Antipsychotic Medication to Address Challenging Behavior of People with Intellectual Disability: Assessment with the MEDS

Anne Desnoyers Hurley, Ph.D.
hurleyannd@aol.com

Clinical Director, Center for START Services
University of New Hampshire
Institute on Disability

Getting Too Many Antipsychotics

The New York Times

Many group-home residents with mental retardation are receiving psychotropic medications that may be doing far more harm than good.

MAIA SZALAVITZ 2011

Major Issues

- **Research on the efficacy** of antipsychotics for this use in ID is minimal with little benefit
- Medication **side effects and adverse events** are significant with **inadequate monitoring**
- **Limited informed consent** to the risks & benefits for people with ID

Antipsychotic Medication USA

- 2008 Domino & Swartz USA
  - (1997) 0.72% to (2005) 1.17%

- 2012 Pillarella *et al.* USA bipolar dx

  1998 (18% visits) – 2009 (49% visits)

  decreasing use of mood stabilizers

Psychopharmacology
Antipsychotic epidemiology studies

- Tsiouris et al. 2013NY State 45%
- de Kuijper 2010 Netherlands 32%
- Holden & Gitlesen 2004 Norway 31.6%
- Lott *et al*. 2004 California 32%
- Spreat 2000 *et a*l Oklahoma 20.8%
- Robertson *et al* 2000 UK 56/27/17%
- Branford, 1994 UK 44/13%
- Jacobson 1988 NY 39.9/24.8/10.1%
- Intagliata & Rinck, 1985 Missouri 45/29%

Efficacy of atypical antipsychotic behaviour children & adolescents ID / borderline ID: review Unwin Deb 2011

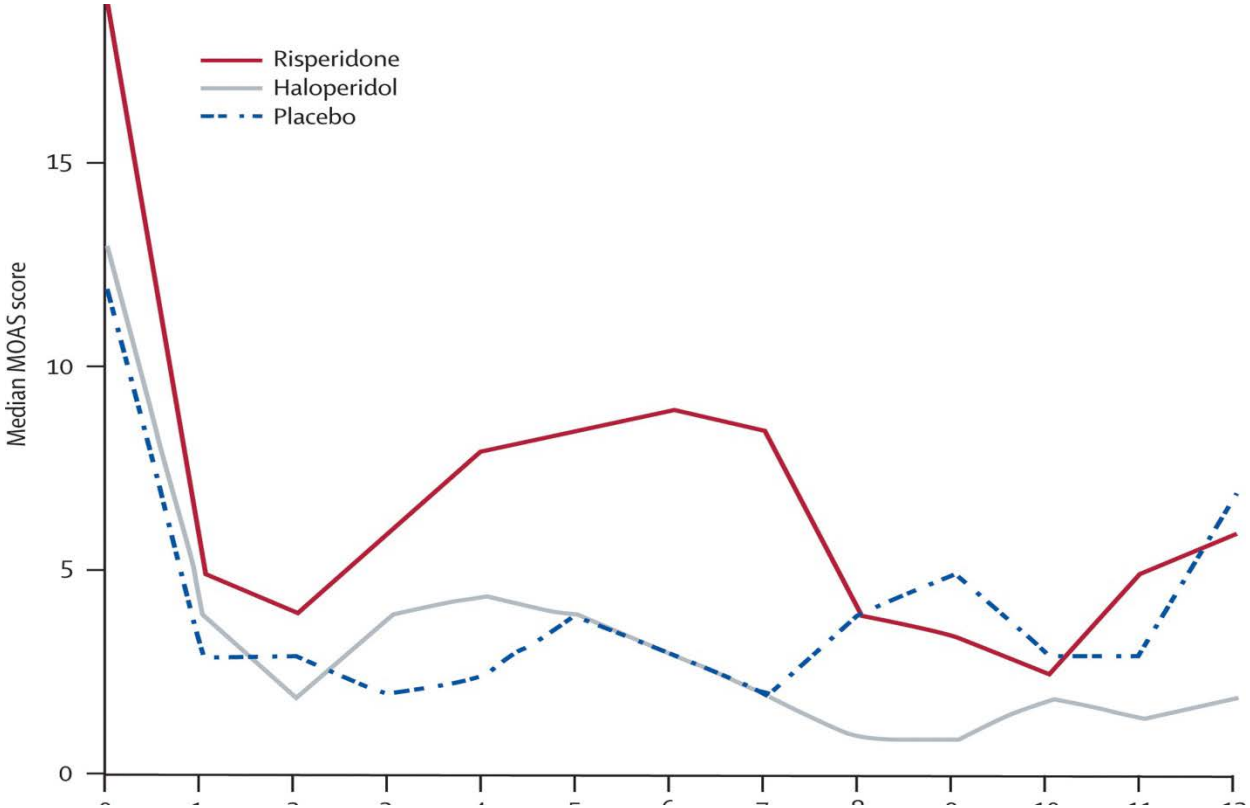
- 442 citations➔40 title➔ 18 abstract ➔ 6 RCTs full text (4 & 2 extension)
- risperidone significantly effective
- adverse events somnolence/weight gain
- concurrent behavior treatment typically not curtailed, metabolic syndrome not fully measured

Tyrer *et al*. Lancet 2008
RCT blinded ID/CD/Antipsychotics

- *Risperidone, haloperidol, and placebo in the treatment of aggressive challenging behaviour in patients with intellectual disability: a randomised controlled trial.* **Lancet** 2008; 371: 57-63.
- Multi-center international study
- Multiple measures: CGI, ABC, MOAS, quality of life, carer uplift & burden, side-effects
- Excluded those with psychosis

Tyrer *et al*. Lancet 2008

- Multicentre: Wales, England, Australia
- 180 patients
- 94 excluded various reasons (e.g., inability to swallow a pill)
- 86 randomized to 12-week trial:
  - 29 risperidone
  - 28 haloperidol
  - 29 placebo



Tyrer et al. 2008 Lancet

Median scores on the Modified Overt Aggression Scale for 12 weeks

Placebo Effect

- We get “better” because we are seeing a caring health practitioner----
- Recent research suggests physiological effects
- Staff-family report he/she is a little better, or worse… but no real test of efficacy

- **Side effects** are problems that occur when treatment goes beyond the desired effect, or problems that occur in addition to the desired therapeutic effect.
- An **adverse drug reaction** is "an appreciably harmful or unpleasant reaction, resulting from an intervention related to the use of a medicinal product, which predicts hazard from future administration and warrants prevention or specific treatment, or alteration of the dosage regimen or withdrawal of the product" (Edwards & Aronson, 2000).

Side Effects
(Adverse Events) Monitoring

- Performed by physician
- Conversation with patient
  - (self-report)
- Examination
- Studies & laboratory tests

Benzodiazepines

- lorazepam
- diazepam
- clonazepam
- Side Effects: motoric problems, fatigue, less focus, dependence, disinhibition, irritability, reflux, dizziness (low blood pressure)

Side Effects Benzodiazepines

Observable

- irritability
- disinhibition
- walking, chewing
- balance

Self-Report

- fatigue
- less focus
- reflux-nausea
- dizziness

Side Effects-Adverse Events conventional antipsychotics-1st generation

- Anticholinergic (dry mouth, ocular changes, constipation)
- Extrapyramidal (dystonia, akathisia, TD)
- Sedation, feeling no energy
- Cardiovascular (arrhythmias, blood pressure)
- Metabolic (weight gain, glucose, hyperlipidemia)
- Altered hormones (hyperprolactinemia, FSH, LH)
- Lowered seizure threshold

Side Effects-Adverse Events
atypical antipsychotics-2nd generation

- Improved motor side effects but not all atypicals, with long-term health consequences
  - Significant weight gain
  - Increased hyperglycemia and type 2 diabetes
  - Altered lipid profiles
  - Cardiac effects (orthostatic hypotension, tachycardia and QTc prolongation)
  - Over time, motor side-effects, e.g., TD

Side Effects Antipsychotics

Observable

- appetite ↑
- weight gain↑
- movement disorders
- constipation

Self-Report or Labs

- fatigue
- cardiac effects
- diabetes
- lipids
- headache
- dry mouth
- hormones

Proxy Decision Making

- Parents, guardian, care staff seeking help
- **Risk-Benefit discussion** about treatment made my proxy
- Limited ability to self-report side effects/adverse events
- Limited assessment if medicine is helping or causing more distress

Antipsychotic Monitoring Standards 2nd generation

- Used NICE and Deb (2006)
- 1. Indication for antipsychotic treatment clearly documented
- 2. Continuing need reviewed at least once a year
- 3. Side effects reviewed yearly for EPS and metabolic syndrome: BP, obesity, glycemic control, plasma lipid profile

Psychopharmacology UK Leicester
Atypical antipsychotics audit Tin *et al* 2008

- 3400 people with ID
- 983 saw ID psychiatry services in 2000
- 185 (18.9%) SGA
  - 45 FGA
  - 36 anticholinergic
  - 50 antidepressant
  - 15 mood stabilizer
  - 54 antiepileptic
  - 46 anxiolytics

Psychopharmacology UK Leicester
Atypical antipsychotics baseline audit Tin *et al* 2008

- Mental illness use 30.3%
- Challenging behavior 57.4%
- No side effects reported 69.7%
- EPS and weight gain most reported
- Majority had no screening for metabolic syndrome
- residences (67%)(2x more likely) vs. community (33%)
- males (58%) females (42%)

Antipsychotic prescribing in UK psychiatry ID services Paton *et al*. 2011

- 145 teams, 39 MH Trusts, 2,319 pts
- Used NICE and Deb (2006) for audit
- 1. Indication for antipsychotic treatment clearly documented
- 2. Continuing need reviewed at least once a year
- 3. Side effects reviewed yearly for EPS and metabolic syndrome: BP, obesity, glycemic control, plasma lipid profile

Antipsychotic prescribing in UK psychiatry ID services Paton et al. 2011

- Indication clearly documented and reviewed 85%
- 40% psychotic disorder-multiple reasons
- EPS 40%
- Metabolic syndrome
  - 40% no evidence of BP, weight, blood glucose, lipids

Discontinuing Medicines

- The longer on a medicine, the more difficult due to adaptation
- Antipsychotics have effects that cause difficulties, e.g. motor problems, tardive dyskinesia, in withdrawal
- Multiple medicine regimens complicate all problems in discontinuation
- Usually, d/c is very slow, one drug at a time

Discontinuation Study de Kuijper, 2013 JIDR

- 99 pts randomly assigned:
  - 14 or 28 weeks discontinuation protocol
  - 12.5% dose reduction q 2 or 4 weeks –baseline
  - ABC & Visual Analogue Scale
- 43 achieved complete discontinuation: All improved on ABC even if not d/c
- No difference between 14 of 28 weeks
- Higher ABC predicted higher EPS symptoms
- Long-term follow at 26 &40 weeks 16 great improvement and 7 worse
- Weight and BMI improved with any lowering

Little Side Effect Monitoring

SOLUTION

EMPOWER STAFF & CARGIVERS TO ADVOCATE FOR MONITORING OF RISKS

Discontinue, evaluate need for medicines

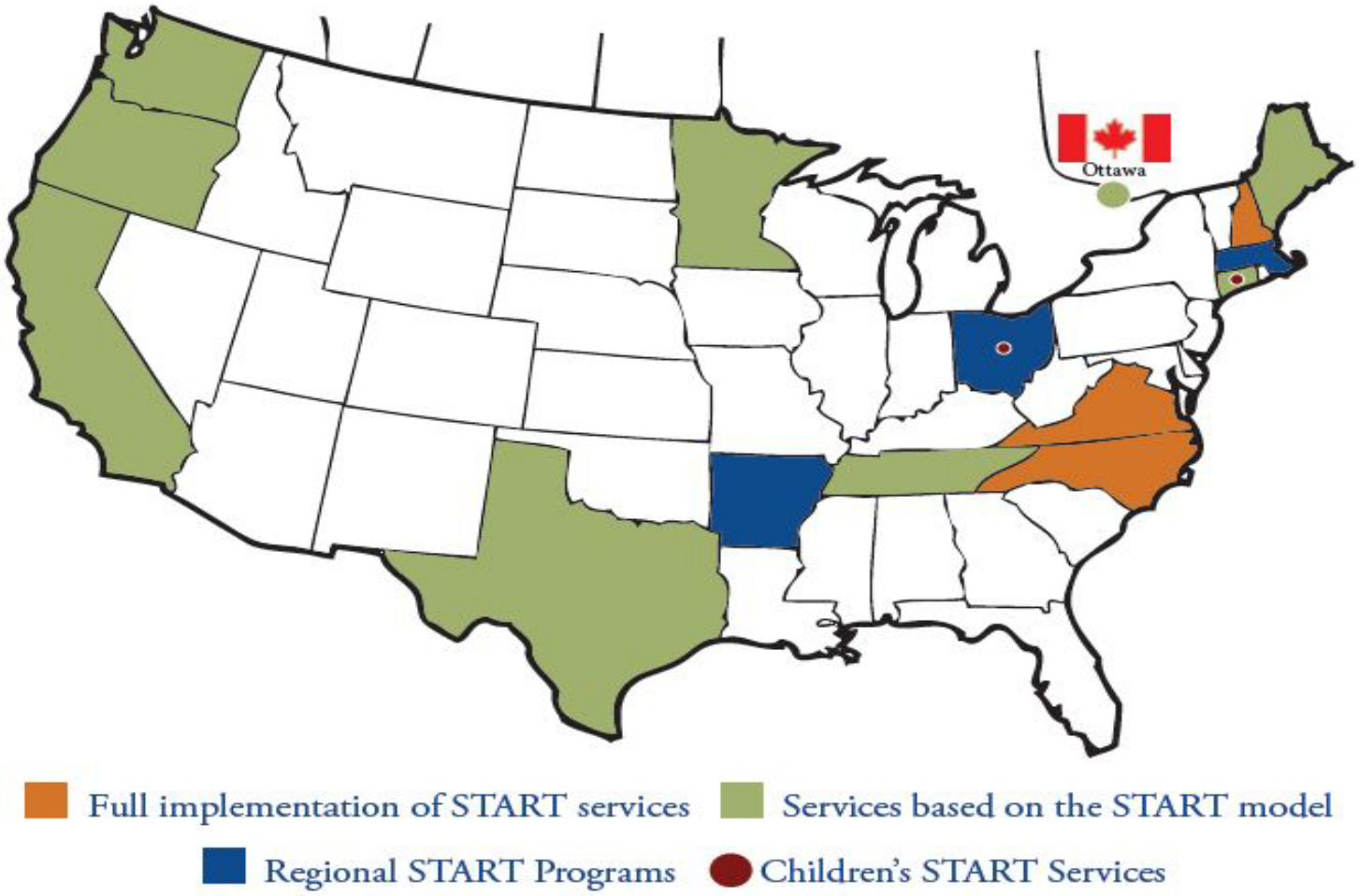
Matson Evaluation of Drug Side Effects (MEDS) Matson & Baglio 1998

- A rating scale developed for people with ID
- Researched and normed developed on an institutionalized population
- Covers a wide range of side effects associated with psychiatric medicines
- Professional interviews carer "informant interview scale"
- In addition to interview, medical information from chart is also incorporated

Matson Evaluation of Drug Side Effects (MEDS) Matson & Baglio 1998

- **MEDS:** 90-item *informant-interview* scale: chart review also necessary
- Severity and duration the last 2 weeks
- 3- point scale *(severity*: 0 = no problem, 1 mild/moderate, 2 severe/profound)and (*duration*: less, 1 mon., 1 month year, more than 1 year)
- Inter-rater reliability 0.85 & internal consistency 0.99, test-retest 0.76 (Matson, Mayville, Bielecki, Barnes, Bamburg, & Baglio, 1998).

START Across North America



Areas with START programs or services based on START

START Medication Side Effects Project

- MEDS administered for individuals living in START Center programs
- Information shared with family, referral source, GP and psychiatrist
- Training for all staff on medications and side effects
- We are starting a conversation about efficacy and side-effects (informed consent)

Matson Evaluation of Drug Side Effects (MEDS)

9 categories, each 5-14 symptoms

(1) cardiovascular and hematological
(2) gastrointestinal
(3) endocrine/genitourinary
(4) eye/ear/nose/throat
(5) skin/allergies/temperature
(6) CNS-general
(7) CNS-dystonia
(8) CNS-parkinsonism/dyskinesia
(9) CNS-behavior/akathisia

MEDS Cardiovascular Subscale

- 1. A sudden loss of strength or fainting
- 2. Trouble breathing or shortness of breath
- 3. Rapid breathing (tachypnea)
- 4. Chest pain
- 5. Irregularity of the heartbeat
- 6. Abnormal frequency of heartbeat (Circle one: bradycardia / tachycardia)
- 7. Subnormal arterial blood pressure (hypotension)
- 8. Persistent high blood pressure (hypertension)
- 9 .Abnormality in white blood cell count

Medications-Jim 57 yo Mild ID

• quetiapine (Seroquel)	100 mg
• levothyroxine	150
• risperidone (Risperdal)	2 mg bid
• benztropine (Cogentin)	5 bid
• clonazepam (Klonopin)	4 tid
• ranitidine (Zantac)	50 bid
• antacid	500 tid
• divalproex sod (Depakote)	125 tid
• buproprion SR (Wellbutrin)	150 mg bid
• alprazolam(Xanax)	0.5 tid

Compared to non-treated controls

	Cont	**Jim**
(1) cardio /hematological	0.7	2
(2) gastrointestinal	0.13	3
(3) endocrine/genitourinary	0.0	2
(4) eye/ear/nose/throat	0.4	5
(5) skin/allergies/temperature	0.13	3
(6) CNS-general	0.87	22
(7) CNS-dystonia	0.0	1
(8) CNS-parkinsonism/dyskinesia	0.33	11
(9) CNS-behavior/akathisia	0.14	4
TOTAL	**2.7**	**53**

APA five recommendations: www.choosingwisely.org

- Don’t prescribe antipsychotic medications to patients for any indication without appropriate initial evaluation and appropriate ongoing monitoring.
- Don’t routinely prescribe two or more antipsychotic medications concurrently.
- Don’t prescribe antipsychotic medications as a first-line intervention to treat behavioral and psychological symptoms of dementia.
- Don’t routinely prescribe antipsychotic medications as a first-line intervention for insomnia in adults.
- Don’t routinely prescribe antipsychotic medications as a first-line intervention for children and adolescents for any diagnosis other than psychotic disorders.

Rogers vs. Okin 1975

MEDICAL LAW-THE RIGHT TO REFUSE ANTIPSYCHOTIC DRUG TREATMENT: SUBSTANTIVE RIGHTS AND PROCEDURAL GUIDELINES IN *MASSACHUSETTS*

***Rogers v. Commissioner of the Mental Health Department*, 390 Mass. 489, 458 N.E.2d 308 (1983)**