with the brain, we MUST approach the task as much care and scientific rigor as we can muster.
- We must bring all of our knowledge to the effort – not only about the subject matter, but about the *person underneath all of these treatment plans*

## Section 2

Basic Terminology, Drug Classes, and Side Effects

### Chronic Vs. Acute Use of Medication

□ Chronic = Long term use

Ideally for behavior problems that have not responded to environmental manipulations:

- "Endogenous" agitation: Inferred Biochemical cause
- "Medication management" appointments should occur with the prescribing physician on a regular basis

#### **Behavior Analyst Role**

- "Operationalize" definitions of the behaviors targeted by the medication
- Provide ongoing data/charts
- Create systems/training for caregivers to monitor/report on effects and side effects
- Attend med management appointments whenever possible (or allowed!)

 $\hfill\square$  We will discuss this in detail in Section 4

#### Acute Use of Medication

- Acute = Immediate, short term need
- Prescribed for a variety of problems:
  - Emergency use, behavioral
  - Emergency use, medical
  - □ Short term use for a specific problem
  - Pre-medication

## **Emergency Use**

#### Emergency use, behavioral

- Behavioral crisis intervention
- Sometimes called "chemical restraint"
- Example: Shot of a major tranquilizer in a crisis management unit: Cloazpine, Haldol

#### Emergency use, medical

- Medical crisis intervention
  - Example: Haldol as anti-emetic; Suppository for status epilepticus: Rectal Diazepam (Valium)

#### Other Acute Uses

#### Short-term

- Short term symptom alleviation
  - Anxiety, Insomnia
  - Example: Lorazepam (Ativan) for panic attack

#### Pre-medication

- Relaxation/Sedation
- Example: Ativan, Valium (anxiolytic)

## **Drug Effects**

- Main effect Therapeutic target
- Side effect Likely effects <u>other</u> than the therapeutic effect physiological.
- Secondary effects Usually synonymous with side effects, but not necessarily...
- Toxic effects Too much medication
  Important for behavior analyst to recognize

#### **Examples of Drug Effects**

- Main effect Prozac: reduce symptoms of depression
- Side effect Typical antipsychotic dry mouth; dyskenisia
- Secondary effects Risperdal: more likely to steal food
- Toxic effects Tremors, confusion
  Debbie and the Depakote





#### **Drug Classes Overview**

□<u>Stimulants/other ADHD treatments</u>:

Amphetamine related (Short acting: Ritalin/methylphenidate,

Adderall/Dextroamphetamine; Long acting: Concerta/Methylphenidate)

□Non-amphetamine related stimulants; alpha-2 agonists (Hypertension drugs: Tenex aka Intuniv; Clonadine/Catapress;)

Other experimental agents:

De.g. Oxytocin, I-carnitine

#### Antipsychotics: Schizophrenia

In Schizophrenia: Dopamine is a prime suspect; too much or too little

- Positive symptoms (things that happen: hallucinations, delusions)
- Negative symptoms (things that don't happen: flat affect, anhedonia, avolition)

## **Drug Class: Antipsychotics**

□ 1<sup>st</sup> Generation: "Typical"

Blocks Dopamine D<sub>2</sub>

Thorazine, Mellaril, Haldol, Navane, Prolixin

**2**<sup>nd</sup> **Generation**: "Atypical":

Mainly Serotonin blocker ("antagonist")

Clozapine, Risperdal (risperidone), Zyprexa, Seroquel, Geodon

3<sup>rd</sup> Generation: also called "Atypical", but
 Dopamine partial "agonist": D<sub>2</sub>, D<sub>3</sub>, D<sub>4</sub>
 Abilify (aripiprazole)

## **Drug Class: Antipsychotics**

- Very high Therapeutic Index = Very safe
  - $\Box$  TI = LD/ED.
  - Almost no tolerance effects: same dose for years
  - Little withdrawal effects due to depot binding, slow release from fat cells





#### Clinical implications of Anti-Cholinergic Side Effects

- □ I need water! Polydipsia (Jeb's story)
  - Behavior problem or medication adjustment--or both?
- Constipation, diet, and toileting skills
- Anorgasmia, and the problems it may cause

Aggression, property destruction, SIB

#### **Drug Class: Antipsychotics**

- D Other Major Side Effects
  - 1<sup>st</sup> generation = EPS related (Parkinsonism) TD, NMS, Dystonia, Akathesia
  - 2<sup>nd</sup> generation= EPS, but <u>less</u>; Metabolic (diabetes, weight, gynecomastia, hyperlipidemia)
  - 3<sup>rd</sup> generation (Abilify) = Some EPS, Less Metabolic, Less anticholinergic

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## **EPS and Typical Antipsychotics**

- Extra-Pyramidal Signs and Symptoms
- These side effects are most often associated with <u>typical</u> antipsychotics, likely due to the relationship with dopamine (specifically the D2 receptor)

## EPS & <u>Atypical</u> Antipsychotics

- Recent studies indicate that <u>atypical</u> antipsychotics <u>also</u> show a higher incidence of these side effects than initially suspected, especially with long term use and importantly with children and adolescents (McKinney & Renk, 2011).
- Some atypicals (e.g., Risperdal, Abilify, Zyprexa) may show higher incidence than others (Clozapine, Seroquel)

## Parkinsonism, Dystonia, Dyskenesia, or Akathisia?

□ All of these are characterized by:

Movement disorders, some completely involuntary

□ Most are characterized by:

Muscle stiffness (except for Akathesia)

Evaluation tool: The AIMS:

Abnormal Involuntary Movement Scale

#### Parkinsonism, Dystonia

#### **Parkinsonism**:

Shuffling gait, stooped postureDrooling, tremors, masked expressionPill rolling, cog-wheeling

#### Dystonia

Sustained <u>muscle contractions</u>
 Involuntary movements of neck, arms
 Rapid blinking or involuntary eye closing

#### Dyskenisia, Akathisia

#### Tardive dyskenesia:

 Involuntary lip smacking, tongue thrusting, grimacing, chewing, walking in place, pelvic thrusts, hums or grunts

#### □Akathisia

Restless motionLeg crossing and uncrossingPacing

#### Dyskinesia vs. Akathisia

Dyskinesia: You cannot sit stillAkathisia: You cannot sit down

### Life Threatening Reactions

#### **DNMS:** Neuroleptic malignant syndrome

❑High fever, <u>muscle stiffness</u>, sweating, abnormal heartbeat, excess saliva

#### □Serotonin Syndrome

□High fever, seizures, irregular heartbeat, heavy sweating, unconsciousness

#### **Lithium Toxicity:**

Low therapeutic index: Toxicity common
 GI symptoms; poor coordination, ear ringing
 Regular blood tests required

#### Life Threatening Reactions

#### □Mellaril

Heart issues: Banned in Eng.

#### **Clozapine:**

□Agranulocytosis: White blood cell problems– fatal infections

#### □Antipsychotics and the Elderly

□No longer approved in dementia-related psychosis: High risk of death by stroke.

#### Danger: NO Geriatric Use

- Schneider, et.al. (2006) in N.E.J. Med:
- Treatments were discontinued when they proved ineffective
  - "Adverse effects offset advantages in the efficacy of atypical antipsychotics for the treatment of psychosis, aggression, or agitation in patients with Alzheimer's disease."
- In 2005 the FDA issued a "black box warning" against the use of atypical antipsychotics in elderly dementia patients. In 2008, the warning was extended to ALL antipsychotics.

#### Non-life Threatening Side Effects

- **Risperdal** weight gain, upper respiratory infections, gynecomastia, hyperglycemia, diabetes
  - Clinically- Food EO; heavier and hard to block/redirect; embarrassment
- Haldol (and others) Akathesia
   Clinically increased "agitation"
- **Mellaril** Highest anticholinergic effects – Clinically– thirst, constipation, etc.

#### Side Effects vs. Secondary Effects

□Often considered synonyms, but...

□Side effects are typically *physiological* 

 Secondary effects may be conceptualized as <u>behavioral</u>
 Effects on target behaviors (e.g., SIB and proprioceptive feedback)
 Effects on other behaviors (e.g., sedative

effects in teaching contexts, attention span)

#### Secondary Effects: In ABA Terms

 Changes in contingent relationships between evocative, abative, and/or consequating stimuli and target behaviors\*
 MOs (EOs and AOs), S<sup>D</sup>s and S<sup>D<sup>P</sup></sup>s.

□Appetite increase/reduction; Anticholinergics; Blurred vision, ringing in ears and hearing

 Changes in reinforcing/punishing effects
 Deadening of pain sensation; hypersensitive tactile responses; appetite increase/suppression

\*e.g., Valdovinos & Kennedy (2004), LaRue et al., (2008)

#### Allergic Reactions

- Any medication can potentially cause an allergic/immune response.
- The story of Becky

## A Brief Note on Side Effects of NON-Psychotropics

For example: NSAIDS
 The story of Angie and her joint pain
 NSAIDs and gastrointestinal problems
 The story of Michael and his joint pain
 An uncertain but likely link
### **Drug Classes: Anxiolytics**

<u>Anxiolytics</u>: Anti-anxiety &/or Sedative/Hypnotics

- Anti-Anxiety = Long acting
- Sedative-Hypnotics = Shorter acting
- Barbiturates (Phenobarb; Low TI = high risk; Respiratory depression)
- Then came Benzodiazepines: Discovery of Librium – pretty crystals!
  - A/A= Valium, Xanax, Ativan
  - S/H = Dalmane, Halcion, Restoril
  - Amnesic properties see Rohypnol

### **Drug Classes: Anxiolytics**

- All are <u>GABA agonists</u>, but
  - Phenobarb at high doses opens CL Ion channel wide: Axon suppressed: Lethal
  - Benzodiazepines are also GABA agonists, but do not throw open the ion channel; <u>Much safer</u> drug
- Geller & Seifert screen: Multiple schedule
   EAB test; *Anti-Punishment effect*: AO<sup>SP</sup>





#### Likely Functions Related to Anxiety

- All functions are in play as always, but the likely functional relations inherent in anxiety-related behavior are:
  - 1. Escape/avoidance (especially avoidance)
  - 2. Respondent conditioning (e.g., phobias)

# Is Anxiety a Cause of Behavior?

This is a classic explanatory fiction -

- But calling it that is probably why people do not usually come to us to seek relief for their anxiety!
- □We need to change this. "Explanatory fiction" does not mean "fiction"

### Anxiety and Behavior Analysis

Behavior analysts must operationalize the target responses that can be characterized as indicators of "anxiety" by both the individuals who seek treatment, and the medical professionals who manage medication

We may then collect data on <u>those</u> targets

#### Measurement

- Data may be collected by observers on external responses
  - Pacing/agitated movements
  - · Refusals to go into public settings
  - Running away
  - Hyperventilating
- But "anxiety" is mostly experienced as a private event ("I feel like I am going to die").
- Thus, self-reporting is key to monitoring, especially during assessment (for individuals with verbal repertoires)

### Treatments

- Everyone is different, but besides anxiolytic drugs...
- Systematic desensitization (related to anxiety producing situations)
- Teaching other relaxation techniques
- · Search the literature for more

#### Benzodiazapines: Low toxicity risk, but...

- Paradoxical side effects sometimes
- Anxiolytics have anticonvulsant properties, so..
  - **Discontining** anxiolytic drug  $\rightarrow$  <u>Seizure risk</u>
- □ Tolerance problems, so...
  - Euphoria + Tolerance  $\rightarrow$  <u>Substance abuse</u>
- Benzodiazepine withdrawal effects
  - Physical dependence can happen, so when medication is stopped too fast:
    - Sleep disturbance, anxiety panic attacks all the way to
    - Hallucinations, seizures, psychosis, and suicide attempts

# NO ALCOHOL!

Never combine Anxiolytics and Alcohol!

Higher likelihood of injuries from accidents

Both slow down metabolism (CNS depressants): increased alcohol intoxication (poison), coma, heart failure

#### **Drug Class: Anti-depressants**

#### Anti-depressants:

- MAOI, Tricyclics, SSRI, SNRI
  - Mono-amine oxidase inhibitors

 Rarely used now: Very dangerous interactions with other drugs, foods, etc.

- Tricyclics: Block reuptake of Serotonin & NE
  - Anticholinergic effects; irregular heartbeat, postural hypotension, weight gain, reduction in seizure threshold. Safer than MAOIs, but side effects bad. T<sup>1/2</sup> =24 hrs.
  - Steady state usually about 5 days

#### Drug Class: Anti-depressants: SSRIs and SNRIs

#### SSRI: Affects Serotonin

- Serotonin stays in synaptic cleft longer.
- Fewer side effects than others: Very safe.
- NEVER MIX WITH MAOIs
- Steady state may take up to 75 days!
- Celexa, Prozac, Luvox, Zoloft, Paxil, ...
- SNRI: Affects Norephineprine
  - Serzone, Cymbalta, Effexor

# SSRI and SNRI Side Effects

- □Headache
- Tiredness
- Dry mouth
- □Constipation
- □Agitation
- Decreased sexual function
- Suicidal ideation
  - □ Special Information on Straterra in ADHD section

# Behavior Analysis and Depression

- Many of the same points made in the section on behavior analysis and anxiety pertain to depression as well
- Depression is not a cause of behavior, but a category of behavioral responses that can be operationalized.

### **Depression and Medication**

- Studies are quite mixed on the efficacy of anti-depressant medication in changing behavior related to most types of depression (see later in presentation).
- The behavior analyst MUST be involved in tracking target behaviors, operationalized as markers of depression, and charting those data.

#### Drug Class: Anticonvulsants/Mood-stabilizers

Anticonvulsants (used as mood stabilizers):

- Earliest type: Bromides concerns with toxicity
- 1<sup>st</sup> Generation:
  - I912: Phenobarbital (a barbiturate) Low TI
  - 1930: Dilantin (Phenytoin) gum tissue
  - Depakote toxicity issues at high doses; Tegretol

#### □ 2<sup>nd</sup> Generation:

- □ Fewer side effects: Neurontin, Topamax, Trilepal
- Different drugs for different seizure types

#### • Mood Stabilizer: Lithium

□ Used for depression, bi-polar disorder, ADHD (!)

### Seizures and Behavior Analysis

Seizure activity in an individual is important for behavior analysis services for five main reasons

- 1. Behavior before the seizure
- 2. Behavior during the seizure
- 3. Behavior after the seizure
- 4. Staff training related to seizures
- 5. Tracking medication effectiveness

### Behavior Before the Seizure

Identify external signs of upcoming seizure
 Help the individual identify and recognize
 "aura" signs that a seizure episode may be about to begin

### Behavior During the Seizure

- There are many types of seizures
- Most involve tonic/clonic involuntary movements ("Grand Mal"), or brief periods of "absence".
- Caregivers must be trained to recognize and track these episodes, by collecting "seizure data".

#### Atonic Seizures and Protective Devices

Atonic seizures – muscle control totally lost

- Individual can simply drop to the floor without warning
- Safety hazard to the individual (e.g., head injuries when falling).
- Helmets or other safety devices may be needed
- Behavior analyst often involved in training and tracking these interventions

#### Frontal & Temporal Lobe Seizures

- Frontal lobe (and some temporal lobe) seizures have been implicated in some research literature as being characterized by <u>directed aggression</u>!
- As such, this behavior may or may not be a good candidate for behavioral intervention. The behavior analyst must assess this with the MD.

### Behavior After the Seizure

- Often right after a seizure, the individual is tired, irritable, not talkative, and otherwise exhibiting a different behavioral profile than usual
- Efficient learning may be temporarily compromised.
- Automatisms (robot-like responses after a seizure) may be mistaken for a behavior problem

  – these must be behaviorally assessed

#### Seizure related behavior

- These and other patterns of responding may not be under full operant control – or may, at the very least, be functionally related to the physical act of having gone through a seizure.
- Behavior analysts are responsible for training caregivers how to respond to these types of post-seizure behaviors

# Staff Training re: Seizures

- Staff must be trained in all three of these phases:
  - What to do before a seizure if one is identified as coming;
  - What to do during a seizure, including special medication administration for rapidly cycling and high frequency seizure activity (usually "p.r.").
  - What to do when the seizure activity is over

### **Tracking Medication Effectiveness**

- Seizures should be counted and timed
   Collect data!
  - □ Each seizure *may* be a condition line
- Frequency/duration charts on seizurebased behavior provide an important tool for determining the effectiveness of a particular dose of a particular drug (or drugs).

### Drug Class: Stimulants and ADHD

- <u>Stimulants</u>: Two main types for ADHD medication
  - Amphetamines (Dexedrine)
  - Non-amphetamine Stimulant (Ritalin)
- <u>Non-stimulants</u>: A 3<sup>rd</sup> drug treatment for ADHD:
  - Anti-hypertensive meds:Clonadine, Tenex
  - SNRIs: Strattera\*\* (see *black box* warning)
  - Lithium (rated "possibly effective" on WebMD)

### Straterra and ADHD

- In September, 2005, the FDA directed Eli Lilly to place a black box warning on Straterra regarding suicidal ideation in children and adolescents (about 4 per 1000)
- ADHD is considered mainly a problem with children/adolescents (although it is present in adults as well)
- Straterra is primarily prescribed for ADHD in children. Very close monitoring is vital

# An Important Note

- The DSM-5 now allows a comorbid diagnosis of ASD & ADHD together (DSM-IV did not)
- Individuals diagnosed with ASD may now have ADHD symptoms treated using ADHD medications "on-label"
- This is a mixed blessing: sometimes behavior that appears to be related to ADHD is not. Environmental causes may be missed, and a drug is used but not effective

### Routes of Administration

Oral (p.o.)
Intra-muscular (i.m.)
Intra-venous (i.v.)
Inhalation (inh)
Sub-lingual (s.l.)
Sub-cutaneous (s.c.; s.q.)
Topical (top.)
Anal (p.r.; supp.)







### Generic versus Brand

#### Brand names:

- Proprietary
- Limit the production of a drug to the specific drug company that owns the patent.

#### □ After a period of time

- Proprietary ownership expires; drug goes public
- The drug can then be marketed by various companies under its original generic name

### The Various Names of Drugs

#### D Chemical name:

7-chloro-1,3-dihydro-1-methyl-5-phenyl-2H-1,
 4-benzodiazepin-2-one

#### Class

- Benzodiazepine
- a Active ingredient is given a generic name:
  - "Diazepam"
  - Most Benzos have name with a suffix "-pam"
     Lorazepam, diazepam, clonazepam
- *Then* marketed w/a brand name: Valium
   When patent runs out, sold as "diazepam"

# Are They the Same?

- Yes...and no.
- The active ingredient is the same, but the drug is delivered within certain inert, inactive ingredients
- These may differ- and this can legally affect *bioavailability* up to 20%

# Bioavailability

• "The degree to which a drug or other substance becomes available to the target tissue after administration"

 Miller-Keane Encyclopedia and Dictionary of Medicine, Nursing, and Allied Health, 7<sup>th</sup> ed. (2003)

### Effect of Bioavailability

- There can be a profound difference between the clinical effects of the same drug between Brand and Generic preparations.
- A change from Brand to Generic (for the same drug and dosage) should be indicated on graphs with <u>a condition</u> <u>change</u> line

An Important Half-Life Consideration for Behavior Analysts

- □For a medication with a short half-life, a missed dose can have a profound clinical impact – and a direct effect on data collected on target behaviors.
- Thus, behavior analyst may need to include information on missed doses (for these meds) on the graphs

#### The Final Class: Experimental Drugs

New medications under study
 E.g., Oxytocin, L-Carnitine
 Clinical trials are occurring now

□ In the next section we will discuss how clinical trials work, and what to look for

# Section 3

History, Prevalence, Current Research:

#### How widespread is the use of psychotropic medication for "behavior management"?

- □ What follows is compiled from many sources/surveys:
  - Valdovinos et al., 2016; Jobski, 2016; Turek et al., 2013; Griffiths et.al., 2012; Howovitz, Matson, & Barker, 2011; McKinney & Renk, 2011; Weeden, Ehrhardt, & Poling, 2010, Matson & Neal, 2009; Tyrer et al, 2008; Singh et al, 2005; Schall 2002; Pyles et al, 1997; Aman & Singh, 1983, 1986, 1988; Gadow & Poling, 1988; Hill, Balow, & Bruininks, 1985; Marti & Agran, 1985.

### Poling (1994) cited Grenier's 1958 grim but accurate prediction:

"In the years to come, the retarded may claim an all time record, of having the greatest variety and largest tonnage of chemical agents shoveled into them" Individuals with Intellectual Disabilities

#### Institutional Settings:

- -30 to 50% of individuals diagnosed with ID are prescribed medication "to control behavior"
- <u>Community Residential Settings</u>

   Approximately 20 to 40% receive medication prescribed to control behavior
- Kahn (1994) reported that about 75% of those receiving psychotropics given neuroleptics

 "Pharmacological interventions have become the most widely used intervention techniques with persons evincing mental retardation despite the fact that many drugs are ineffective, suppress behavior generally, and cause a number of lasting, deleterious side effects."

Baumeister & Sevin (1990)

#### Why is This So? Matson offers one answer

Johnny Matson (2008), refers to an article by Spreat & Conroy (1998) in *Psychiatric Services:* 

"They note that over 90% of antipsychotic drug prescriptions for persons with intellectual disabilities in nursing homes are for **'behavior control'**." -- (p. 573)

# Matson's (2000) Findings:

- An extensive survey of published literature on use of psychotropic medication with people with I.D.:
  - Aggression is the primary reason for institutional placement, and is the #1 reason cited when medication is used for"behavioral control."

# Matson (continued)

- Yet his comprehensive literature review yielded the following startling result:
  - "There is no information in the literature suggesting that antipsychotic agents are an effective means of treating *aggression*."

### Other Options?

■Peter Sturmey (2002) wrote in his article, "Mental Retardation and Concurrent Psychiatric Disorders: Assessment and Treatment", in the journal, *Current Opinion in Psychiatry…*  "Interventions based on *applied behavior analysis* have the *strongest empirical basis*, although there is some evidence that some other therapies have promise". (my *bold italics*) – Sturmey (2002)

### ABA as the First Best Practice

□ A few sources listing ABA as the best therapeutic intervention to try <u>before</u> considering medication:

UWyatt, 2009. Behav. Anal. Pract. (or "BAP") Fall 2(2)

□Van Haaren, 2009. BAP Fall 2(2)

□Warren et al., 2011. Pediatrics 127(5)

Sturmey, 2012. Canadian J. of Psychiatry 57 (10)

Ameis et al., 2013: J. of Clinical Psychiatry 74(10)

□ Weitlauf et al., 2014. Agency for healthcare Research and Quality. Report No.: 14-EHC036-EF

Newhouse-Oisten et al., 2017 BAP 10

New Evidence of Medication Efficacy with Aggression?

The results are mixed, at best

Deb Unwin & Deb (2015), write the following in their concluding section of *Characteristics and the trajectory of psychotropic medication use in general, and antipsychotics in particular, among adults with intellectual disability who exhibit aggressive behaviour:* 

### Deb et al., 2015

□ "Given the concern regarding high rates of psychotropic medication use to manage aggressive behavior in adults with ID in the absence of psychiatric disorders, and *in the absence of definitive evidence for their efficacy*, it is important to follow practice points stipulated in the recent guidelines", which, "advise clinicians to consider nonmedication-based management first"

#### Their Basic "Practice Points"

- Start at a low dose
- Titrate up until...
  - Reaching the highest recommended dose OR
  - Until the behavior improves OR
  - Adverse effects appear
- Review the need for the medication (and at that dosage level) on a regular basis
  - Assess efficacy and adverse effects
  - Consider d/c and a shift to non-medicationbased management of the problem

### A Note on Practice Guidelines

□Not part of this presentation

□ The M.D.s responsibility... (see section 4)

Graph For good information in this area, see:

Kalachnik et al., (1998) Guidelines for the use of psychotropic medication. In S.R.Reiss & M.G.Aman (eds.) Psychotropic Medication and Developmental Disabilities. p.45-72

Schall, C. (2002). A consumer's guide to monitoring psychotropic medication for individuals with autism spectrum disorders. *Focus on Autism and Other Developmental Disabilities*, 17(4), p. 229-235

#### Is the Situation Different with ASD?

The picture regarding the specific effect of psychotropic medication particularly on "aggression" when exhibited by individuals diagnosed with ASD is very complex.

The story begins by looking at prevalence of use.



#### Medication vs. ABA?

□Turek et al., (2013): "In most cases, psychotropic medications are the first treatment choice for aggression and tantrums in children with ASD, despite evidence supporting the efficacy of applied behavior analysis."

(p. 1380, Research in Autism Spectrum Disorders, 7)

### Age and Severity as Factors

- Aman et al., 2005
  - Likelihood of psychotropic use <u>increases</u> <u>with age</u> of the child (also Witwer & Lecavalier, 2005)
  - The more severe the ID or ASD = more likely use of anti-psychotics, anticonvulsants/mood stabilizers, anxiolytics)
  - -Less severe ID or ASD = more likely to see the use of a psycho-stimulant

### Meds for Infants?

- Mandell et al., 2008: Medicaid enrolled children:
  - -0-2 year olds:

# Infants!

- Mandell et al., 2008: Medicaid enrolled children:
  - -0-2 year olds: 18%

### Meds for Toddlers?

- Mandell et al., 2008: Medicaid enrolled children:
  - -0-2 year olds: 18%
  - -3-5 year olds:

### Toddlers!

- Mandell et al., 2008: Medicaid enrolled children:
  - -0-2 year olds: 18%
  - -3-5 year olds: 35%

# Horovitz et al., 2012

In The relationship between symptoms of ASD and psychotropic medication use in infants and toddlers, these authors state:

Psychotropic medications are often prescribed to children with ASD. However a disturbing trend underscored in this study is that, unlike in the past, these powerful drugs are being given to babies and infants. Given the potential for serious and irreversible side effects, particularly for the antipsychotics, this trend is of even greater concern" (p.1409)

# "Off-Label" Use

Keep in mind that these medications have <u>not</u> undergone rigorous testing in, and are <u>not</u> <u>recommended</u> for use with, children under the age of 5

# Are Medications Effective With ASD?

# □NO medications have yet been found that treat the <u>CORE symptoms of ASD</u>

□Social communication deficits, language impairments, repetitive behaviors

Medications used with individuals with ASD <u>may</u> help treat the "comorbid emotional and behavioral disturbances, including irritability, inattention, anxiety and hyperactivity" (my <u>italics</u>)

– Baribeau & Anagnostou (2014)

### Antipsychotics and ASD

Risperdal: The Positive Results:

 Risperidone was the first drug to be approved by the FDA for treatment of "irritability" in children/adolescents with ASD (10/6/2006)
 "Irritability" includes tantrums, aggression, and SIB
 Studies report varying levels of positive results

Le.g., McCracken et al, 2002; Zarcone et al, 2004; Zarcone, Napolitano, & Valdovinos, 2008; Aman, et al 2002, 2005, & 2009; Frazier et al, 2011; Schall et al, 2012

### **Risperdal and Abilify**

#### Abilify: The Positive Result:

- □In November 2009, Ability became the 2<sup>nd</sup> antipsychotic medication to be approved by the FDA for use in treating "irritability" in children/adolescents with ASD
- □Abilify also has shown some positive effects, but less than Risperdal
  - □ e.g., Robb et al., 2011,Sikich et al., 2009, Marcus et al., 2009

### The McCracken Study (2002)

□Often cited

□Used the following measures:

- The Irritability subscale on the Aberrant Behavior Checklist
- Clinical Global Impressions-Improvement (CGI-I) scale

In fact, almost all studies with positive results use some form of global rating scale. This highlights a problem... Design Problem #1 What about measurement? Most studies use <u>Standardized Ratings Scales</u>: CGI: Clinical Global Impressions Severity Scale (Guy 1976) ABC: Aberrant Behavior Checklist (Aman et al, 1985) CBC: Child Behavior Checklist (Asenbach & Rescorla 2001) NCBRF: Nisonger Child Behavior Rating Form CARS: Childhood Autism Rating Scale

### Why is this important?

In their update of the Matson 2000 review, Matson & Neal (2009) found the following:

Of the 12 studies which made the methodological cut (re: Sprague & Werry)

- 8 found significant decreases in problem behaviors over placebo
- 4 showed no difference.

BUT...

### Why this is important

"Notably, the four studies that did <u>not</u> find a significant effect were the <u>only ones to</u> <u>employ **objective observations**</u> in addition to rating scales." (p. 581) In other words....
# Why this is important

"Notably, the four studies that did <u>not</u> find a significant effect were the only ones to employ **objective observations** in addition to rating scales." (p. 581)

In other words....

When objective, operationalized behavior measurements are used, apparent improvement in behavior indicated on global scale ratings may disappear!

#### More on Ratings Scales

Singh, et al (2005) in a review of various Risperidone studies states:

"While findings from global impressions tended to be universally favorable, findings from dimensional ratings were less so. Further, studies that employed ratings scales that could delineate the differential aspects of Risperidone treatments were even less favorable than dimensional ratings. Based on this review, it seems that **more specific measures showed much lower positive drug effects**" (p. 216)



#### □Valdivinos et al., (2016)

- They changed meds and did repeated analogue functional analyses (and collected quantitative numerical data)
- They also had caregivers fill out repeated rating scales
- □The result: <u>Rating Scales did NOT capture</u> <u>rate changes</u> that in turn indicated changes in function of target behaviors

#### Valdivinos et al., (continued)

- "Better measures and procedures need to be in place to determine the exact effects medications are having on challenging <u>and</u> <u>adaptive</u> behavior in addition to monitoring adverse side effects" (p 209; my bold underline) (also see Weeden et al., 2010)
- "It is possible that changes in medication dose and kind are made contingent on perception of caregivers rather than data."

#### Some Not-So-Positive Results

In line with Matson's review in 2000, many studies have continued to show that psychotropic medications of many types have limited if any <u>long term</u> and <u>specific</u> reductive effect on challenging behaviors.

 E.g., Malteos et al 2009; Singh et al, 2010, Sturmey et al, 2010, Matson & Dempsey, 2008; Singh et al, 2005; Unwin & Deb 2011 – positive results were "equivocal"; Deb, Unwin, & Deb 2015

#### Two Other Important Factors

□McKinney & Renk (2011) state:

"Many studies document the discontinuation of AAMs\* due to relapse, loss of efficacy, or worsening of symptoms" (p. 470)

 "Somnolence, fatigue, and lethargy are other documented AEs\*\* and appear to be the most frequent AEs after weight gain", and these, "may be considered incompatible with disruptive behavior." (continued next slide)

\*AAM = Atypical Antipsychotic Medications \*\*AE = Adverse Events

#### A Global, not Targeted Effect

□McKinney & Renk continue:

"For example, the sleepier, more fatigued, and/or more lethargic children and adolescents are, the less likely that they are to have the energy to engage in DBs\*. Thus AAMs may reduce DB through sedation rather than by targeting the actual causes of this behavior."

\*DB = Disruptive Behavior

#### Adverse Events: More Likely in Children

McKinney & Renk also state (based on a review of multiple studies:

Children and adolescents appear to be at a higher risk for sedation, weight gain, and movement disorders that are associated with extrapyramidal symptoms (EPS) as well as other adverse effects that are prompted by AAMs. Thus before the real utility of AAMs can be determined, previous research examining the efficacy of AAMs in children and adolescents needs to be examined." (p466)

#### Zarcone (2008)

- In discussing measurement of problem behaviors during medication evaluations, she cites her own and others positive findings in Risperdal studies. But then Dr.Zarcone states:
- "It is possible they (psych meds) are over used in a population of individuals who <u>may be even</u> <u>more susceptible to side effects</u>".
- Moreover, "Very few studies have shown <u>social</u> <u>validity data</u> such that blind reviewers have rated the participants behavior change as significant."

#### HALDOL, RISPERDAL, AGGRESSION and the PLACEBO EFFECT

#### Tyrer et al (2008) published in LANCET

- A large scale international study
- Very well designed
- Group Comparisons: Haldol, Risperdal, Placebo

#### Tyrer, et al (2008): Findings

- 1. All three groups (Haldol, Risperdal, & Placebo) showed reductions in aggression (the target)
- 2. The placebo group had the largest decline in aggression.
- 3. "The **absence** of any **significant differences between drugs** on any of the other secondary outcomes...antipsychotic drugs are of no selective benefit"(p.62)
- 4. "No evidence of a delayed beneficial effect of the active drugs over an increased period of time."(p.62)

# Tyrer, continued

Their conclusion:

Our study...shows that either the placebo effect, the psychological effect of a formal external intervention, or spontaneous resolution, or all three, are substantial and would be difficult to surpass by even the most effective of drugs." (p.62)

□We will come back to this...

#### Antidepressants and ASD

- NO antidepressant medications are currently approved by any regulatory body for treatment of ASD. (Baribeau & Anagnoustou, 2014)
- Williams, et al., (2013): No evidence of effect of SSRIs on repetitive behavior, <u>but</u> <u>some evidence of harm</u>—greater incidence of adverse effects in treatment groups

#### ASD w/Depression Symptoms, or OCD

- This should be addressed on a case by case basis
- ■For example, repetitive behavior may appear to be related to OCD, but may have a different function and etiology than OCD (e.g., pleasurable sensation, or escape from environmental or social irritants, versus the obsessive self-talk as a private event common to OCD)

# Anti-Depressants and Suicide

On 5/2/2007 the U.S. FDA proposed that the makers of ALL antidepressant medications update the existing black box warning on their products' labeling to include warnings about increased risks of suicidal thinking and behavior known as suicidality in young adults ages 18-24 during initial treatment (generally the first one to two months)." – Retrieved from FDA website, 7/23/17

□ But: See Friedman, N Engl J Med. Oct 30, 2014 Perspective

#### Are Antidepressants Better Than Placebo for Depression?

# Antidepressant drug effects and depression severity: a patient-level meta-analysis.

- Fournier J.C., DeRubeis R.J., Hollon S.D., Dimijian S., , Amsterdam J.D., , Shelton R.C., Fawcett J. (2010)
- Journal of the American Medical Association
- Department of Psychology, University of Pennsylvania, 3720 Walnut St, Philadelphia, PA 19104, USA. jcf@sas.upenn.edu

#### Fournier et.al Conclusion

"The *magnitude of benefit* of antidepressant medication compared with placebo <u>increases with severity of depression</u>

symptoms and may be minimal or nonexistent, on average, in patients with mild or moderate symptoms. For patients with very severe depression, the benefit of medications over placebo is substantial."

#### Alternative Views:

□Some researchers believe most effects of antidepressants are due almost entirely to the placebo effect (as in Tyrer's study of Risperdal and Haldol)

Kirsch et al., 2008; Moncrieff & Kirsch, 2015

□Confirmation bias

#### **A New Statistical Model**

- Trajectories of Depression Severity in Clinical Trials of Duloxetine (Cymbalta): Insights Into Antidepressant and Placebo Responses
- Ralitza Gueorguieva, PhD; Craig Mallinckrodt, PhD; John H. Krystal, MD
- Arch Gen Psychiatry. 2011;68(12):1227-1237.

# "Growth Mixture Modeling"

- Treatment "trajectories"
  Individual tracks rather than composite data
- Some get better, some get worse, some respond better to placebo!
- This hides differential results in most studies: individualized subject effects cancel each other out





#### ASD and ADHD Medication

- Increasing use of these meds with children with ASD (e.g., Ddalsgaard et al., 2013)
- □ The best evidence for a positive effect is for Ritalin (Methylphenidate – e.g., Simonoff et al., 2013), but rating scales are still the primary measurement tool
- Children w/ASD show a LOWER response on reduction of ADHD symptoms than typically developing children (Baribeau & Anagnostou 2014)
- Atomexitine (Straterra) has shown very mixed results (Hafterkamp et al., 2012, 2013)
   Remember black box warning!

#### ASD & ADHD: Recommendations

Baribeau & Anagnostou (2014) recommend the following:

- Carefully evaluate for contributing medical causes
- □Use an ADHD standard assessment tool
- □Use behavioral and educational interventions
- Consider psycho-stimulant use only if:
  - Child is over 5; no history of psychosis, severe anxiety, low weight, or cardiac concerns
     Weight/BMI/heart rate/BP can be monitored easily

# If ABA fails, do Meds Work?

- Matson & Dempsey (2008) also found the following:
  - Not a single study exists in which a functional assessment was completed, a behavior program was implemented, the program failed, and then, a medication was used to successfully reduce a specific target behavior.

(p.184)

# Scahill, et.al (2012)

- Risperidone vs Risperidone + Parent Training were compared.
- The focus: Adaptive functioning in children with PDD and serious behavior problems.
- *Risperidone* + *Parent Training* was mildly more effective than *Risperidone alone*
- Notice anything missing?

# Scahill continued

#### • Parent training alone was not tested!

- Scahill states, "It may be argued that there should have been a PT-only group....", but "inclusion of a PT-only group would not have been a fair comparison and would not meet the *equipoise standard*." (p 144) (my italics).
- The ethics of "Equipoise"
- Other problems: DRO (vs DRA), ABC scale

#### Studies Comparing Meds w/ABA?

Weeden M., Erhardt, K, & Poling, A. (2009) in *Research in Autism Spectrum Disorders* The title of their article says it all:

Conspicuous by their absence: Studies comparing and combining risperidone and applied behavior analysis to reduce challenging behavior in children with autism.

# Frazier, et.al., 2010

Effectiveness of Medication Combined with Intensive Behavioral Intervention for Reducing Aggression in Youth with Autism Spectrum Disorder

> JOURNAL OF CHILD AND ADOLESCENT PSYCHOPHARMACOLOGY Volume 20, Number 3, 2010 p 167-177















# Conclusion

"Behavioral treatment combined with antipsychotic medication was the most effective approach to reducing aggressive behaviors in youths with ASD. Mood-stabilizing and nonstimulant ADHD/sleep medications did not contribute to aggression reduction" (p.167)

 "Mood-stabilizing and non-stimulant medications used to treat ADHD symptoms and/or sleep difficulties (primarily clonidine) did not improve the effectiveness of IBI\* during the course of study."
 (p.174) \*Intensive Behavioral Intervention

# This Is A Great Article

- Ameis, Corbett-Dick, Cole, and Correll (2013)
- Decision Making and Antipsychotic Medication Treatment for Youth with Autism Spectrum Disorders: Applying Guidelines in the Real World
   Journal of Clinical Psychiatry, 74:10

Here is just a bit of what they say...

#### Remember: This is The Journal of And Finally **Clinical Psychiatry** The Gold Standard: A team of specialists use the "Use behavioral interventions to help youth ADOS (Autism Diagnostic Observation identify alternative/more rewarding ways to Schedule) and clinical judgment. communicate needs. (see ATN Challenging Behaviors Tool Kit)" "Primary treatment for core ASD symptoms centers on evidence-based educational and □ https://www.autismspeaks.org/familybehavior interventions." (p 1022) services/tool-kits/challenging-behaviors-tool-kit □ "Establish the function of behavior (eg, escape, □ Autism Speaks ATN. Tool kits. avoidance, attention), evaluating antecedents, http://www.autismspeaks.org/familybehaviors and consequences ("ABCs")." p.1023 services/tool-kits

#### Many Tool Kits, Including Kits on Medication Use and Decision Making

- <u>https://www.autismspeaks.org/science/resources</u> -programs/autism-treatment-network/tools-youcan-use/medication-guide
- <u>https://www.autismspeaks.org/science/find-resources-programs/autism-treatment-network/tools-you-can-use/atn-air-p-autism-medication-safe-careful-use</u>

#### Two Design Problems #1: Placebo "Washout"

- In many medication studies, individuals are given placebo for a period of time prior to the actual beginning of the trial period.
- Anyone showing a positive effect is <u>removed from the subject pool</u> even before the study is begun. (Wyatt, 2006, p.145)
- Is this Selection Bias?

# Fournier on "washout"

"Although it is not clear that placebo washouts actually enhance the statistical power of ADM/placebo comparisons,<sup>9,10</sup> this design feature severely limits the ability to generate accurate estimates of the placebo response rate. Because early placebo responders are removed from the trial before they can contribute data, the true rate of placebo response may be underestimated in trials that use this feature" (2010) JAMA 303 p.48

#### Design Problem #2: Identification of Problem Behaviors

- Problem behaviors are referred to as "CB" (challenging behaviors) or DB (disruptive behaviors)
- Behavior analysts "operationally define" behavior, based on what it looks like: "physical assault", "self-injury", "running away", "social withdrawal"
- But in most drug studies...

#### Where are the target behaviors?

#### □<u>Matson & Dempsey</u> (2008)

 "The hallmark assessment for challenging behaviors are <u>operationalized target</u> <u>behaviors</u> with strong inter-rater reliability. However in practice, very few research studies on pharmacological treatments of ASD follow this model. Often scales that are more general measures of psychopathology or behavioral disturbance are used in lieu of measures specific to challenging behaviors."

#### Matson and Dempsy (2008) Conclude:

□ "<u>Operational target behaviors</u> in drug treatment research on persons with challenging behaviors and ASD are <u>generally non-existent</u>. We are of the opinion that proper selection and use of dependent variables in the drug research we reviewed is one of, if not the greatest obstacle to accurately addressing pharmacology as a treatment" (P. 185)

□ Also see Matson et al., 2011 on "irritability"

# Zarcone's Suggestion

 In "Mesaurement of problem behaviour during medication evaluations" (2008), Zarcone states that, for example, the Clinical Global Impressions Scale (CGI) is in common use, but "the scale lacks any specific information about the effects of medication on specific problem behaviors, and instead groups them into one large category of "presenting problems".

#### Zarcone continued

 She states that the ABC (Aberrant Behavior Checklist – Aman 1985) is "one of the 'gold standards' for medication evaluation" (p 1019), but goes on to stress the importance of determining more specific information and identifying functional relationships. "Perhaps the most advantageous approach is to use both indirect and direct methods to evaluate true effects of mediation" (p 1022)

# Section 4

What Behavior Analysts bring to the table– how we can influence the medication management process.



What We Can Do To Help!

The Behavior Analyst, The Treatment Team, & How to Get Along

# What are some immediate contingencies at play here?

- 1. Two parallel approaches with strong advocates: ABA & Psychopharmacology
- 2. Insufficient trained staff makes ABA intervention difficult in many settings
- 3. Intervention during serious behavioral episodes can lead to injuries to all parties and/or potential allegations of abuse

--Matson & Wilkins (2008), p.9

Immediate contingencies (continued)

4. "Additionally, for antipsychotic medication, a psychiatrist, neurologist, or other medical professional takes primary responsibility for care, whereas a behavior intervention requires coordination in planning and implementation by various staff who may not want that responsibility" --Matson & Wilkins (2008) p.9

The story of "Eddie the Pincher".

#### The Most Likely Driving Force

"At times of severe behavioral crises, there may be excessive pressure on the prescribing physician to do *something*. To do nothing may give the appearance of neglect, even when it is the most prudent course".

– Sturmey, 1998

### So, Are Medications Bad?

 Aman and Singh (1991) warn those who might eliminate the use of medication to, "maintain an open mind about the use of such therapeutic procedures, lest they otherwise inadvertently adopt extreme positions that are counter to the interests of those they wish to serve". (P.350)

#### Perhaps Tyrer (2008) says it best

"Our results should not be interpreted as an indication that antipsychotic drugs have no place in the treatment of some aspects of behaviour disturbance in people with intellectual disability. Evidence suggests that such drugs are effective for autistic behaviour in children...and in prevention of further aggressive behaviour in those given anti-psychotic drugs as an emergency measure...

#### Tyrer (continued)

"But we conclude that the <u>routine</u> prescription of antipsychotic drugs <u>early</u> in the management of aggressive challenging behavior, even in low doses, should <u>no</u> <u>longer be regarded as a</u> <u>satisfactory form of care</u>."



# What does it mean for a medication to *"help"*?

Two general classes of behavior targeted for change

- 1. Reduction of problem behaviors
- 2. Increase in functional behaviors

# Everybody wants to help. So what's the problem?

Behavior analysts and doctors not only know about different things, but *observe* different things

# The Diagnostic Problem

- Office Visits vs. Continuous
   Observation
  - Doctors see the consumer for brief periods only; must often make rapid assessments and treatment decisions
- Example:

#### The Rash vs. Aggression

• One can be evaluated quickly, not the other

# How Can We Help?

# Our Typical Skills:

Clearly define target behaviors

Collect data and graph it

Analyze (environmental) functions (vs endogenous causes)

Educate team members about ABA.

# What We Can Do

- Develop additional skills
   Learn the language
   Learn about the medications
   Know the effects and side effects
   Attend workshops!
- Coordinate w/ prescribing physician
   E.g., Find out what kind of graphs the doctor is most comfortable using

# **Specific Actions**

- Identify and track clearly defined target behaviors
  - Ask the doctor what exact behaviors he or she needs for you to track, and report back
  - Suggest objective, clear, and <u>measurable</u> target behavior definitions

#### What Do Psychiatrists Want?

- $\rightarrow$  Sleep Data.
- → Activity Level
- → Weight Data
- → Social Isolation
- E.g., Tsiouris et al(2003) found that core conventional symptoms of depression were strongly associated with each other, but challenging behaviors were NOT associated with depression as had been previously thought (Sturmey et al 2010)

# **Specific Actions**

- With <u>deference</u> to the M.D., request treatment coordination: ABA & Medical
  - Try to change only 1 variable at a time (see Sprague & Werry 1971)
- Present graphs with clear condition & phase change lines
  - Indicate both program & medication changes on the chart.

# Charting Changes

- Phase change lines (solid)
  - -Major environ change; intervention (IV)
  - -Medication introduction
  - -Medication discontinuation
- Condition change lines (dotted)
  - -Change in parameter of intervention
  - -Change in dosage

# What We Can Do Learn Additional skills: Become fluent in uses and side-effects of medications "One way to decrease underreporting is to provide patients or carers with a list of possible side effects associated with each medication being used" (from Corso et al 1992 in Zarcone 2008) AIMS: Abnormal Involuntary Movement Scale (NIMH 1985)

- MEDS: Matson Evaluation of Drugs Side Effects Scale (Matson et al, 1998)
- □ Also learn their secondary effects

#### **Treatment Ethics**

 When the prescribing physician does not accept the behavioral model, and you think that medication is being inappropriately used to control environmentally mediated behaviors,

What should you do?

The Professional and Ethical Compliance Code for Behavior Analysts

#### **2.09** Treatment/Intervention Efficacy

2.09 (c): In those instances where more than one scientifically supported treatment has been established, additional factors may be considered in selecting interventions, including but not limited to efficiency and cost-effectiveness, risks and side effects of the interventions, client preference, and practitioner experience and training. The First Question: Who Decides?

 The behavior analyst has no direct clinical responsibility for the decision to medicate or not to medicate. The consumer is the ultimate decider, but when it comes to meds..

-The doctor has the license!

# Our Challenge How can we influence without alienating?

# What Works: Priority #1

 Attend medication management appointments
 This can be a challenge, but the consumer makes this call
 To assist with medication management, there is no substitute
### Do What Works, Not What Feels Good

• We may want to speak of contingencies and functions, while the psychiatrist speaks of an "underlying mental state" as causing the problem ....

But we both agree that specific behaviors must be tracked!

### Do What Works, Not What Feels Good

Regardless of any difference you may have with the doctor over the cause of the behavior problem...

Both <u>will</u> agree that we need to find out <u>whether the medication is working or</u>

<u>not</u>

## What Works

- Withhold <u>arguments</u>, at least in the early phases of your relationship with the physician, about likely operant or respondent causes of the problem
- Our FIRST job is to become a useful participant in the doctor's decision making process

### What Works

- Establish friendly and helpful rapport
- Become a reliable source of information, asap!
- Ask the doctor what type of data he or she would like to see. Provide that, asap!
- Ask (subtly suggest) how to operationalize behavior that reflects the psych diagnosis
- Establish yourself as an S<sup>D</sup>, especially at first
  - Be there to help, not critique or lecture (don't be an EO for S<sup>r-</sup>!)

## What Works

- Save philosophy for later, when you have become colleagues.
- Let the DATA and the GRAPHS do the talking.
- Good condition/phase change lines are vital. The M.D. will see it right there on the chart!

- Don't preach behavior analysis. Do behavior analysis.
- Do try to convince the MD you are RIGHT about the source of behavior

Do it, don't talk about it!

## What does NOT work

- Questioning the M.D.s reasoning
- Suggesting Medication Changes.

This is a very bad idea.

Show me **your** license to practice medicine!

# What Works

"The individual will benefit most when the members of a collaborative or inter-disciplinary team combine their expertise and consider all the possible interventions and outcomes."

- Jennifer Zarcone (2008)

## A Member of the Team

The behavior analyst is member of the team who is best prepared to demonstrate the link between behavior and the environment.

□ If and when psychotropic medications are prescribed, ABA can help insure that:

The medication is well-monitored,
 Given at the lowest effective dose, and
 Used for the least amount of time needed to obtain the desired therapeutic benefits.



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