

Measuring Effects of Psychotropic Medication on Challenging Behavior

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Goals of the Presentation

- ▶ The current state of the use of psychotropic medication
- ▶ The use of supplements and other biomedical interventions
- ▶ Current methods for measuring the effectiveness of medications
- ▶ Collaborating with school, families and other professionals

Words Matter

- ▶ Use of identity first language
- ▶ Recognize that “treatment” is not something that everyone wants
- ▶ Recognize that clinician/researcher perspective is different from neurodivergent individual’s perspective
- ▶ And this may be different from parent’s/guardian’s perspective

The Use of Psychotropic Medication with Children

- Mandell et al (2008) reviewed 60,641 national Medicaid claims found that 57% of autistic children were taking at least one psychotropic medication
- 20% using 3 medications or more
- Neuroleptic medications are most common and primarily to control challenging behavior
- Ziskind et al. (2020) found that 16% of autistic children ages 3-6 were taking more than one med

Mandell et al. (2008); Ziskind et al. (2020)

Psychotropic Medication and Adults

- ▶ Based on a chart review of 343 Canadian outpatients the prevalence of use in adults with IDD is 79%
- ▶ For autistic individuals without IDD it was 58%
- ▶ Polypharmacy for autistic adults with IDD was 49% and for autistic adults without IDD it was 31%
- ▶ Factors associated with medication use include:
 - Age, gender, presence of co-morbid disorders and presence of challenging behavior
- ▶ Presence of ASD diagnosis also increases likelihood of med use

Yoshida, Lunsky, Muller, & Desarkar, 2024;
Cvejic, Arnold, Foley, & Trollor, 2018

Co-morbid Diagnoses

- ▶ Although meds often prescribed for interfering behaviors, they are also often attributed to other diagnoses
- ▶ Difficulty with diagnosing in individuals with IDD:
 - Difficulty articulating symptoms and side effects
 - Have to rely on information from caregivers
 - Lack of sensitive measures or rating scales
- ▶ Diagnosis may be attributed to their disability
 - Features of anxiety and OCD overlaps with core features of autism

Prescription Guidelines

Clinical trial research process means that nearly all meds prescribed for people with disabilities initially done “off label”

Some meds tested with children (e.g., ADHD meds, OCD meds) but not usually children with IDD

Even more rare for FDA approval with individuals with IDD

Risperdal (risperidone) and Abilify (aripiprazole) approved for irritability in autistic individuals

Prescription guidelines for neurotypical individuals generally used, even if symptoms don't completely match

Other Considerations

- ▶ In the absence of data, medical prescribers must use their best judgment and a trial-and-error approach when evaluating medication
- ▶ Lower doses should be used with children, the disabled and the elderly
- ▶ Side effects – are children and people with ASD and ID more susceptible?
- ▶ Cultural issues and social acceptability of medication

Supplements and other biomedical interventions

For many people, alternative therapies may be preferred over psychotropic medication for a variety of reasons:

- Cultural factors
- Safer with fewer side effects
- Less invasive
- Influenced by social media, friends, and other families

Use of Dietary Supplements

- ▶ A study of 288 children with ASD, 56% were taking supplements (Stewart et al., 2015)
- ▶ Supplements are often aimed at either:
 - Improving gut health (particularly for autistic people)
 - Probiotics, antioxidants, digestive enzymes, special diets



Use of Dietary Supplements

Supplements are often aimed at either:

- Improving gut health
- **Improving brain health and cognitive functioning**

Nootropics (“smart drugs”)



Vitamin D

Ginkgo biloba

Vitamin B6
+
Magnesium

Prescription Nootropics



Oxytocin

Ginseng

Use of Dietary Supplements

- ▶ Evidence is mixed supporting their use
 - Prospective clinical trials are limited
 - Much of research done were supplements and other alternative interventions are more acceptable (biased?)
- ▶ Vitamins and minerals not actually “needed” for most individuals which could lead to excessive intake
- ▶ Many individuals taking supplements or on restrictive diets have vitamin D and calcium deficiencies

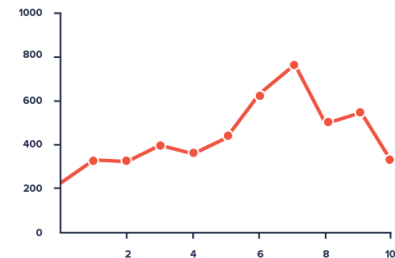
Tracking Medication Effects

- ▶ Anecdotal information/opinion (most common)
- ▶ General rating scales:
 - Aberrant Behavior Checklist
 - Clinical Global Impressions scale ☹️
 - Child Behavior Checklist
- ▶ Symptom specific:
 - Yale-Brown Obsessive Compulsive Scale
 - Repetitive Behavior Scale
 - Glasgow Depression Scale
 - Connors scales for ADD



Tracking Medication Effects

- ▶ Continuous data
 - This works for target behavior that are easy to measure and observable
 - But difficult to collect consistently and reliably across the day
- ▶ Sampling measures
 - Partial or whole interval – under and overestimates frequency
 - Time sample – could work if behavior occurs frequently enough
 - Probe data
- ▶ But often aren't context specific



Capturing Context

- ▶ Take data during naturally occurring contexts or situations most likely to be affected by medication
- ▶ Set up analog or create contexts most relevant to medication impact
 - Example: set up a “work session” to test out if ADHD med is addressing on task behavior
 - Example: look at period of social interaction (e.g., recess) to see if behaviors related to impulsivity or anxiety changes
- ▶ Functional behavioral assessment or functional analysis: is functional reinforcer affected by medication?

In an Ideal World...

- ▶ You know exactly when medication changes are going to occur and perhaps even have a role in the decision process
- ▶ You can measure level of behavior prior to medication change
- ▶ You can collect continuous data consistently and reliably across the day
- ▶ You are able to conduct a functional analysis periodically to test changes in function across time

In the Real World...

- ▶ You have no idea when medication changes are taking place and aren't a part of the discussion
- ▶ You need to rely on caregiver to share any relevant information from your setting
- ▶ Data aren't shared with medical provider so changes aren't data-based
- ▶ You have difficulty getting accurate data

What You Can Do

- ▶ Get informed on medication and expected behavioral and side effects
- ▶ Get more training in behavioral pharmacology (*Li & Poling, 2018*)
- ▶ Collect any data possible
- ▶ If no direct interaction with provider, coach parent on data and current behavior status and be an “informed consumer”

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Thank you!

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