Holistic Approaches to Prevent the Overuse of Psychiatric Medications for Individuals with Developmental Disabilities

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Presentation Overview

- Background of Psychiatric Prescribing and Developmental Disabilities
- Importance of Comprehensive Functional Assessments
- Evaluating the Effectiveness of Positive Behavior Supports
- A Method for Seeking Psychiatric Consultation
- Case Illustration
- This presentation is predominantly focused on adults diagnosed with developmental disabilities. However, there are implications for a larger target audience that includes children and adolescents.
- It is hoped that from this presentation we can continue to bring about a cultural change that allows our audience to be better consumers of positive behavior supports and psychiatric prescribing.

Background

- Challenging behaviors displayed by those with developmental disabilities often receive a heightened focus because of potential harm to self and others. While there is a high prevalence of problem behavior in this population, the range of treatments varies considerably.

- Fifty-percent of the total population of individuals with developmental disabilities takes at least one psychiatric medication (e.g., antipsychotics, antidepressants, psychostimulants, and mood stabilizers). *Are people who are diagnosed with developmental disabilities the most medicated segment of our society?*

- It is estimated that over 50% of those in institutions and over 25% in community-based congregate settings are prescribed medications.

- What is the first choice of treatment options when trying to reduce problem behaviors--medication or non-medication based interventions? Is combined treatment best?

Mansfield Training School

On December 6, 1978, a volunteer organization sued the State of Connecticut. In a class-action suit, known as CARC versus Thorne, the volunteers sued the state for the way it perceived and treated some persons with developmental disabilities. Judge F. Owen Egan found:

- **That the institutional environment was destructive and at times "devoid of potential for meaningful human activity".**
- **That physical restraints were used to control clients as a substitute for programs.**
- **That many residents were denied their privacy and basic human dignity.**
- **That residents were routinely restricted-- even locked up – and their daily activities regulated in conformity with the institutional routine.**

Among other things, the Consent Decree that ensued, because of the overuse of psychiatric medications , restraints, and seclusions, required the establishment of the Program Review Committee.

Program Review Committee

1. **Medications were to be used after exhausting all other means of dealing with the challenging behavior.**

2. **Medications were not to be used for the convenience of the staff or due to a lack of resources.**

3. **Restraint was to be used as a last resort to prevent injury or harm to self or others.**

4. **All medications and aversives must be in conjunction with a Behavior Support Plan, which along with the use of a Functional Assessment, looks to teach the skills necessary to get one's needs met in a socially acceptable manner.**

Psychiatric Medications

- In Connecticut, data on psychiatric medication use has only been kept regarding individuals residing in DDS funded facilities. Our most recent statistics indicate that 6,480 individuals residing in funded sites are on one or more psychiatric medications.

- Those individuals represent approximately 67% of the residentially placed individuals. These individuals are currently taking 9,715 psychiatric medications.

- On average, these individuals are taking 2.64 psychiatric medications.

- A more startling statistic is that once an individual begins psychiatric medication treatment, they continue on that or a variety of other psychiatric medications for an average of 13 years.

Psychiatric Medications

- **Also of concern is the large number of individuals with intellectual disability and autism spectrum disorder who are treated with multiple pharmacological agents, a practice for which there is virtually no evidence base.**

- **Mandell (2008) using data based on Medicaid claims for 60,000 children diagnosed with autism spectrum disorder, found that 56% of children surveyed were on at least one psychiatric medication and that 20% were receiving 3 medications.**

Table Name	Code	sDesc
PSYTYPE	0	ANTI-PSYCHOTIC (NEUROLEPTIC)
PSYTYPE	1	ANTI-DEPRESSANT
PSYTYPE	2	ANTI-MANIA
PSYTYPE	3	ANTI-ANXIETY
PSYTYPE	4	SEDATIVE/HYPNOTIC
PSYTYPE	5	STIMULANT
PSYTYPE	8	HERBAL/NATURAL
PSYTYPE	9	OTHER psychiatric

Row Labels	0	1	2	3	4	5	8	9	Grand Total
Grand Total	2802	2094	206	1249	68	55	107	2618	9199
3227	1.25	1.17	1.03	1.16	1.03	1.02	1.00	1.48	2.85
	1	1	1	1	1	1	1	1	1
	5	4	3	3	2	2	1	6	11

How Did We Get Here?

- **For all of our efforts since the closing of Mansfield Training School, the situation regarding psychiatric medication use has worsened. A great deal of effort, time and expense have been directed at overseeing the use of these medications to assure that no use of medication is unnecessary.**

- **Yet, the majority of those living in DDS funded living facilities are taking psychiatric medications and of those people, the average number of medications per person is over two.**

How can we change this situation?

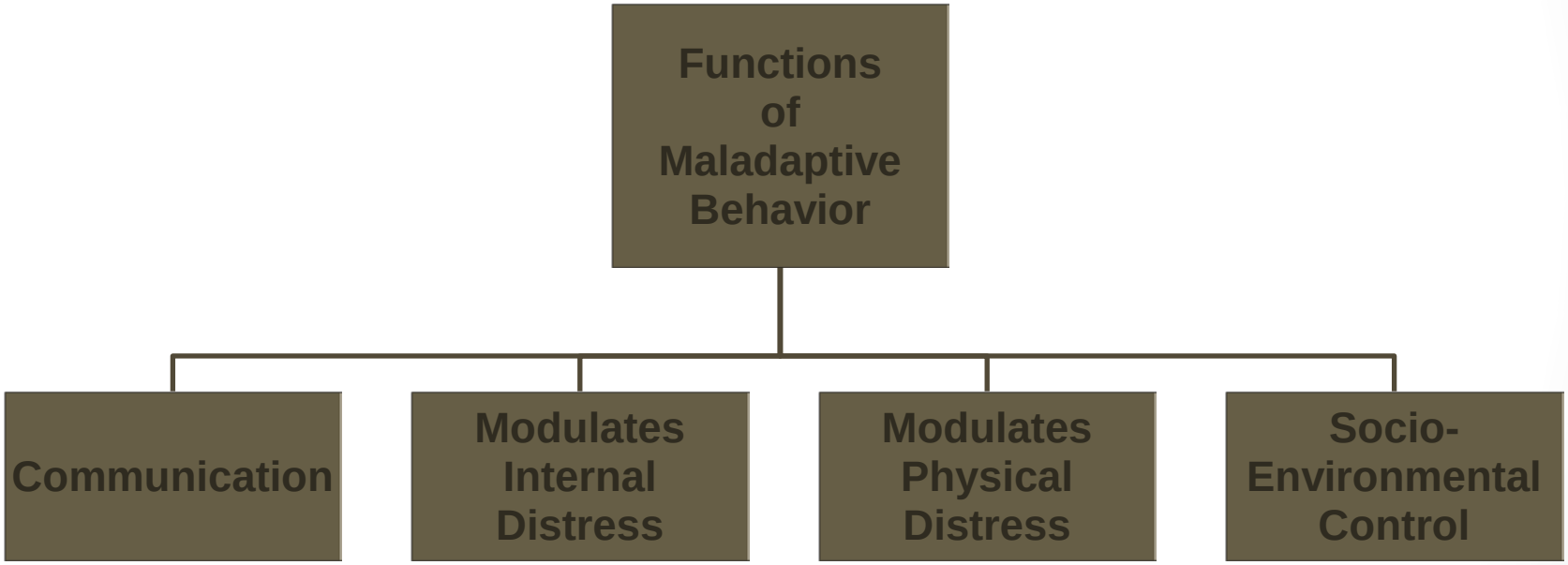
- **Two sets of factors must be recognized and modified to turn the tide of overuse of medications.**

- **The first set of factors is rooted in the larger culture of the United States. The use of legal and illegal medication in the U.S. has skyrocketed since the middle of the last century. For example, prescriptions for opioid pain medications have tripled from 1991 to 2009 (NIH Report, 2011).**

- **Secondly, complexes like anger, aggression and agitation are suppressed with medications, rather than being seen as symptoms of unhappiness and dissatisfaction with one's life. The view that medications can cure unhappiness is ubiquitous, and it deflects more substantial efforts to better understand the sources of unhappiness so that solutions can be found.**

Holistic Functional Assessment

The first step in better understanding and more effectively treating the reasons why individuals diagnosed with developmental disabilities engage in maladaptive behaviors is to conduct a <u>comprehensive functional assessment (FBA)</u>.



(Robert Souvner, 1991)

Evaluating the Effectiveness of Positive Behavior Supports

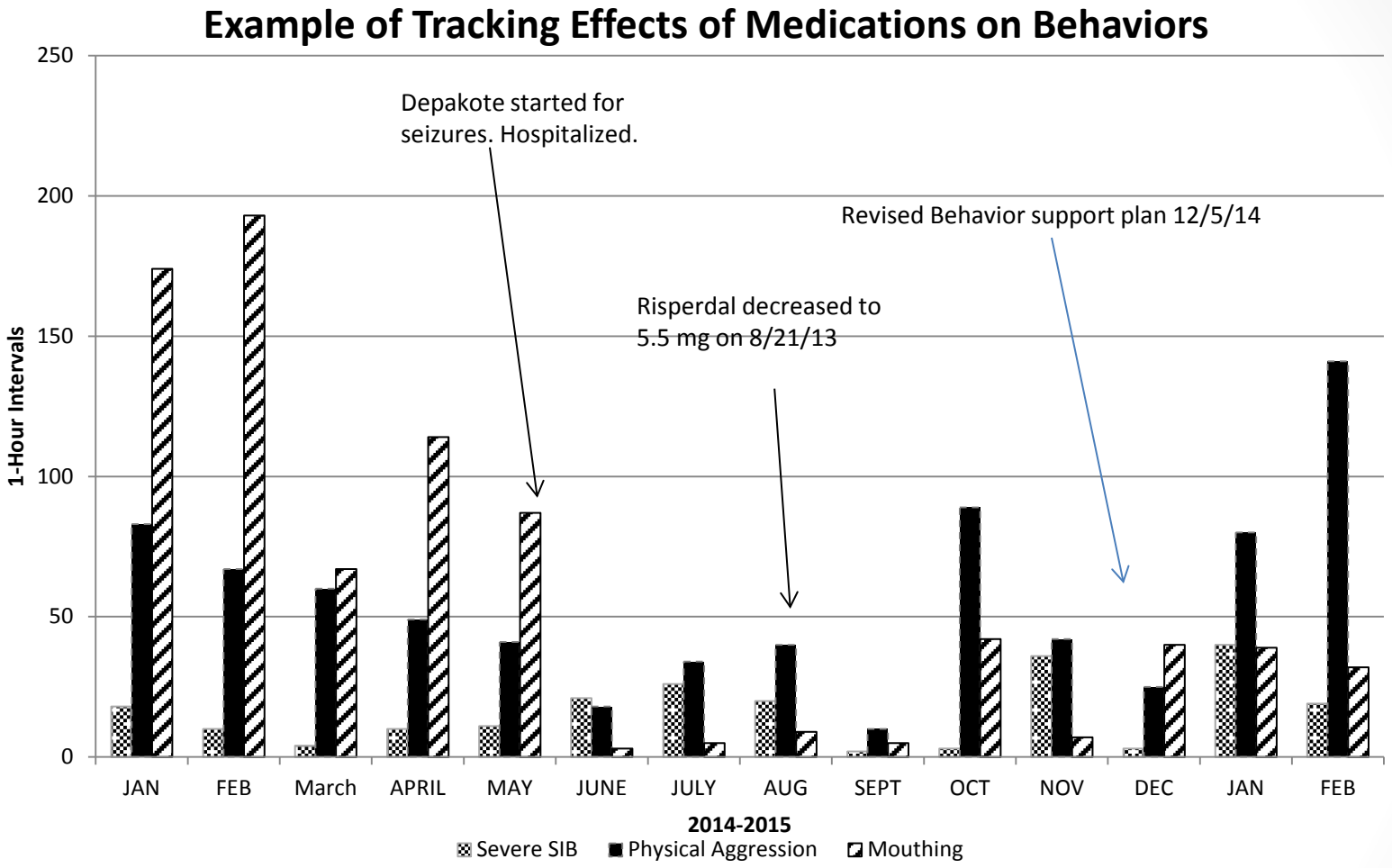
- **Have all health issues been ruled-out (e.g., dental, GI, sleep disorders, etc.)?**
- **Is the behavioral presentation different across settings (e.g., residential versus vocational)?**
- **What situations are the challenging behaviors *most* likely to occur? What situations are the behavior problems *least* likely to occur?**
- **What do you think internally and externally triggers the behaviors (e.g., slow versus fast antecedents)?**
- **What intuitively seems to cause the behaviors and why?**

Evaluating the Effectiveness of Positive Behavior Supports

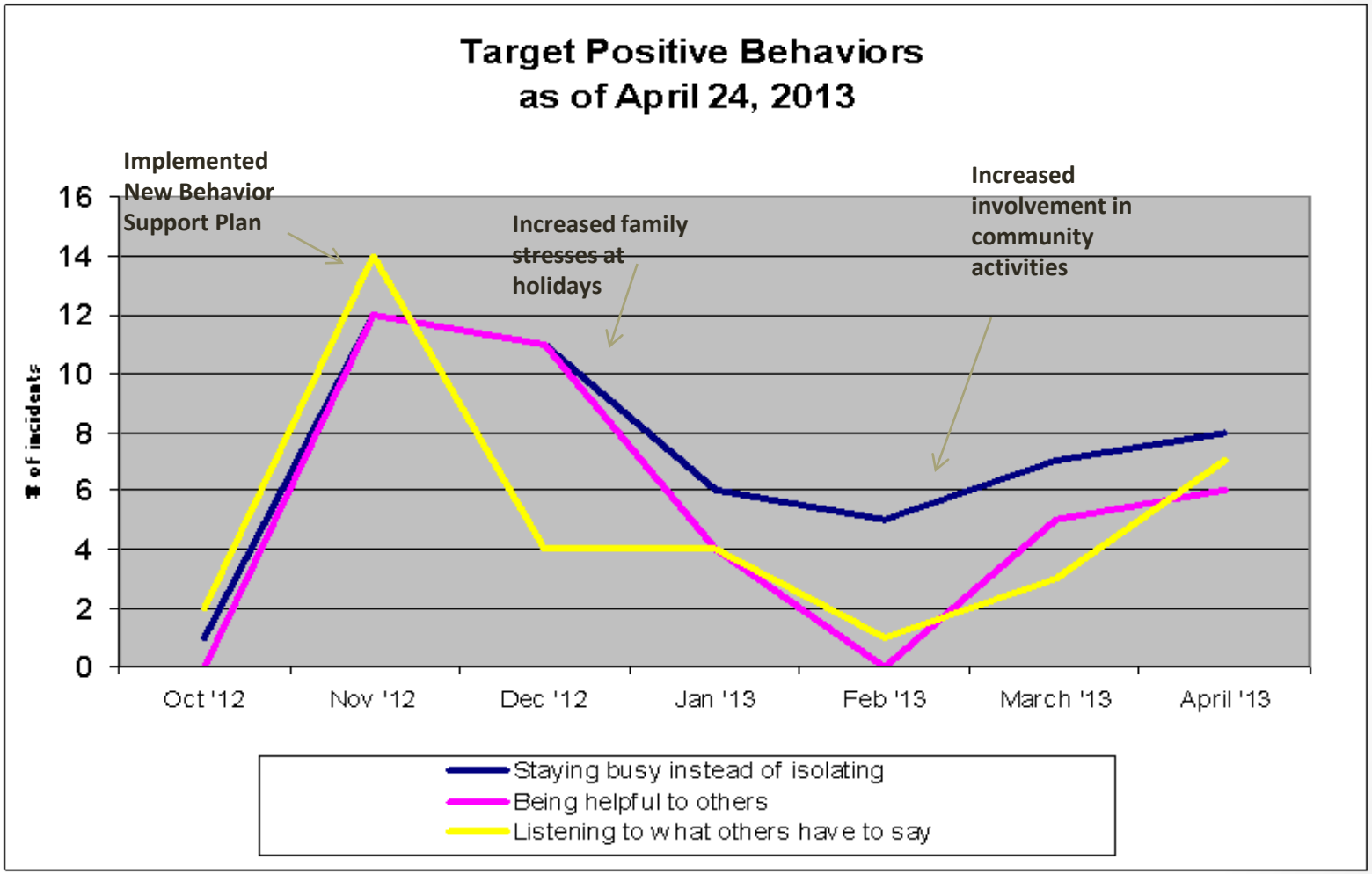
- **What specific steps from the behavior support plan have helped to improve behavior?**
- **What environmental changes (e.g., scheduling, access to soothing items) have been made to prevent the challenging behaviors?**
- ***Do the interventions correspond with the identified functions?***
- **What new behaviors and coping skills (e.g., adaptive, prosocial) have been taught to replace the challenging behaviors?**
- **Are the new behaviors being positively reinforced (e.g., immediate praise)?**
- **What interventions do you think have been unsuccessful or too difficult to follow?**

Evaluating the Effectiveness of Positive Behavior Supports

- **Has the individual been observed in their natural environment? Have the caregivers been interviewed?**
- **How do caregivers respond when the problem behaviors happen (i.e., maintaining consequences)?**
- **How do the interventions work alone and what are the effects of the combined treatment (i.e., *interaction, differential, and synergistic effects* of drug treatment and environmental strategies)?**
- **Does the medication dose and the timing of dosage affect behavior?**
- **Describe the individual's routine, such as when and where they participate in preferred and meaningful activities?**


Example of Tracking Effects of Medications on Behaviors
250
200
150
100
50
0
1-Hour Intervals
Depakote started for seizures. Hospitalized.
Risperdal decreased to 5.5 mg on 8/21/13
Revised Behavior support plan 12/5/14
JAN
FEB
March
APRIL
MAY
JUNE
JULY
AUG
SEPT
OCT
NOV
DEC
JAN
FEB
2014-2015
Severe SIB
Physical Aggression
Mouthing

Sample Line Graph: Longitudinal Trends



Psychopharmacology with Developmental Disabilities

- **Psychotropic medications are sometimes needed to provide a stable neurological "platform" on which to do positive behavior supports and/or psychotherapy.**
- **The IDD population has been subjected to polypharmacy, is particularly vulnerable to adverse side effects, and may lack the ability to make subjective verbal complaints about them.**
- **What is the social validity of the intervention(s) to the person-served? Can they communicate the acceptability and effectiveness of the treatment?**
- **Consider the caveat to avoid "working backwards" by using the response to prescribed medications as the guide to arrive at a working psychiatric diagnosis.**
- **Developing a *cultural change*, especially in triaging issues.**

Method of Seeking Medication Consultation

from Frank Anderson, MD

Identify the symptoms and behaviors to target:

- Saying "anxiety" or "depression" is too generic
- Limit focus to 3 or 4 symptoms helps reduce polypharmacy
- Focus on symptoms (e.g., insomnia and low motivation), rather than feelings (e.g., loneliness and sadness). That is, try to differentiate psychosocial and emotional distress from biology.
- Reducing the intensity of symptoms (e.g., making emotional affect more manageable), might warrant consideration of a PRN (as needed) instead of a standing order.

Method of Seeking Medication Consultation

- **Validate any concerns about medications (prescribing is often polarizing, in that “part" of the person might agree, while others “parts” might not).**
- **Understand that medications often have both positive negative side effects.**
- **Especially with polypharmacy, educate the individual and team members on which medications do what.**
- **Collaborate along the way by monitoring reactions and progress.**

Method of Seeking Medication Consultation

Consider other factors that might impact psychiatric medication effectiveness:

- **The optimal dose (i.e., therapeutic window of tolerance and benefit) of many psychiatric medications might be lower for people with developmental disabilities.**
- **Understanding of pharmacodynamics, pharmacokinetics, and pharmacogenetics.**
- **How do team members view medications? Placebo versus Nocebo Effect?**
- **What is the drug history for the individual? Is *inherited prescribing* occurring?**
- **Cortisol (and other stress hormones) may reduce tolerance to and effect of medications.**
- **Consider receptor "Up or Down" Regulation**
- **Ability to metabolize medication versus therapeutic effect**

An Example of DNA Enzyme Testing

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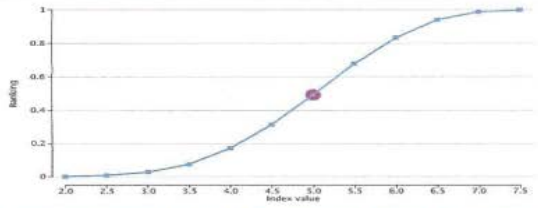
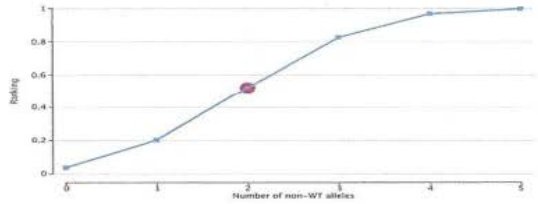
Patient Name	Gender	LPH ID	Date Of Birth	Ethnicity	Receive Date
	Male				07/27/2016

CYP2C9	*CYP2C19*	*CYP2D6*
*1*1	*1*1	*41*41
Functional	Functional	Poor

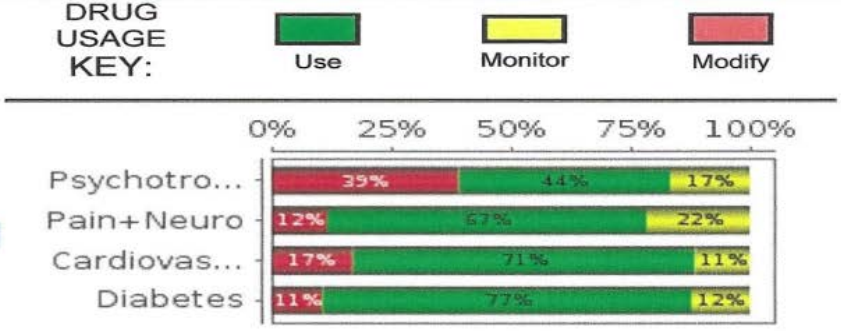
Drug Metabolic Reserve Index Curve



Allele Alteration Index Curve



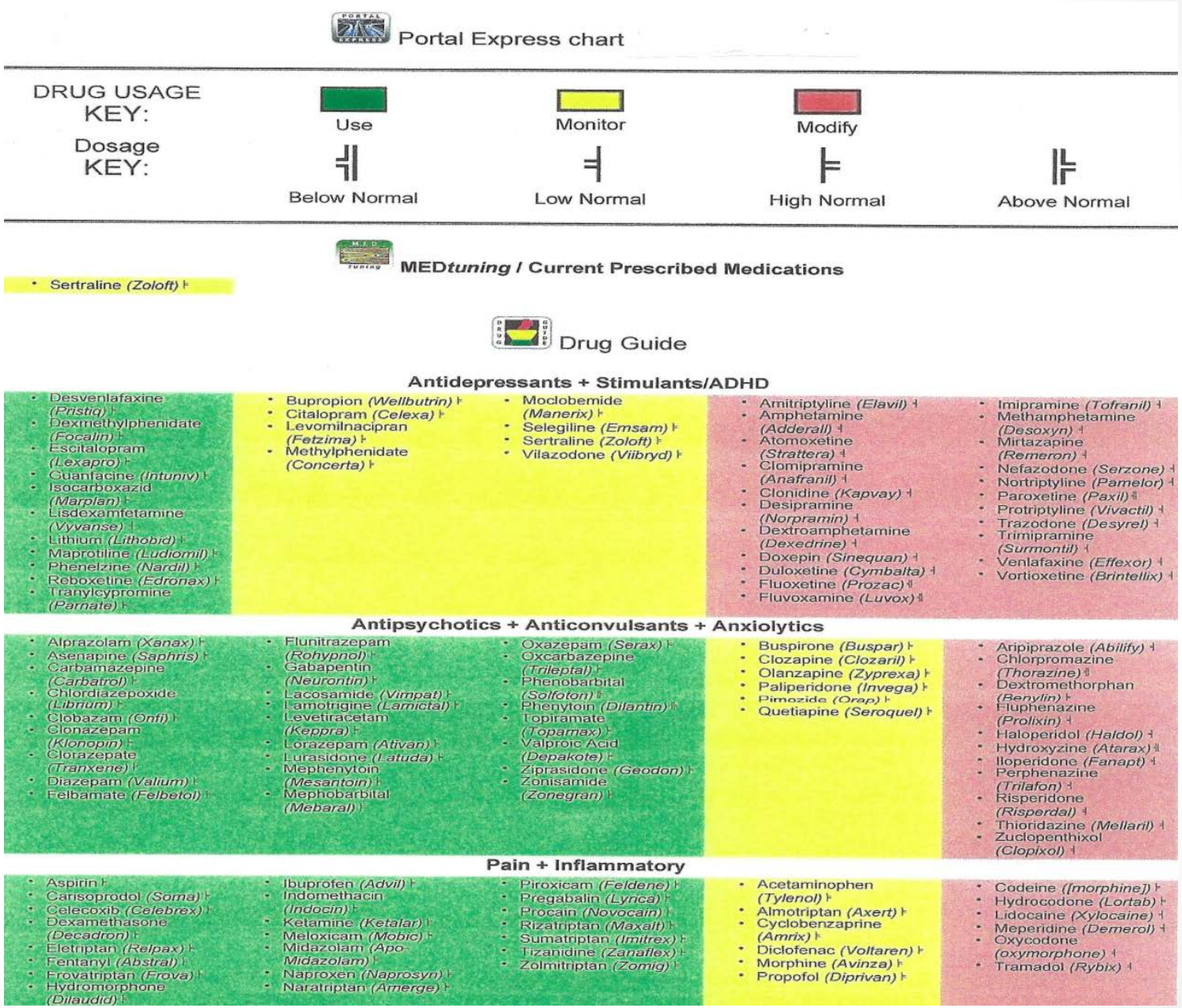
Guidance by Therapeutic Area (% Drugs)



Drug Interactions at High Risk

Patient has average interaction risk.

DNA Enzyme and Neurotransmitter Testing



Portal Express chart

DRUG USAGE KEY: Use | Monitor | Modify

Dosage KEY: Below Normal | Low Normal | High Normal | Above Normal

MEDtuning / Current Prescribed Medications

- Sertraline *(Zoloft)* ⊦

Drug Guide

Antidepressants + Stimulants/ADHD

- Desvenlafaxine *(Pristiq)* ⊦
- Dexmethylphenidate *(Focalin)* ⊦
- Escitalopram *(Lexapro)* ⊦
- Guanfacine *(Intuniv)* ⊦
- Isocarboxazid *(Marplan)* ⊦
- Lisdexamfetamine *(Vyvanse)* ⊦
- Lithium *(Lithobid)* ⊦
- Maprotiline *(Ludiomil)* ⊦
- Phenelzine *(Nardil)* ⊦
- Reboxetine *(Edronax)* ⊦
- Tranylcypromine *(Parnate)* ⊦
- Bupropion *(Wellbutrin)* ⊦
- Citalopram *(Celexa)* ⊦
- Levomilnacipran *(Fetzima)* ⊦
- Methylphenidate *(Concerta)* ⊦
- Moclobemide *(Manerix)* ⊦
- Selegiline *(Emsam)* ⊦
- Sertraline *(Zoloft)* ⊦
- Vilazodone *(Viibryd)* ⊦
- Amitriptyline *(Elavil)* ⊣
- Amphetamine *(Adderall)* ⊣
- Atomoxetine *(Strattera)* ⊣
- Clomipramine *(Anafranil)* ⊣
- Clonidine *(Kapvay)* ⊣
- Desipramine *(Norpramin)* ⊣
- Dextroamphetamine *(Dexedrine)* ⊣
- Doxepin *(Sinequan)* ⊣
- Duloxetine *(Cymbalta)* ⊣
- Fluoxetine *(Prozac)* ⊣
- Fluvoxamine *(Luvox)* ⊣
- Imipramine *(Tofranil)* ⊣
- Methamphetamine *(Desoxyn)* ⊣
- Mirtazapine *(Remeron)* ⊣
- Nefazodone *(Serzone)* ⊣
- Nortriptyline *(Pamelor)* ⊣
- Paroxetine *(Paxil)* ⊣
- Protriptyline *(Vivactil)* ⊣
- Trazodone *(Desyrel)* ⊣
- Trimipramine *(Surmontil)* ⊣
- Venlafaxine *(Effexor)* ⊣
- Vortioxetine *(Brintellix)* ⊣

Antipsychotics + Anticonvulsants + Anxiolytics

- Alprazolam *(Xanax)* ⊦
- Asenapine *(Saphris)* ⊦
- Carbamazepine *(Carbatrol)* ⊦
- Chlordiazepoxide *(Librium)* ⊦
- Clobazam *(Onfi)* ⊦
- Clonazepam *(Klonopin)* ⊦
- Clorazepate *(Tranxene)* ⊦
- Diazepam *(Valium)* ⊦
- Felbamate *(Felbetol)* ⊦
- Flunitrazepam *(Rohypnol)* ⊦
- Gabapentin *(Neurontin)* ⊦
- Lacosamide *(Vimpat)* ⊦
- Lamotrigine *(Lamictal)* ⊦
- Levetiracetam *(Keppra)* ⊦
- Lorazepam *(Ativan)* ⊦
- Lurasidone *(Latuda)* ⊦
- Mephenytoin *(Mesantoin)* ⊦
- Mephobarbital *(Mebaral)* ⊦
- Oxazepam *(Serax)* ⊦
- Oxcarbazepine *(Trileptal)* ⊦
- Phenobarbital *(Solfoton)* ⊦
- Phenytoin *(Dilantin)* ⊦
- Topiramate *(Topamax)* ⊦
- Valproic Acid *(Depakote)* ⊦
- Ziprasidone *(Geodon)* ⊦
- Zonisamide *(Zonegran)* ⊦
- Buspirone *(Buspar)* ⊦
- Clozapine *(Clozaril)* ⊦
- Olanzapine *(Zyprexa)* ⊦
- Paliperidone *(Invega)* ⊦
- Pimozide *(Orap)* ⊦
- Quetiapine *(Seroquel)* ⊦
- Aripiprazole *(Abilify)* ⊣
- Chlorpromazine *(Thorazine)* ⊣
- Dextromethorphan *(Benylin)* ⊦
- Fluphenazine *(Prolixin)* ⊣
- Haloperidol *(Haldol)* ⊣
- Hydroxyzine *(Atarax)* ⊣
- Iloperidone *(Fanapt)* ⊣
- Perphenazine *(Trilafon)* ⊣
- Risperidone *(Risperdal)* ⊣
- Thioridazine *(Mellaril)* ⊣
- Zuclopenthixol *(Clopixol)* ⊣

Pain + Inflammatory

- Aspirin ⊦
- Carisoprodol *(Soma)* ⊦
- Celecoxib *(Celebrex)* ⊦
- Dexamethasone *(Decadron)* ⊦
- Eletriptan *(Relpax)* ⊦
- Fentanyl *(Abstral)* ⊦
- Frovatriptan *(Frova)* ⊦
- Hydromorphone *(Dilaudid)* ⊦
- Ibuprofen *(Advil)* ⊦
- Indomethacin *(Indocin)* ⊦
- Ketamine *(Ketalar)* ⊦
- Meloxicam *(Mobic)* ⊦
- Midazolam *(Apo-Midazolam)* ⊦
- Naproxen *(Naprosyn)* ⊦
- Naratriptan *(Amerge)* ⊦
- Piroxicam *(Feldene)* ⊦
- Pregabalin *(Lyrica)* ⊦
- Procain *(Novocain)* ⊦
- Rizatriptan *(Maxalt)* ⊦
- Sumatriptan *(Imitrex)* ⊦
- Tizanidine *(Zanaflex)* ⊦
- Zolmitriptan *(Zomig)* ⊦
- Acetaminophen *(Tylenol)* ⊦
- Almotriptan *(Axert)* ⊦
- Cyclobenzaprine *(Amrix)* ⊦
- Diclofenac *(Voltaren)* ⊦
- Morphine *(Avinza)* ⊦
- Propofol *(Diprivan)* ⊦
- Codeine *([morphine])* ⊦
- Hydrocodone *(Lortab)* ⊦
- Lidocaine *(Xylocaine)* ⊣
- Meperidine *(Demerol)* ⊣
- Oxycodone *(oxymorphone)* ⊣
- Tramadol *(Rybix)* ⊣

DNA Enzyme and Neurotransmitter Testing

Neuro + Sleep + Addiction

- Armodafinil *(Nuvigil)*
- Buprenorphine *(Buprenex)*
- Cannabis *(i»¿tetrahydrocannabino*
- Carbidopa-levodopa *(Sinemet)*
- Cocaine
- Disulfiran *(Antabuse)*
- Estazolam *(ProSom)*
- Eszopiclone *(Lunesta)*
- Flurazepam *(Dalmane)*
- Hexobarbital *(Citopan)*
- Modafinil *(Provigil)*
- Naloxone *(Narcan)*
- Ramelteon *(Rozerem)*
- Temazepam *(Restoril)*
- Triazolam *(Halcion)*
- Varenicline *(Chantix)*
- Zaleplon *(Sonata)*
- Benztropine *(Cogentin)*
- Caffeine *(Cafcit)*
- Donepezil *(Aricept)*
- Galantamine *(Razadyne)*
- Methadone *(Dolophine)*
- Nicotine *(Nicorette)*
- Zolpidem *(Ambien)*
- Diphenhydramine *(Benadryl)*

Hypertension + Cholesterol

- Atorvastatin *(Lipitor)*
- Benazepril *(Lotensin)*
- Bosentan *(Tracleer)*
- Bumetanide *(Bumex)*
- Candesartan *(Atacand)*
- Enalapril *(Vasotec)*
- Ezetimibe *(Zetia)*
- Fenofibrate *(TriCor)*
- Fosinopril *(Monopril)*
- Furosemide *(Lasix)*
- Gemfibrozil *(Lopid)*
- Hydrochlorothiazide *(HydroDiuril)*
- Irbesartan *(Avapro)*
- Lisinopril *(Prinivil)*
- Losartan *(Cozaar)*
- Lovastatin *(Mevacor)*
- Metolazone *(Zaroxolyn)*
- Moexipril *(Univasc)*
- Perindopril *(Aceon)*
- Pindolol *(Visken)*
- Pravastatin *(Pravachol)*
- Quinapril *(Accupril)*
- Ramipril *(Altace)*
- Rosuvastatin *(Crestor)*
- Simvastatin *(Zocor)*
- Telmisartan *(Micardis)*
- Torsemide *(Demadex)*
- Trandolapril *(Mavik)*
- Valsartan *(Diovan)*
- Bisoprolol *(Zebeta)*
- Fluvastatin *(Lescol)*
- Alprenolol *(Aptin)*
- Captopril *(Capoten)*
- Carvedilol *(Coreg)*
- Flecainide *(Tambocor)*
- Metoprolol *(Lopressor)*
- Nebivolol *(Bystolic)*
- Propranolol *(Inderal)*
- Timolol *(Timoptic)*

Thrombo + Arrythmia + Heart Failure

- Amlodipine *(Norvasc)*
- Clopidogrel *(Plavix)*
- Dabigatran *(Predaxa)*
- Digitoxin *(Crystodigin)*
- Digoxin *(Lanoxin)*
- Dipyridamole *(Persantine)*
- Dobutamine *(Dobutrex)*
- Eplerenone *(Inspra)*
- Felodipine *(Plendil)*
- Hydralazine *(Apresoline)*
- Isorsobide mononitrate *(Imdur)*
- Isosorbide dinitrate *(Dilatrate-SR)*
- Isradipine *(Dynacirc)*
- Milrinone *(Primacor)*
- Nisoldipine *(Sular)*
- Nitroglycerin *(Nitro-Dur)*
- Prasugrel *(Effient)*
- Spironolactone *(Aldactone)*
- Ticagrelor *(Brilinta)*
- Verapamil *(Isoptin)*
- Warfarin *(Coumadin)*
- Amiodarone *(Cordarone)*
- Cilostazol *(Pletal)*
- Diltiazem *(Cardizem)*
- Nicardipine *(Cardene)*
- Nifedipine *(Procardia)*
- Ranolazine *(Ranexa)*
- Mexiletine *(Mexitil)*
- Procainamide *(Pronestyl)*
- Propafenone *(Rythmol)*
- Quinidine *(Quinaglute)*

Diabetes + Endocrine

- Acarbose *(Precose)*
- Allopurinol *(Zyloprim)*
- Canagliflozin *(Involana)*
- Chlorpropamide *(Diabenese)*
- Exenatide *(Byetta)*
- Glimepiride *(Amaryl)*
- Glipizide *(Glucotrol)*
- Glyburide *(Micronase)*
- Insulin Glargine *(Solostar)*
- Insulin Lispro *(Humalog)*
- Insulin Regular *(Novolin)*
- Levothyroxine *(Levothroid)*
- Linagliptin *(Tradjenta)*
- Liraglutide *(Victoza)*
- Metformin *(Fortamet)*
- Miglitol *(Glyset)*
- Nateglinide *(Starlix)*
- Oxybutynin *(Oxytrol)*
- Pioglitazone *(Actos)*
- Pramlintide *(Symlin)*
- Prednisone *(Prednisone Intensol)*
- Raloxifene *(Evista)*
- Repaglinide *(Prandin)*
- Rosiglitazone *(Avandia)*
- Saxagliptin *(Onglyza)*
- Sitagliptin *(Januvia)*
- Testosterone *(Androgel)*
- Tolbutamide *(Orinase)*
- Progesterone *(Endometrin)*
- Tamsulosin *(Flomax)*
- Metoprolol *(Toprol)*
- Tamoxifen *(Nolvadex)*

Chemotherapy

- Azacitidine *(Vidaza)*
- Decitabine *(Dacogen)*
- Doxetaxel *(Docefrez)*
- Etoposide *(Troposar)*
- Gemcitabine *(Gemzar)*
- Mitoxantrone *(Novantrone)*
- Paclitaxel *(Apo-Paclitaxel)*
- Teniposide *(Vumon)*
- Vincristine *(Vincasar)*
- Vinorelbine
- Cytarabine *(Cytosar)*
- Vinblastine *(Velban)*
- Doxorubicin *(Adriamycin)*

Asthma

- Bambuterol *(Bambec)*
- Cetirizine *(Zyrtec)*
- Fexofenadine *(Allegra)*
- Fluticasone *(Flovent)*
- Fluticasone+Salmeterol *(Advair)*
- Formoterol *(Foradil)*
- Montelukast *(Singulair)*
- Salmeterol *(Serevent)*
- Zafirlukast *(Accolate)*
- Zileuton *(Zyflo)*
- Loratadine *(Claritin)*
- Dextromethorphan *(Benylin)*

GI + GU

- Cimetidine *(Tagamet)*
- Dexlansoprazole *(Dexilant)*
- Lansoprazole *(Prevacid)*
- Probenecid *(Benuryl)*
- Sucralfate *(Carafate)*
- Tadalafil *(Cialis)*
- Vardenafil *(Levitra)*
- Omeprazole *(Prilosec)*
- Pantoprazole *(Protonix)*
- Ranitidine *(Zantac)*
- Metoclopramide *(Reglan)*
- Ondansetron *(Zofran)*

A case in point…

- **57 year old, single, African American male diagnosed with profound intellectual disability.**
- **Behavioral history of bolting, dropping to the floor, and aggression toward staff and objects.**
- **Described by many as very social in that he seeks interpersonal interactions by putting his hand out, smiles often, and laughs to engage others.**
- **He enjoys music, dancing, and being in the community whether at an activity or going for a ride.**
- **He currently resides with five other housemates with various levels of functioning and tolerates this well.**

Developmental History

- **Normal term pregnancy, but received oxygen immediately after birth due to difficulty breathing.**
- **Developmental milestones were delayed.**
- **Diagnosed with cerebral palsy at the age of 4.**
- **Fifth of six children in his family of origin.**
- **Developed high fever secondary to allergic reaction to first DPT serum during vaccinations.**

Placement History

- **Resided at home with his biological family until the age of 11, when the family could no longer care for him due to his intense supervision needs.**
- **He was placed at a Training School for 22 years until it's closing.**
- **Later placement at a residential group home was established where he currently resides.**

Cognitive & Adaptive Testing

Date		9/28/64	3/8/65	4/13/65
Test	Cattell	Cattell	Stanford Binet	Stanford Binet
Score	MA 17-6 months; IQ=21	MA 22 months; IQ=32	Estimate MA 2-3; IQ=30	MA 23 months; IQ=30
Notes	Stanford Binet not scorable.			Scored 3 years on Vineland done with mother; with an IQ=50

	October, 1982	February, 1986	November, 1990	1991	1998
Adaptive Behavioral Composite	3 years, 8 months	3 years	1 year, 2 months*	1 year 7 months**	1 year 8 months**
Receptive Communication				1 year 6 months	1 year 6 months
Expressive Communication				1 year 1 month	1 year 1 month
Daily Living Skills Domain				2 Years six months	2 years 9 months
Socialization Domain				1 year 1 month	1 year 1 month

Factors to Consider

Psychological Factors

Current Tracked Behaviors include the following:

PRECURSOR BEHAVIORS:

- **B1- Bizarre Behaviors (Mild) – Verbal (e.g., Bark, Shhh, Pow, etc.)**
- **B2- Bizarre Behaviors (Moderate)- Includes B1 plus pacing, running, some mild property disruption and difficult to redirect.**
- **B3- Bizarre Behaviors (Severe)- Includes B1, B2, and attempts or actual assault, property destruction or disruption, and he cannot be redirected**
- **D- Dropping to the floor (requires a post-fall evaluation)**

TARGETED BEHAVIORS OF CONCERN:

- **A - Physical Aggression toward Others that presents a risk of harm to another individual excludes any accidental motion**
- **PD- Property Destruction damage to property caused by using an object for other than its intended purpose (i.e., throwing)**

Other Factors to Consider

Complex Medical History

- **Fixed Flexion deformity of lumbar spine**
- **Wolf Parkinson White Syndrome**
- **Mild Cerebral Palsy (diagnosed at age 4)**
- **Hypothyroidism**
- **Hypercholesterolemia**
- **Chronic Constipation**
- **S/P tumor removal left arm**
- **Other diagnoses by history have included environmental allergies (Dust Mites, Molds, Grasses, Trees, and Ragweed)**
- **Rule-out for Fetal Alcohol Syndrome**

Treatment Interventions

Medical interventions

- **Consult with Psychiatrist**
- **PRN Tylenol was being used for pain**
- **Standing order of Motrin in place to date**

Sensory Interventions

- Massage therapy
- Light therapy 30 -60 minutes/day
- Brushing & Buzzing Program
- Weighted vest
- Tactile stimulation
- Deep pressure
- Time outside on the swing
- Other stimulation

Behavioral Interventions

- Neutral/Positive tone of voice
- One directive at a time with planned delay for processing
- Relaxed body language
- Encourage walking
- Increase engagement in preferred activities
- Increase his sense of choice/control when possible.
- Avoid use of precursor verbalizations, such as pow, shh, etc.

Environmental Interventions

- **Three season sensory room**
- **Sensory stimulation toys near by his favorite seat.**
- **Adaptive equipment for dining and seating arrangement to minimize issues.**
- **Orthopedic shoes with Velcro.**

Other Interventions

- **VY- Voluntary Yard break**
- **IY- Involuntary Yard Break**
- **Placebo- Placebo protocol followed for the time of restraint or yard break**
- **E-escort**
- **SS - Seated Security Hold**
- **Medication on PRN basis : Medication protocol followed for the time of restraint or yard break (****Discontinued after one-year of no use***)**

Behavior Changes Across Time

Target Behaviors	May-15	Jun-15	Jul-15	Aug. 2015	Sept. 2015	Oct. 2015	Nov. 2015	Dec. 2015	Jan. 2016	Feb. 2016	Mar. 2016	Apr. 2016	May. 2016	June. 2016
Bizarre Behaviors (B1 - B3)	21	21	20	18	4	2	5	2	7	6	9	23	9	5
Physical Aggression	1	0	0	2	0	0	0	0	0	1	0	0	0	0
Property Destruction	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Emergency restraint	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Escort	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Involuntary Yard Separation	2	0	0	0	0	0	0	0	0	0	0	1	0	0
Voluntary Yard Separation	0	0	1	4	0	0	0	0	1	1	1	3	2	2
Chemical Restraint/PRN	1	0	0	0	0	0	0	0	0	0	0	0	0	0