

Medical Behavioural Assessment and Treatment of Children and Youth with Developmental Disabilities (DD) and Behaviours that Challenge: Framework and Tools for Inter-professional Collaboration

Alvin Loh, MD, FRCPC, Medical Chief of Staff, Developmental Pediatrician (Surrey Place Center), Division of Developmental Pediatrics (University of Toronto)

Nicole Aliya Rahim, MA, BCBA, Senior Behaviour Therapist (Surrey Place Center), Behaviour Therapist, Consultation-Liaison Psychiatry Program (The Hospital for Sick Children)

Meagan Blunt, BA, Service Co-ordinator (Surrey Place Center)

Surrey Place Centre



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

Objectives of the Workshop

1. Summarize evidence based assessment & tx of behaviours that challenge

2. Describe inter-professional collaboration and pathways of care

3. Demonstrate key practices for collaborative functioning



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

Ice Breaker: The Fun of Connecting

Talent wins games,

but teamwork and intelligence wins championships

– Michael Jordan



Our Values
Collaboration • Accountability • Innovation

Inter-professional Collaboration (IPC)

- Why Collaboration?

- Evidence supports:

- Improved patient/client

- Outcomes
 - Safety
 - Satisfaction

- Enhanced System efficiency

- Cost
 - access, wait times
 - co-ordination of care

- For Health care professionals

- Increased professional satisfaction
 - Improved attitudes between and among professions



- Synergy



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

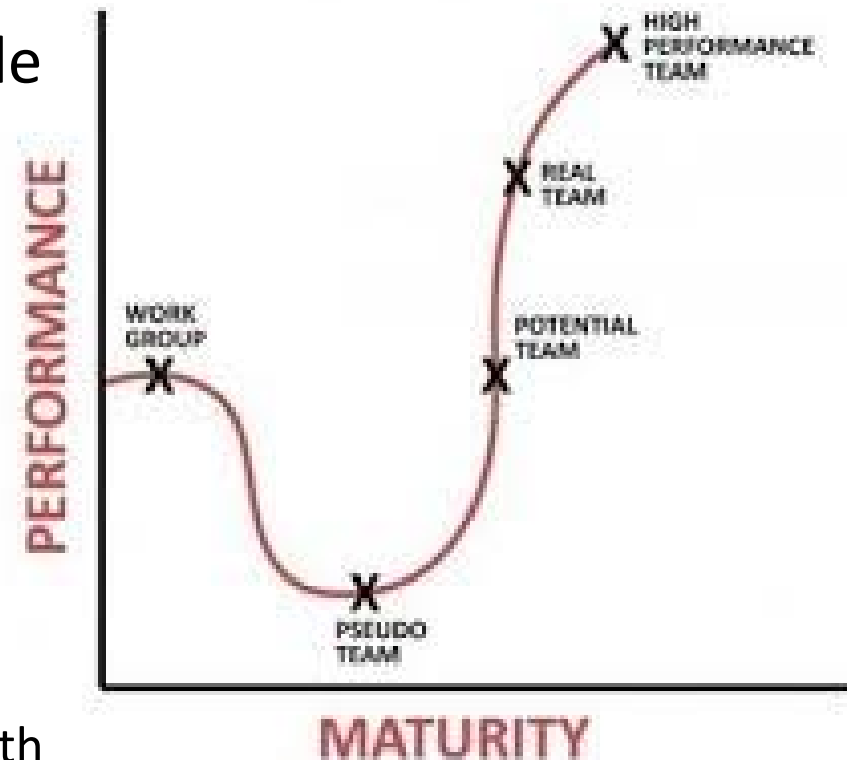
IPC: Collaborative Practice

- Collaborative Patient Centred Practice
 - “Designed to promote the **active participation** of each discipline in patient care. It **enhances patient and family centred goals** and values, provides mechanisms for **continuous communication** among caregivers, and optimizes staff participation in clinical decision making within and across disciplines, fostering respect for disciplinary contributions of all professionals” *Health Canada 2001*
 - Relationship Centred Practice
 - Importance of interaction among people as the foundation of any therapeutic or healing activity
 - **Relationships** are
 - Critical to the care provided
 - A source of satisfaction and positive outcomes for patients and practitioners
- Pew-Fetzer Task Force, 2000
- Tool – Reflection
 - Impact of actions and reactions



IPC - Team Performance

- Real Team:
 - equally committed to a common purpose, goal, and working approach for which they hold themselves mutually accountable
- High Performance Team
 - Meets conditions of a “Real Team” AND
 - Has members who are deeply committed to one another’s personal growth and success
 - Significantly out performs all other teams



Katzenbach & Smith



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

Defining “Challenging Behaviour”



- *Culturally abnormal behaviour(s) of such an intensity, frequency or duration that the physical safety of the person or others is likely to be placed in serious jeopardy, or behaviour which is likely to seriously limit use of, or result in the person being denied access to, ordinary community facilities (Emerson, 1995).*



Behaviours that Challenge Lead to:

- Exclusion from community settings
- Staff burn out
- Abuse / punitive / restrictive practices
- Decreased Quality of Life
- Hospitalization
- Financial burden



Hassiotis et al., 2014: McQuire et al., 2015



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

Psychotropic Meds and Challenging Behaviour

- Individuals with ID among the most medicated (Bradley & Summer, 1999)
- Concerns regarding the use of psychotropic medication to treat challenging behaviour (Chapman et al., 2006)
- Severe side effects (Unwin & Deb, 2011)
 - Chlopromazine, adverse effects on learning performance (Aman, 1984)
 - anticholinergic effects (blurred vision, constipation, dry mouth, urinary hesitance), extrapyramidal symptoms (restlessness), sedative effects, tardive dyskinesia and dermatologic reactions (Wehmeyer et al, 1990)
- Meta- analysis, McQuire et al. 2015
 - Antipsychotics → short term reduction of behaviours
 - lack of evidence regarding long term effectiveness



Our Values

Collaboration · Accountability · Innovation · Respect · Responsiveness

Psychotropic Meds and Challenging Behaviour

- Prescribed for behaviours that challenge vs. diagnosed mental health disorder (Holder & Gitlesen, 2011)
 - 54% of those prescribed psychotropic medication had a psychiatric diagnosis
 - only 31.3% prescribed an antidepressant had depression.
 - 53% of individuals were prescribed psychotropic medications due to a behavioural problem
- Individuals with challenging behaviour are 2x more likely to have a prescription for antipsychotics compared to individuals without a history of challenging behaviour.
 - reasons for the treatment with antipsychotic medications include behaviour problems, agitation, aggression, anxiety, verbal aggression, self injurious behaviour, institutional behaviour, schizoid like outbursts, etc. (Fleming et al., 1996)

Rahim, 2013; Sheehan et al., 2015;



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

Psychotropic Medications and Prescribing Practices

- Supervised by an experienced consulting Medical Practitioner
 - Wehmeyer & Patton, 1990 – a factor in the prescription of medication is the shortage of physicians trained with an expertise in DD.
- Reviewed by an interdisciplinary team
- Effort to implement a behavioural based program to decrease challenging behaviours as opposed to only changing or reviewing the medication when prompted by a significant change in behaviours or the appearance of side effects (Fleming et al., 1996).

Rahim, 2013



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

Shifting from a Paradigm of Acute Physical Illness to Behaviour

- Shift in pediatrics from physical illness to nonmedical concerns or children's behavioural adjustment, which is a major focus of Behaviour Analysts (Allen et al, 1993)
- Common goals between both professions
 - Compliance
 - Sleep
 - Feeding problems
 - Toileting
 - Behaviour management
 - Academic performance



IPE 101: What is a BCBA ?

- While there are many professions that make recommendations for behaviour problems. Board Certified Behaviour Analysts are trained in a the science of ABA
- “ABA is a systematic approach for influencing socially important behavior through the identification of reliably related environmental variables and the production of behavior change techniques that make use of those findings”. <http://bacb.com/>
- Practitioners of behavior analysis provide services consistent with the dimensions of ABA.
 - conducting behavioral assessments,
 - analyzing data, writing and
 - revising behavior-analytic treatment plans,
 - training others to implement components of treatment plans, and
 - overseeing the implementation of treatment plans.
 - services to clients with a variety of needs, including improvements in organizational functioning (e.g., staff performance, management and pay structure interventions),
 - skill deficits (e.g., communication, adaptive behavior), and
 - **problem behavior (e.g., aggression, self-injurious behavior)**



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

Behaviour Analytic Contributions

- Effective in treating medical /psychiatric behaviours that challenge



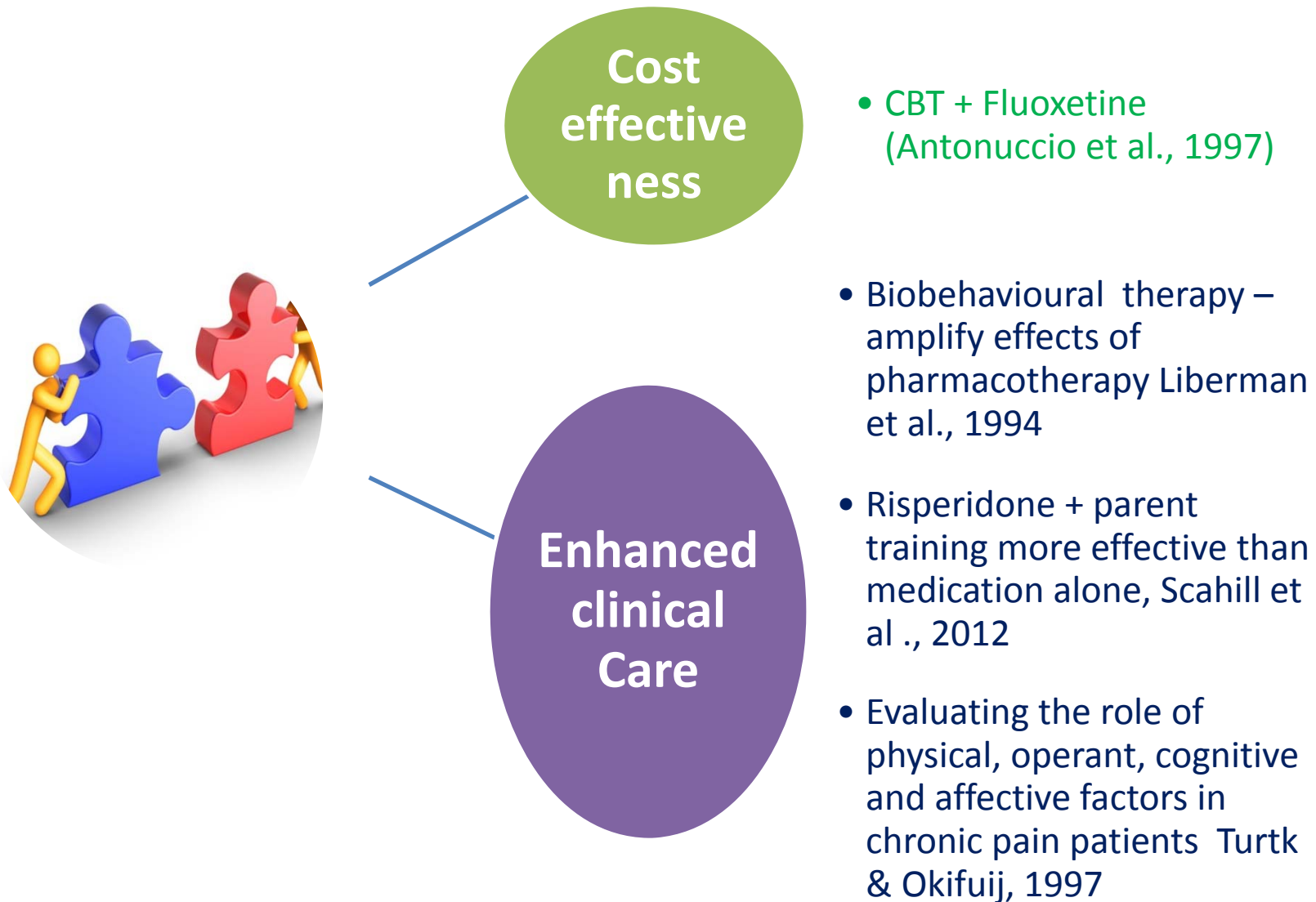
- Bizarre speech (Mace & Lalli, 1991)
- Anti-social behaviour (Serketich & Dumas, 1996)
- Chronic tic disorders (Himle et al., 2006)
- Drug addiction / Cocaine and heroine absentism (Ghitza et al., 2008)
- Life threatening rumination (Sajway et al., 1974)
- Encorpresis (Ross et al., 1998)
- Medication compliance (Epstein et al., 1978)
- Trichotillomania (Falkenstein et al., 2016; Friman, 1985)
- Pediatric obsessive compulsive disorder (Abramowitz et al., 2005)



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

The Need for Behavioural-Medical Collaboration



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

The Inception of a Behavioural Medical Clinic

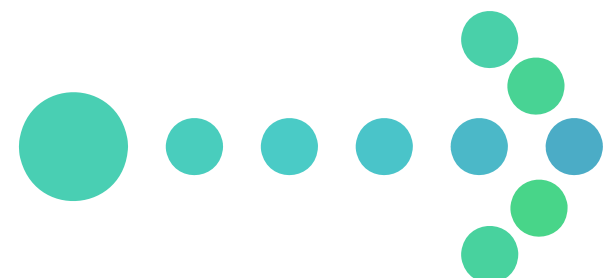
Improving the effective use of psychotropic medications among individuals with DD



Behaviour- analytic contributions to the field of medicine



Access to a strong, highly specialized clinical team



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

The BMACKE Clinic

Behavioural **M**edical **A**ssessment **C**omplex **K**ids & their **E**nvironment (BMACKE) Clinic



Admission criteria:

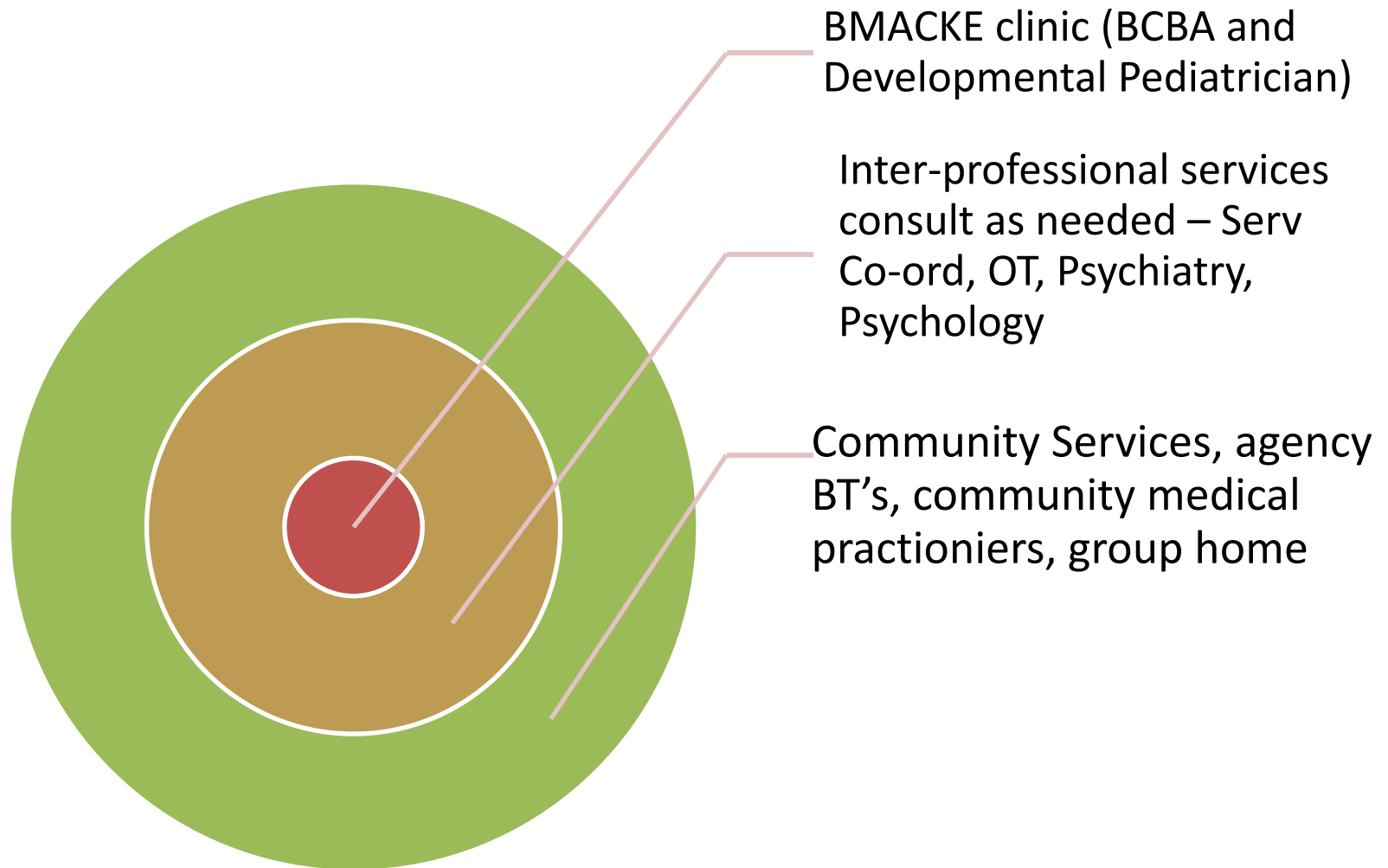
1. Active or suspected medical issues that could be contributing to the behavioural concern
2. Presence of significant behavioural concerns resulting in a priority referral



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

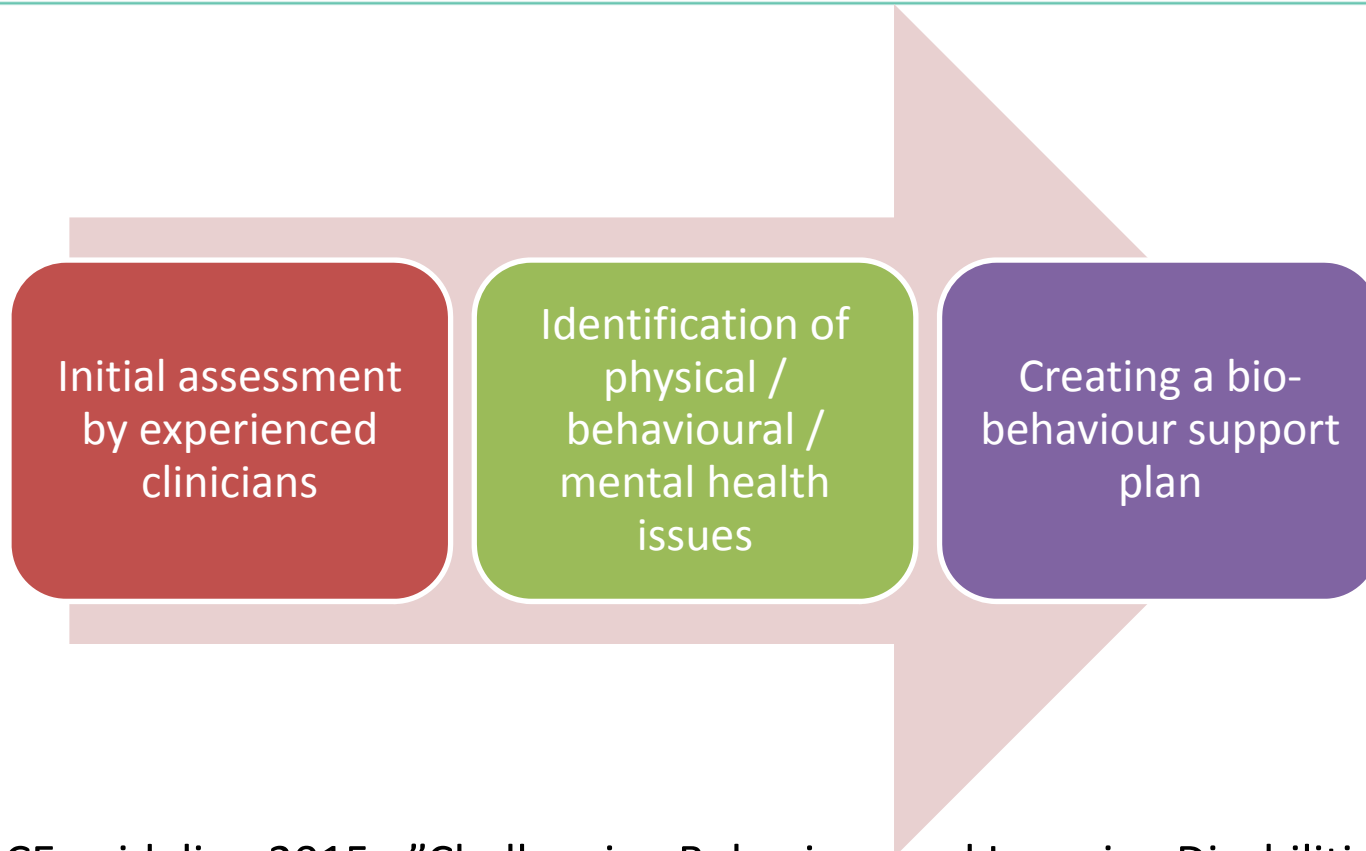
BMACKE Continued



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

BMACKE Continued



- NICE guideline 2015 –“Challenging Behaviour and Learning Disabilities”, recommendation #24
- <https://pathways.nice.org.uk/pathways/challenging-behaviour-and-learning-disabilities>
- Minshawi et al 2015, JADD

Lit Review: Medical Assessment

- (NICE – 24,#25, p. 168)



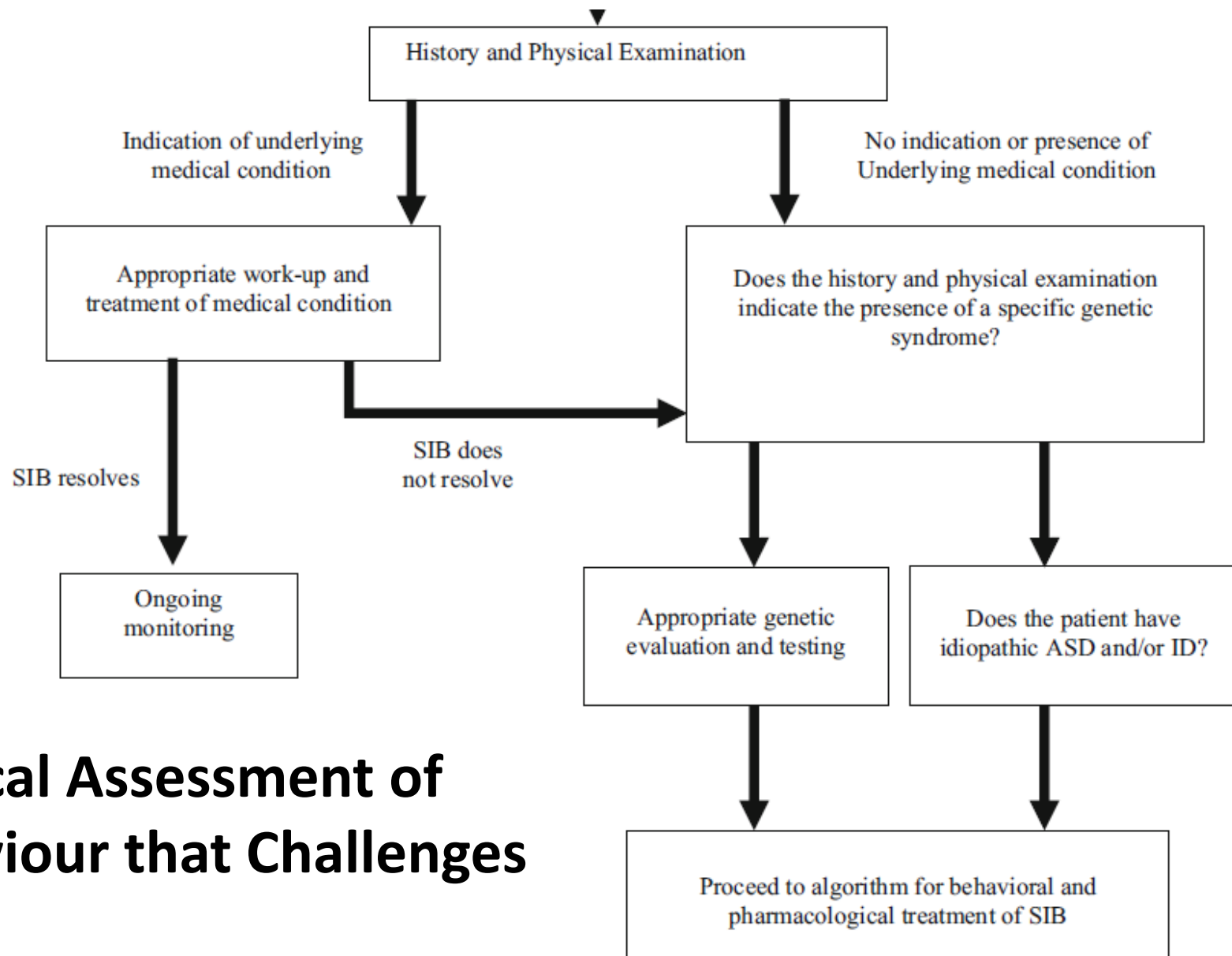
- Written Statement (Formulation) (NICE - #26, p. 168)
- Initial behaviour Support Plan (NICE - #33, p, 171)

Lit Review: Medical Assessment

- Assess Risk regularly (NICE - #27)
 - Suicidal ideation, self harm, harm to others
 - Self neglect, or neglect/abuse by others
 - Breakdown of family or residential support
 - Rapid escalation of behaviour that challenges
 - Address risk issues in Behaviour Support Plan



Medical Assessment

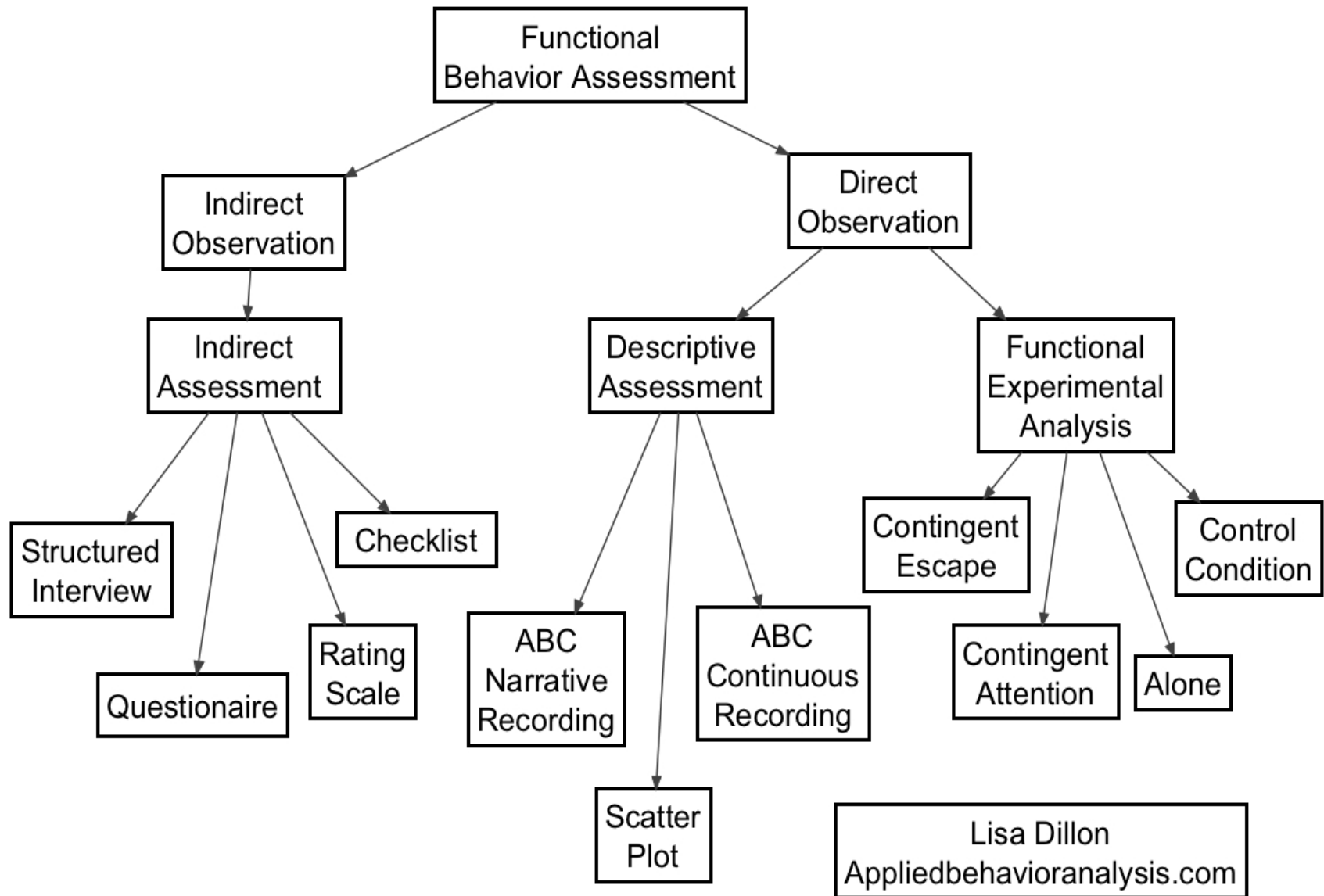


Medical Assessment of Behaviour that Challenges



Fig. 1 Algorithm for assessment of SIB. *SIB* self-injurious behavior, *ASD* autism spectrum disorder, *ID* intellectual disability

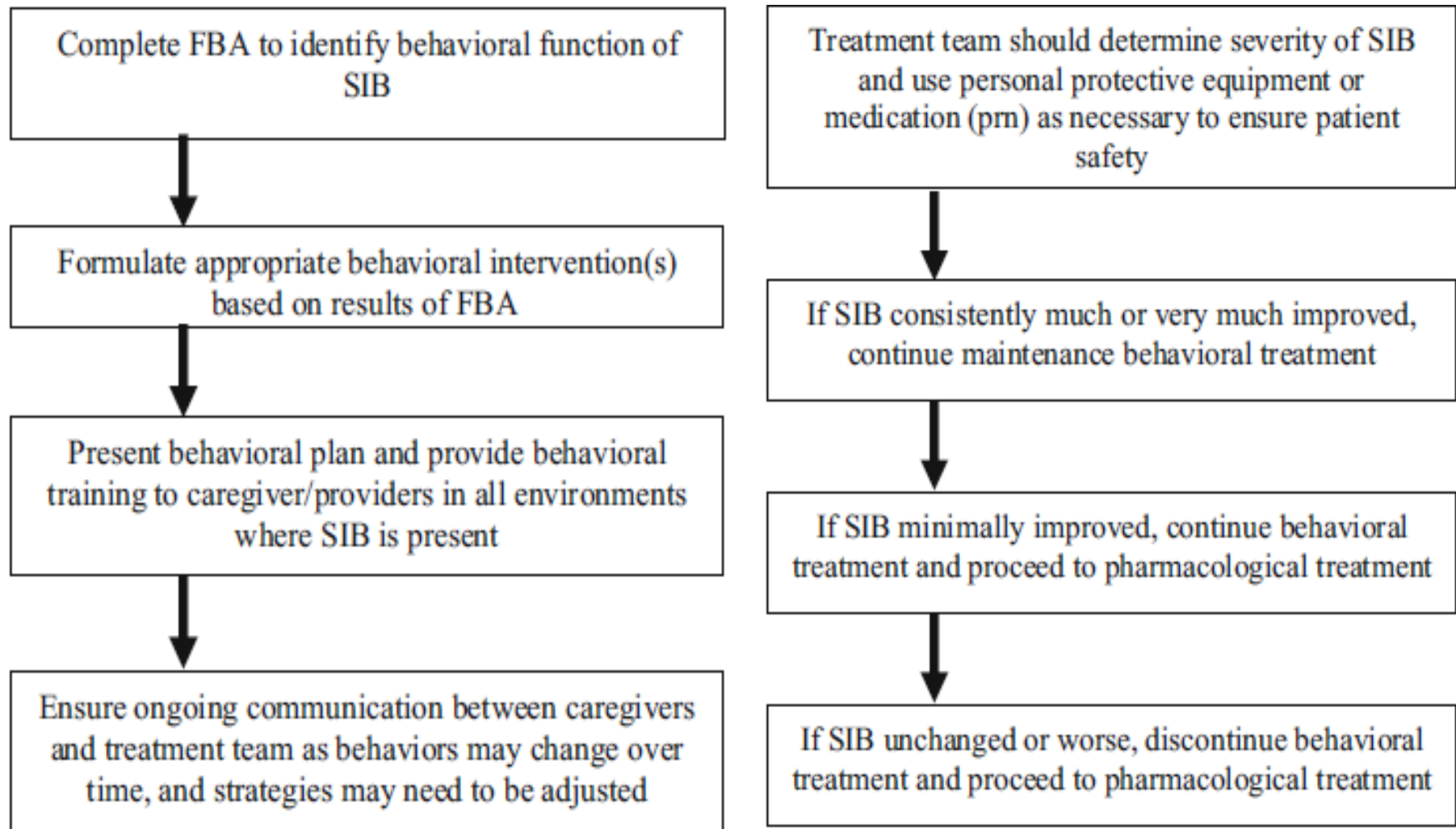
Functional Behaviour Assessment



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

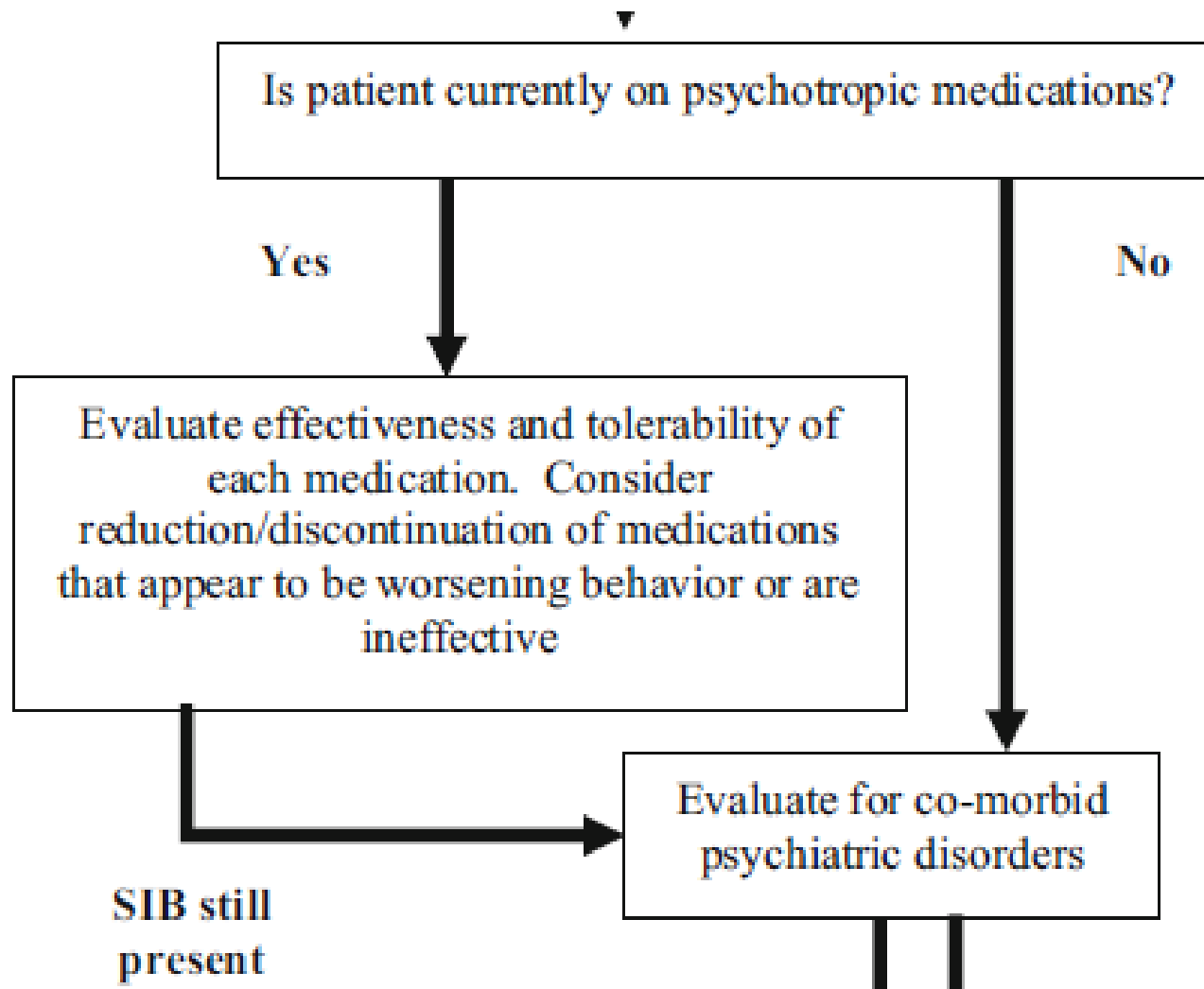
Assessment and Intervention



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

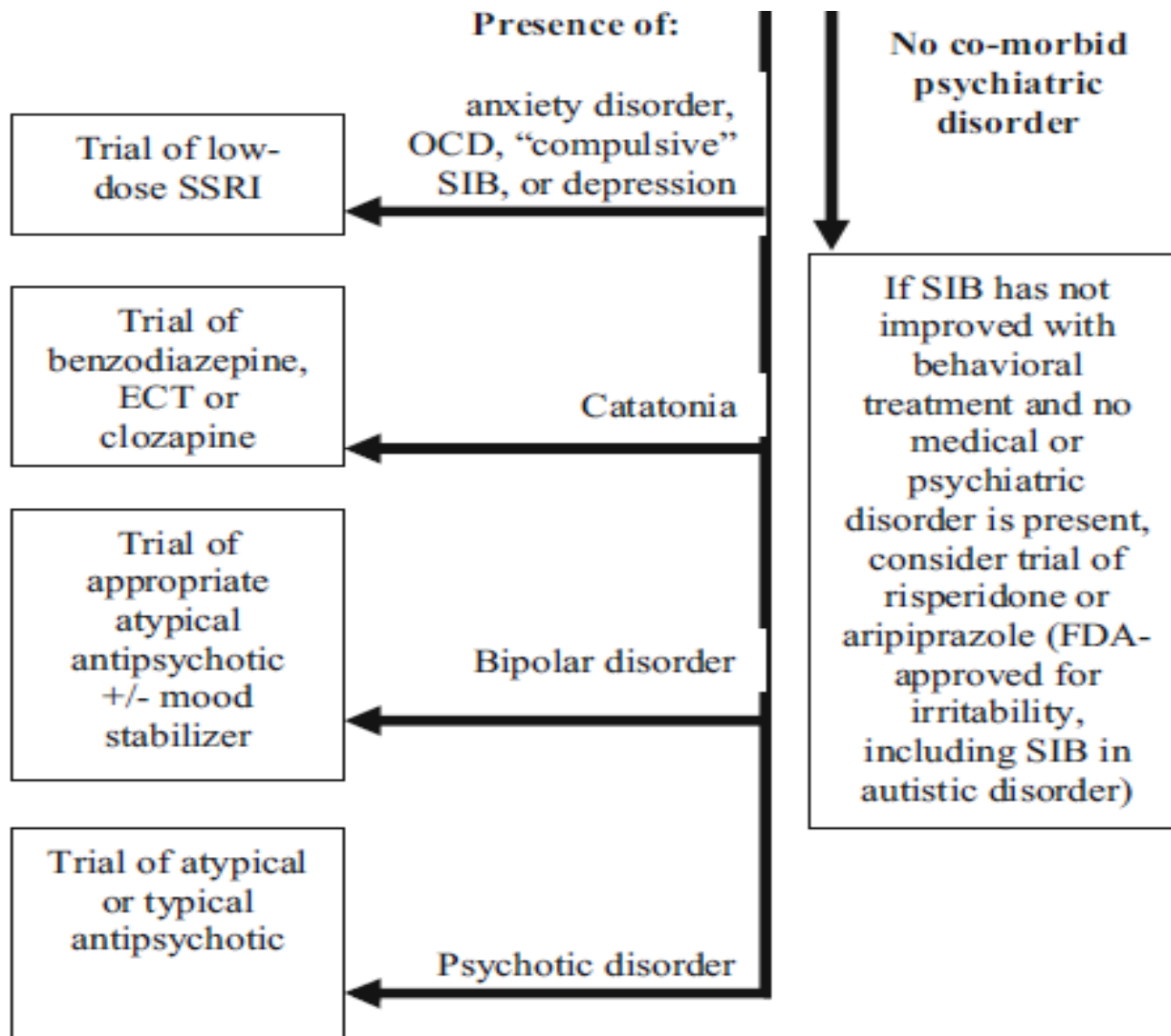
Intervention



Our Values

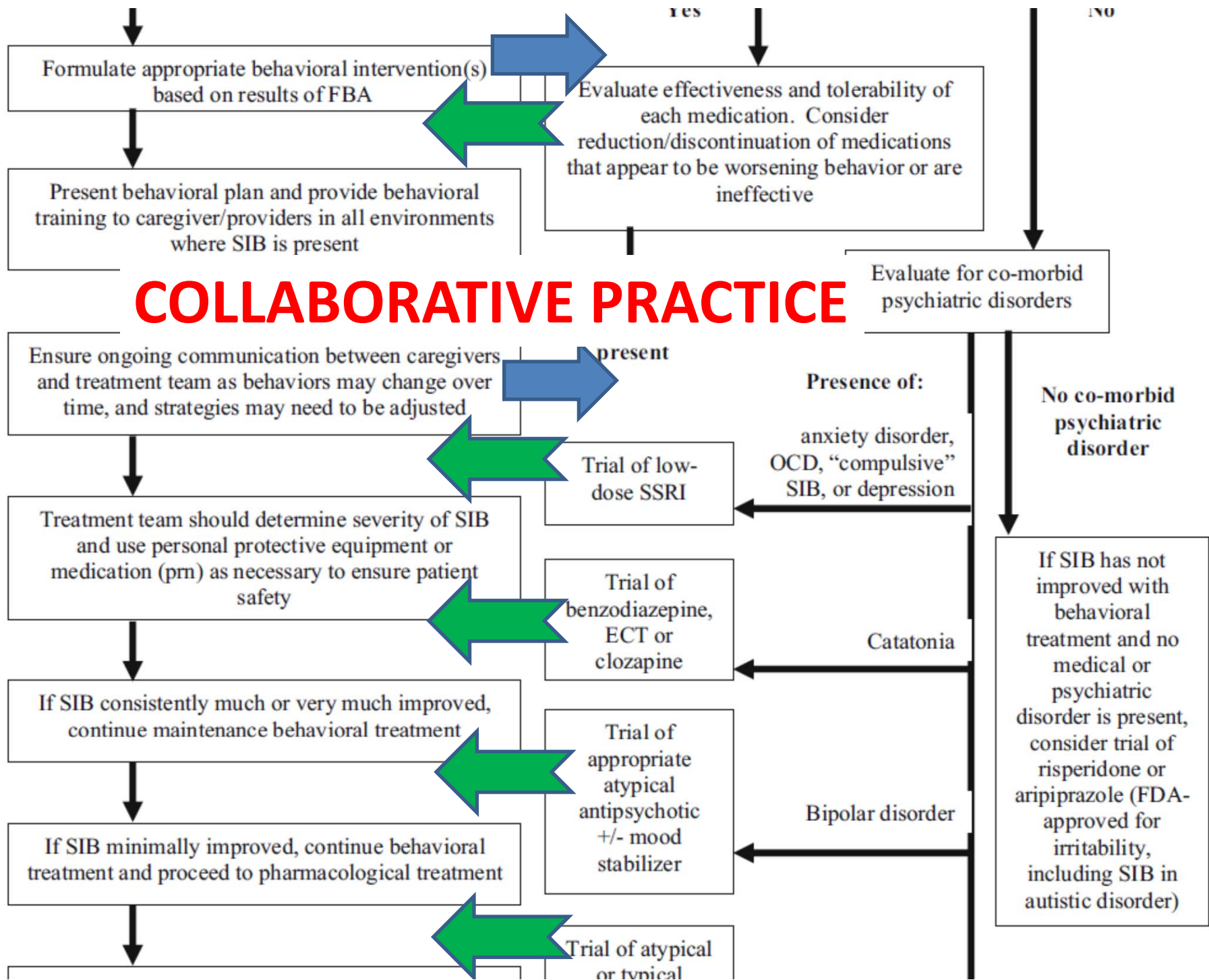
Collaboration • Accountability • Innovation • Respect • Responsiveness

Intervention



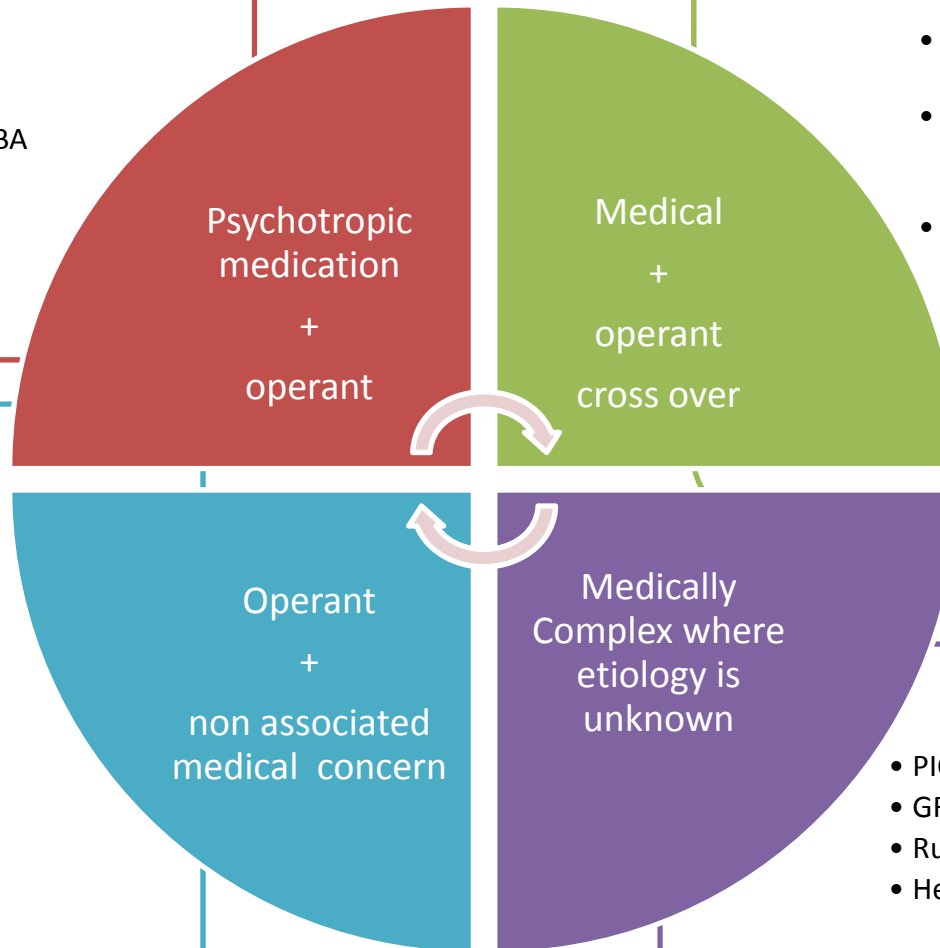
Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness



BMACKE Referrals

- Example: Individuals with autism or DD, no Psychiatric dx, need 2 + staff ratio at school; in and out of community based programs; a long history of polypharmacy → Clinic would manage psychotropic medication and conduct an FBA



- Example: Prader willi Syndrome-
- medical assessment of vaginal itching, anxiety, skin picking
- Behaviour assessment of refusal, flopping, fecal smearing, disrobing
- Clinic → support each other in assessing anxiety and skin picking

- Example: Individual who is pulling out tracheostomy tube. BCBA needs support connecting with the medical community to understand trach, needs medical clearance for Functional analogue. However no medical assessment is needed. Regarding the etiology of referring behaviour

- PICA,
- GRIN1
- Rumination
- Hearing voices



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

BMACKE CLINIC: COMPLEXITY RATING TOOL

- Needed help with triage process to decide if client was complex enough for the interdisciplinary clinic
- Also to decide which professionals to involve in the assessment **(IPC)**
 - Consulted with each profession in our community about their criteria for priority



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

	DOMAINS	0 <i>No Symptoms in Domain</i>	1 <i>Symptom(s) present Managed well by Primary Level (MD, Caregivers, School)</i>	2 <i>Symptom(s) challenging to diagnose and manage, requiring an experienced clinician</i>	3 <i>Multiple Symptoms in a domain requiring expert clinician(s) to assess and manage</i>	4 <i>Crisis Level; requiring most intensive assessment & management Severe impairment & impact on client/family or environment</i>
A	Behaviour	Absence of problematic behaviours that cause harm to self or others.	Presence of problematic behaviours, however ASD team involved and/or other behavioural consultant/teams are able to manage.	<p>Problematic behaviours occurring more often and/or for longer durations and/or increasing in intensity which are challenging to manage</p> <p>Replacing the behaviours may lead to more positive attention/independence. Referral for functional behaviour assessment/consultation and intervention. to determine the function, enabling teaching others to teach a replacement behaviour</p>	<p>Severe problematic behaviours occurring frequently and/or for a long duration of time and/or are increasing in intensity, may be caused by complicating medical or mental health issues, or result in marks/bruises/pain to self or others, both of which require collaboration with other health care providers.</p> <p>Functional behaviour assessment/consultation to determine the function, enabling teaching others to teach a replacement behaviour.</p>	<p>Extremely severe problematic behaviours occurring at a high frequency, duration and/or intensity resulting in imminent risk to self/others which require collaboration with and referrals made to specialist health care providers, clinicians, and caregivers to assess and treat medical + behavioural issues. May require inpatient admission.</p> <p>BCBA would support admission and provide behaviour assessment /consultation to determine the function, enabling a decrease in behaviours while teaching others to teach replacement behaviours.</p>
B	Mental health	No action required	Well managed no action required	Referral for nursing assessment to gather relevant history and data may need one time consult with psychiatrist at SPC	Mental health has deteriorated and/or lengthy period of unsuccessful treatment and/or multiple co-morbidities that may be related to mental status changes. Needs to have review of plans and medications- nursing would collect all the data and past history and especially medication history	Determine if there is a need for an immediate admission- nursing would advocate with information to support admission and provide DD consultation

Physical health	Healthy, has primary care MD, annual checkups, Well managed by Primary MD	Symptom well defined and diagnosed, Primary Care MD able to manage and treat	Symptoms of pain or discomfort, no clear dx, requires experienced MD to assess (community vs SPC MD)	Multiple comorbid conditions requiring multiple specialties but can be managed as an outpatient (Sz, GI, Vision, DM)	Urgent multiple health issues contributing to severe impairment in function or injury; requiring co-ordinated inpatient specialized assessments and treatments Advocate with information to support admission and provide DD consultation
Environmental	Adequate supports, successful attendance at programs	Environmental issues well defined, implementation of environmental adjustments and supports have increased stability	Environmental issues not well defined, adjustments unsuccessful, requires assessment/consultation from BCBA, OT, service co-ordination, individual counselling	Environmental and/or support issues are among multiple issues that are increasing instability and risk, requiring multi-professional consideration	Environment is unable to sustain individual due to high risk, burn out of supports. Includes requiring urgent respite or intense individual and family therapy
Communication	No communication concerns	Communication needs managed by community SLP either through school or private.	Normal reason for referral to SLP not priority	Priority if BT has assessed and determined behaviours are driven by lack of communication skills or equipment	Crisis intervention is done alongside BT only if BT has determined it is a crisis SLP routinely does not have crisis services

Psychological:	Functioning level and needs well understood, recent / valid psychological report available	Some clarification needed to confirm functioning level and needs, generally stable with occasional concerns.	Confusion re functioning levels, support needs and differential diagnosis (i.e. IQ-ASD-psychosis) Increased behavioural difficulties observed in certain environment with certain people	Escalation of behavioural difficulties (i.e., aggression, withdrawal, catatonia etc.) in multiple environments with multiple people, complicated by low IQ, lack of verbal communication skill and limited external resources evidence of sudden and rapid decline in overall functioning level	Difficulties in #3 observed constantly across all environments with all people
Sensory	No fine motor, gross motor or sensory or self-care needs	Fine motor, gross motor sensory needs and/or self-care needs are well managed by community OT (school or private)	Sensory needs are not well defined. More intensive home based support is required	BT assessment completed and has determined that function of behaviour is likely sensory; home based support is required	Crisis level behaviour as determined by BT. Assessment and intervention needed collaboration with BT and team.
Hearing	Stable - history of normal hearing	If there is a concern then there is no time limit for recheck If no concern then can be follow up testing in one year	Requires assessment due to active infection of the ears recently observed, concerns regarding changes in hearing and/or balance	Same as Domain 2 if there is a concern then testing would take place	Crisis would be sudden hearing loss
Overall Response to previous treatment	No previous treatment	Has received some treatment and issue resolved at the time	Some treatment and issue(s) not resolved	Multiple treatments and issue(s) not resolved	Chronic recurring issues despite receiving specialized treatments

BMACKE Clinic: Outcome Tools

Brief Family Distress Scale

Jonathan Weiss, Ph.D., & Yona Lunsky, Ph.D.

On a scale of 1 to 10, please rate where you and your family currently are right now, in terms of crisis by picking one of the following statements:

1 Everything is fine, my family and I are not in crisis at all

2 Everything is fine, but sometimes we have our difficulties

3 Things are sometimes stressful, but we can deal with problems if they arise

4 Things are often stressful, but we are managing to deal with problems when they arise

5 Things are very stressful, but we are getting by with a lot of effort

6 We have to work extremely hard every moment of every day to avoid having a crisis

7 We won't be able to handle things soon. If one more thing goes wrong - we will be in crisis

8 We are currently in crisis, but are dealing with it ourselves

9 We are currently in crisis, and have asked for help from crisis services (Emergency room, hospital, community crisis supports)

10 We are currently in crisis, and it could not get any worse



© Weiss & Lunsky

Collaboration • Accountability • Innovation • Respect • Responsiveness

BMACKE Clinic: Outcome Tools



General Change Questionnaire - BMACKE

Parent

PRE FOLLOW UP POST
Centre Surrey Place

CB#: _____ Relationship to client: _____ Date: dd/mm/yy _____

*The BMACKE clinic was recommended for the following concerns:
Please describe each concern in the spaces below.*

How big a concern is this? Circle ONE number for each concern.

Primary Concern: _____

Concern 2: _____

Concern 3: _____

Concern 4: _____

Very Small	Medium			Very Large
1	2	3	4	5 6 7
1	2	3	4	5 6 7
1	2	3	4	5 6 7
1	2	3	4	5 6 7



Case #1: PW- Prader Willi Syndrome

Operant → disrobing, fecal smearing, aggression, refusal, property destruction,

Medical → anxiety, sleep, skin picking

Medical
+
operant
cross over



Case#1: Prader Willi Syndrome

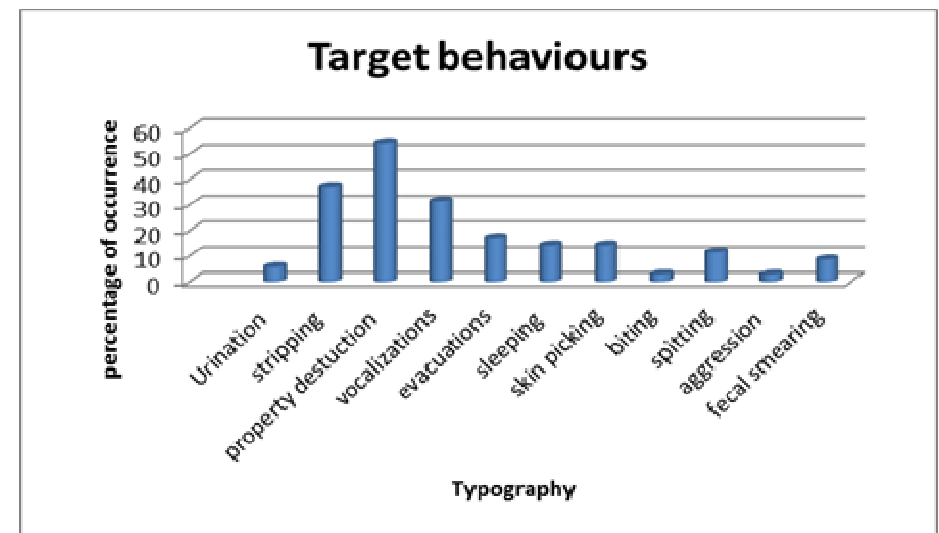
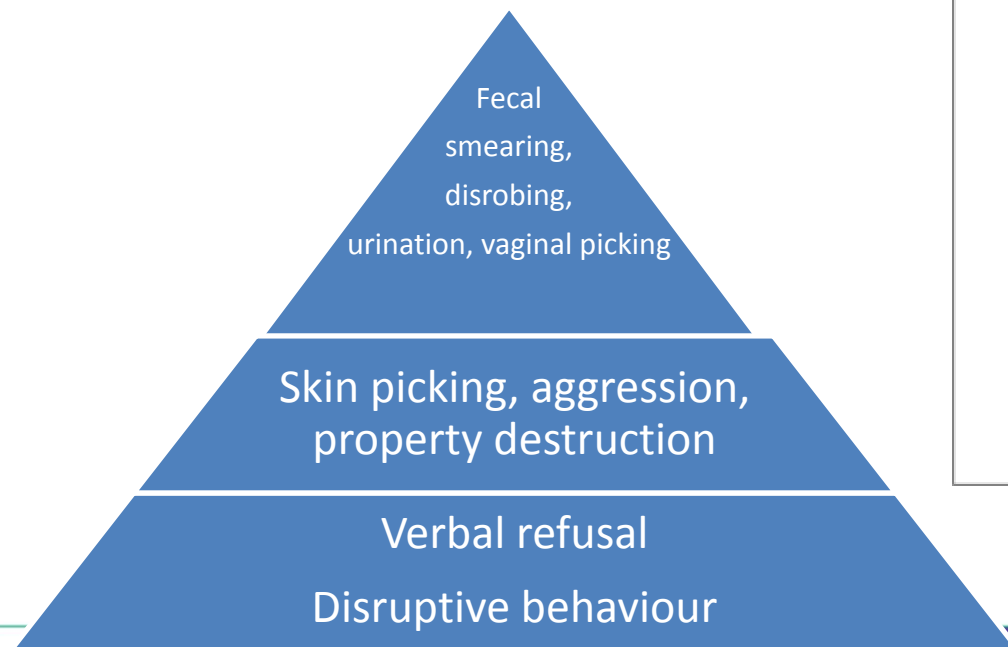
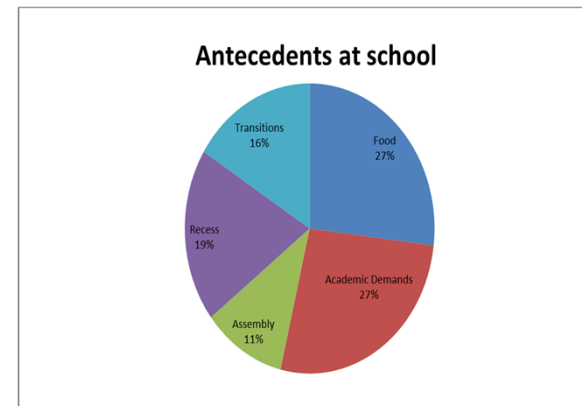
MEDICATIONS:

Celexa 20 mg, stopped for more than 1 month ago

Growth hormone, Nutropin 2.1 mg,

Steroid cream for vaginal and rectal itching

(N-acetylcysteine – 900 mg, twice a day, for skin picking for 1 month)



Derby et al, 1994- separate typographies as they may have separate functions



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

Behavioural Interventions for PW

Antecedent strategies for PW (Minshawi, et al 2015)

- Hand written visual schedule
- Duration of times associated for each activity
- Verbal reminders for socially appropriate behaviours
- Using her humour to motivate her
- Music playing in the background
- PWS training for staff
- Contingency mapping
- Location change in school
- Plan food breaks into visual schedule
- 2:1 staffing
- Reduce food stimuli
- NCR – non contingent reinforcement
- Reinforcement menu



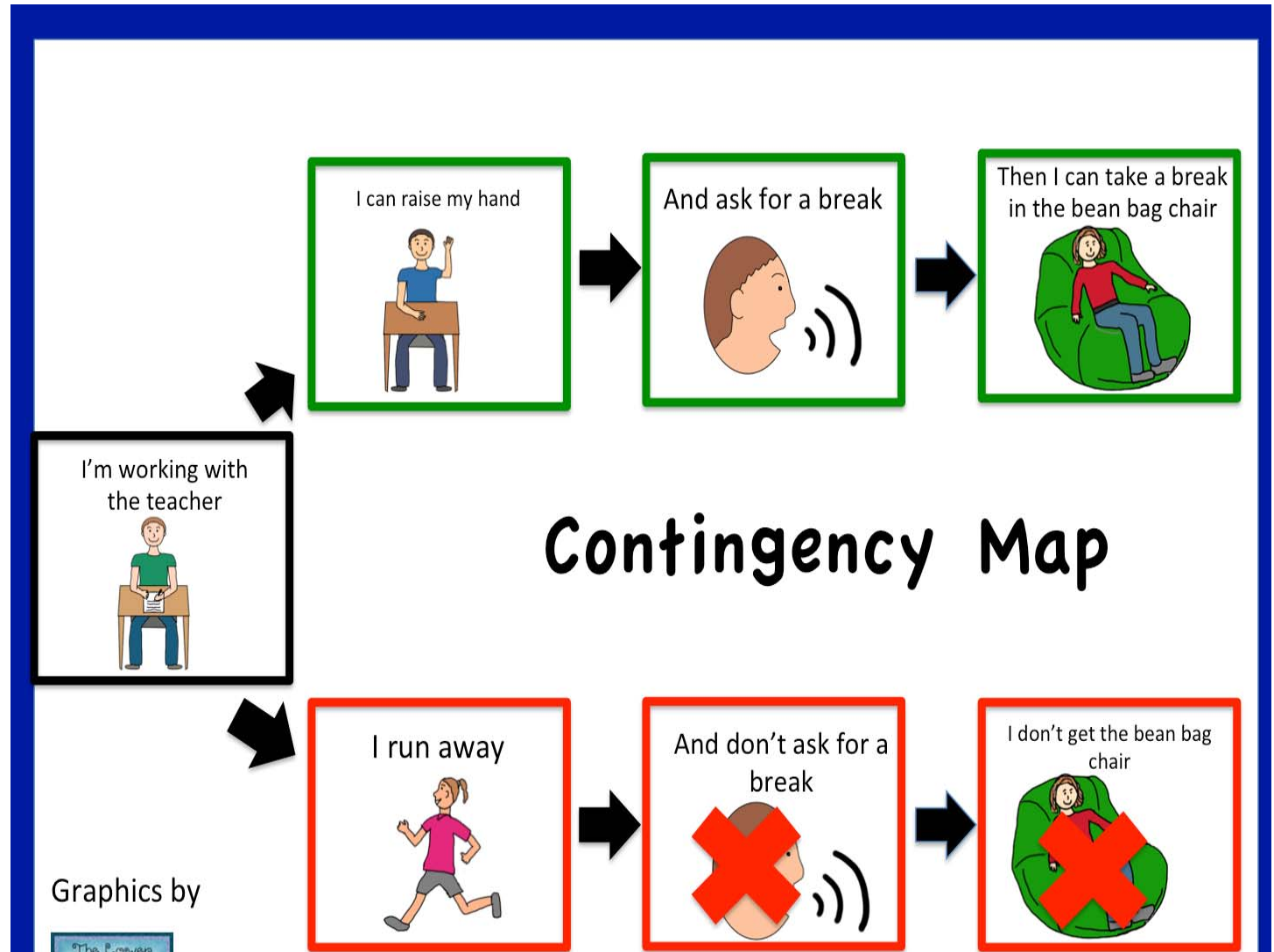
Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

Example of a Contingency Map

Brown & Mirenda, 2006- contingency mapping is more effective than verbal instruction alone for individuals with autism – generalized this tool to our patient with PWS

- Functional equivalence training



Graphics by



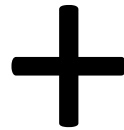
www.autismclassroomnews.com



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

Noncontingent Reinforcement + Reinforcement menu



Moore et al., 2016 report on the effectiveness of noncontingent reinforcement and reinforcement menu's.



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

Behavioural Interventions for PW

Skill building strategies

- 5-point scale for emotional regulation
- Social autopsies
- Choice making - writing a note to friends or administration if they are not available to meet



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

5-point Scale

Name: _____ My _____ Scale

Rating	Looks Like	Feels Like	I can try to
5			
4			
3			
2			
1			

Buron & Curtis, 2003

Behavioural Interventions for PW

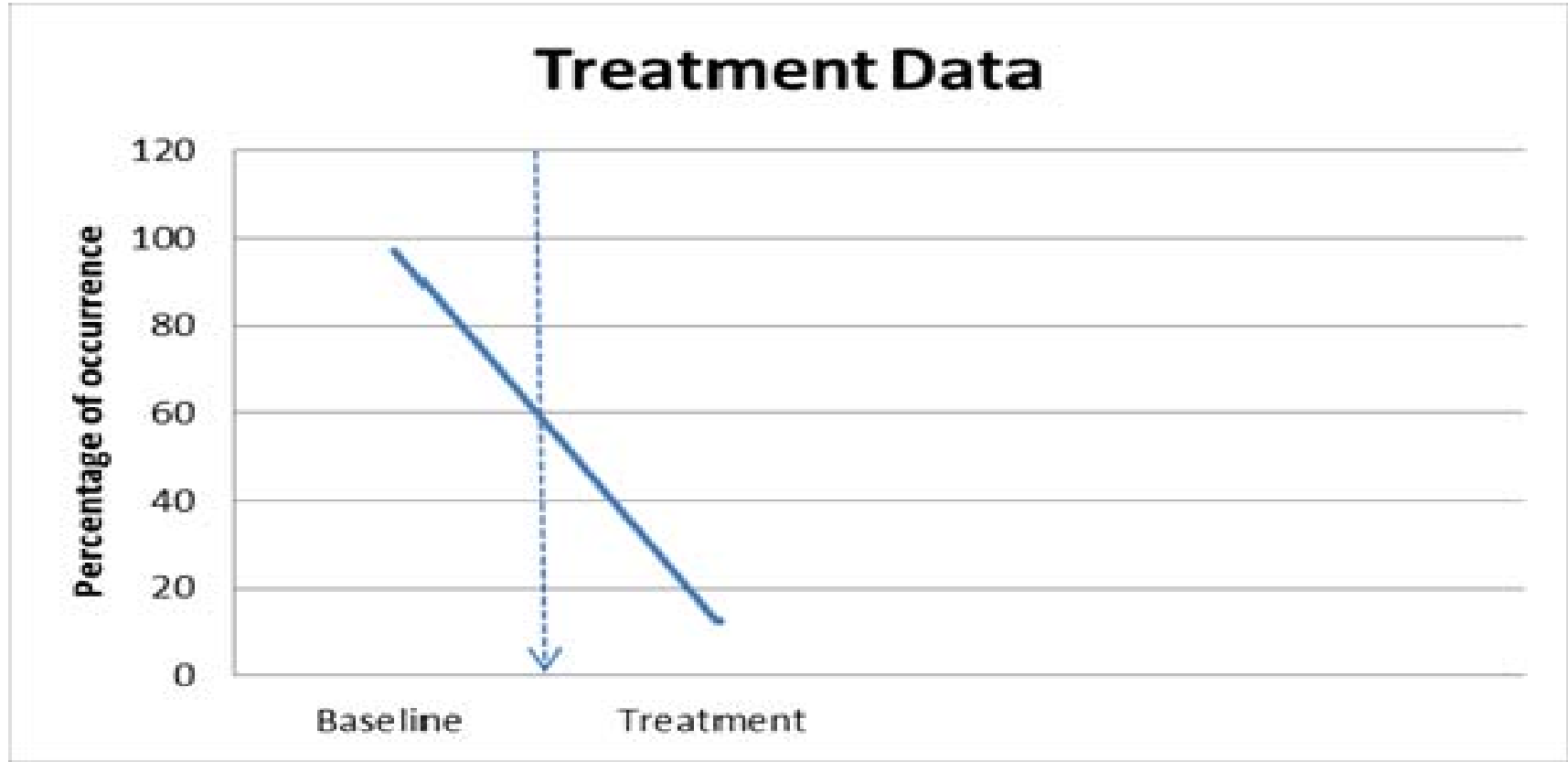
Consequence strategies

- If perseverating – verbal redirect to visual schedule / monthly schedule and then back to the task at hand
- Token system – token every half hour for the non occurrence of smearing and picking, stripping behaviours (Kazdin, 1982)
- Self management strategies – individual with PSW delivers her own tokens upon teacher approval



PW improves after Treatment

Aggregate of All Behaviours



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

Tip about this Intervention

- High risk level of the behaviours
 - Rapid functional assessment completed
 - needed to remove the patient quickly and provide intervention
 - Provided positive behavior support to the classroom and successful implementation because of support from all stakeholders at school
 - Behaviour plan well supported by school administrators and principal
 - Sugai et al., 2000



Case# 2: AC

Operant behaviour →
aggression, property
destruction, rigid
behaviours, stereotypy

Medical → long history of
polypharmacy. Behaviour
reduction difficult without
medication stabilization,
rigidity, impulsivity,

Psychotropic
medication
+
operant



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

Video-JP



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

Severe Aggression and Compulsions

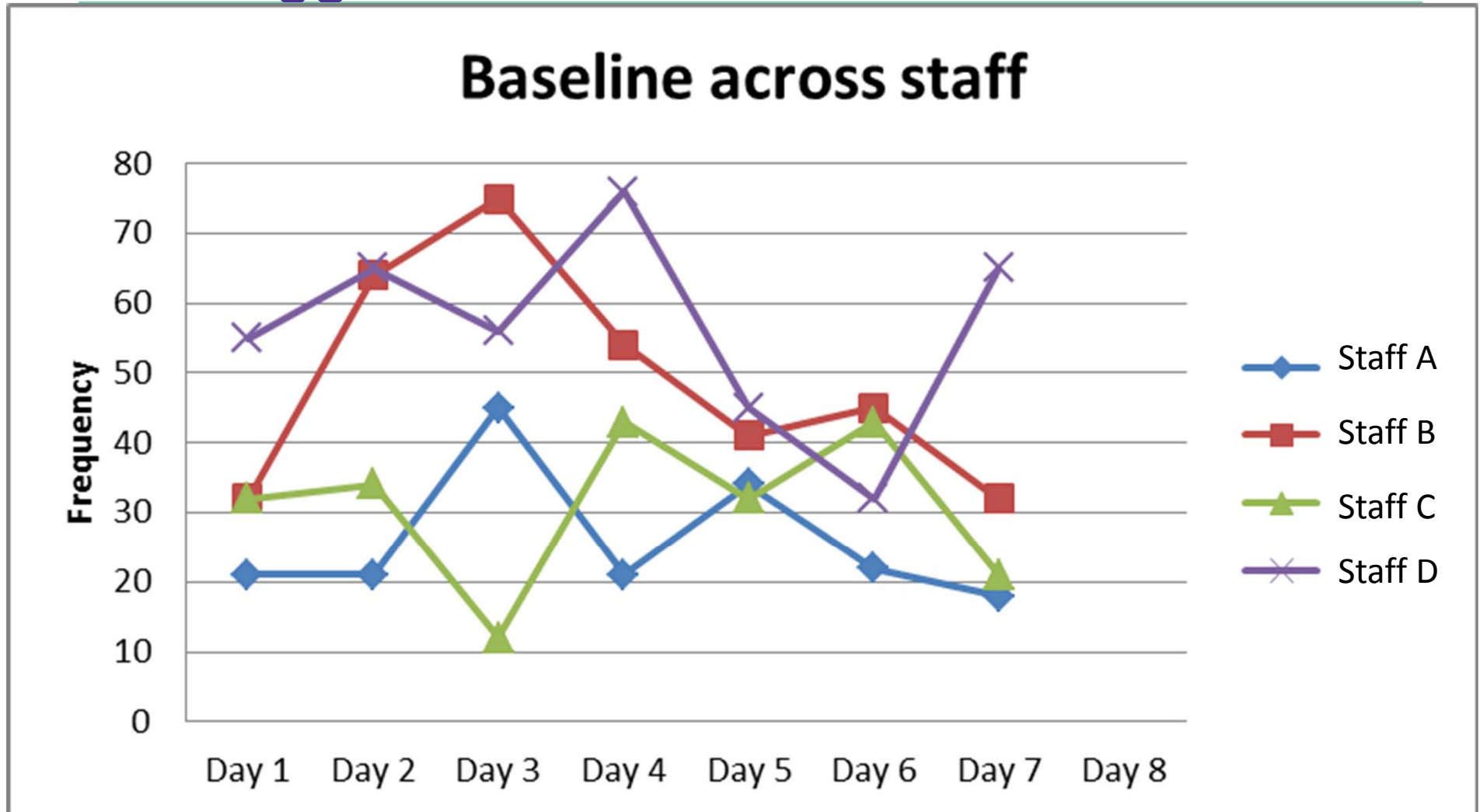
- Medication management to decrease strength of compulsions and subsequent aggression
 - From age 5-10 years, 3 doctors, 10 meds
 - **SSRI:** Fluoxetine, Fluvoxamine, Citalopram
 - **Benzodiazepine:** Lorazepam, Clonazepam
 - **Atypical:** Risperidone, Aripiprazole
 - **Mood Stabilizer:** Gabapentin
 - **Alpha agonist:** Clonidine, Propranolol
 - Since 2015, switched to Olanzapine; started Sertraline; consultation with DD psychiatrist
- BCBA Therapists from 4 settings:
 - Specialized school (teacher), group home, family home and BMACKE clinic



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

Aggression Across School Staff



- Uses isolation room in school; At group home, restraint and PRN Medication used



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

Common Goal: Decreasing Aggression

- Medical

- Medication #11 & #12 with some improvement
- Psychiatry and Developmental Paediatrics
- General Paediatrician involved in primary care

CLONAZEPAM	0.5 mg	tid
OLANZAPINE	5 mg	Bid
LORAZEPAM (ATIVAN)	1 mg	Prn
SERTRALINE (ZOLOFT)	50 mg	qd
BETADERM	0.50%	
VASELINE	NS	



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

Clinical Questions from Case #2 - AC

- *What are the benefits of collaborating with 3 different settings? Challenges*
- *What should the collaborative goals be with 3 Behaviour Analysts in 3 different settings ?*
- *How do we operationally define the target behaviours of “OCD” in different settings to improve measurement of medication effect ?*
- *How do we assess the effectiveness of PRN restraints and medications ?*



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

Case# 3: HV

Medically
Complex where
etiology is
unknown

Operant behaviour →
hearing voices

Medical → history of
catatonia, anxiety
symptoms, ? psychosis



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

Medical Assessment of HV



- 11 year old boy, ASD and Mild ID
- Regression of language, socialization, motor skills
- Difficulty initiating movements, freezing episodes, holding food in his mouth, hearing voices
- Medical cause ruled out by developmental paediatrician, 2 child psychiatrists, 2 neurologists, and metabolics specialist at tertiary level hospital
 - Testing normal including MRI, EEG, and labs
- Dx with atypical catatonia, started on Lorazepam.
- Dx with psychosis; some improvement in “hearing voices” with **Olanzapine**
- Increased agitation when lorazepam increased. D/C’d
- At consultation, “voices” appeared to be related to social overtures, and sometimes when agitated



Bizarre voices can have a function and should be assessed using a functional analysis

- Mace et al, 1988 → Functional analysis and treatment of bizarre speech
- Mace & Lalli, 1991 → Linking Descriptive and experimental analyses in the treatment of bizarre speech
- Wilder et al, 2001 → Brief functional analysis and treatment of bizarre vocalizations in an adult with schizophrenia
- Arnold et al., 2003 → Covariation between bizarre and nonbizarre speech as a function of the content of verbal attention
- Lancaster et al., 2004 → functional analysis and treatment of the bizarre speech of dually diagnosed adults



Our Values

Collaboration • Accountability • Innovation • Respect • Resilience

Operant Behaviour

What does it mean when we say that bizarre voices are successful operants



That they are shaped and maintained by positive and negative reinforcement contingencies



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

Functional Behaviour Assessment

- 1. ABC data collection
- 2. File review
- 3. Indirect Interview
- 4. Content analysis – transcription
- 5. Functional analysis



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

Behaviour Assessment

- **Target Behaviours**
- In both functional analyses the following behaviours were targeted:
- ***Talking to/ about voices:*** Defined by any occurrence of one or more of the following behaviours;
- Talking to another person (in the environment) about voices. As examples:
 - the voices are telling me to stop
 - they want me to do something
 - voices in my head are saying “Jaden isn’t nice”
 - (child’s name) in my head wants me to say no
 - Someone is in there
- Talking to another person who is not visible. As examples:
 - Stop, you never let people talk
 - Yeah okay just keep saying that
 - I drew this one for you



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

Behaviour Assessment

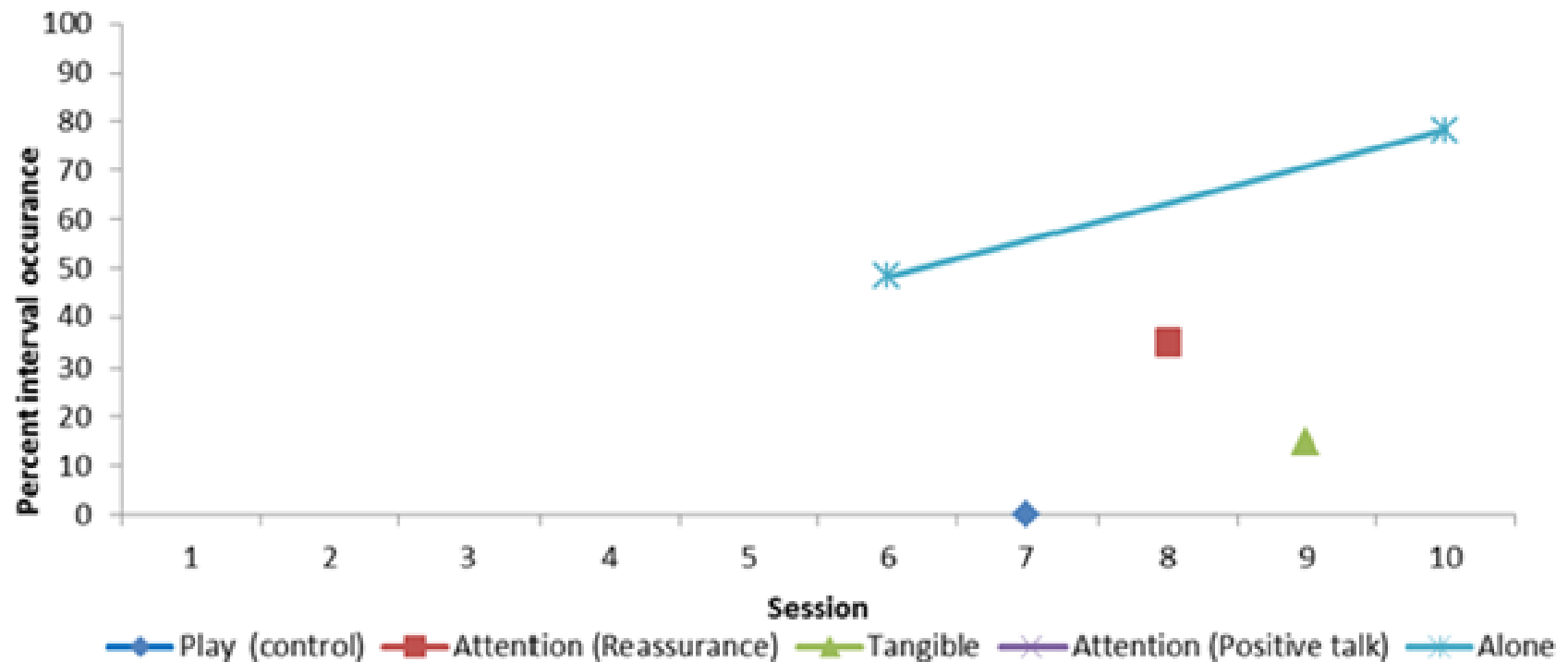
- Exclusionary criteria includes:
 - Singing a song to self
 - Saying lines from a movie while acting out the actions
 - Discussing what someone said in the past (e.g., At school, the teacher asked us to get out our math books and no one was listening)

“Agitation”:

- Defined by any occurrence of one or more of the following behaviours;
 - Yelling, screaming, or crying
 - Swearing
 - Inappropriate statements to others (e.g., *shut up, I will punch you*)
 - Negative statements or questions about self (e.g., *I want to die, I hate my life, am I the devil?*)
 - Throwing items
 - Banging any part of his body against the wall or furniture



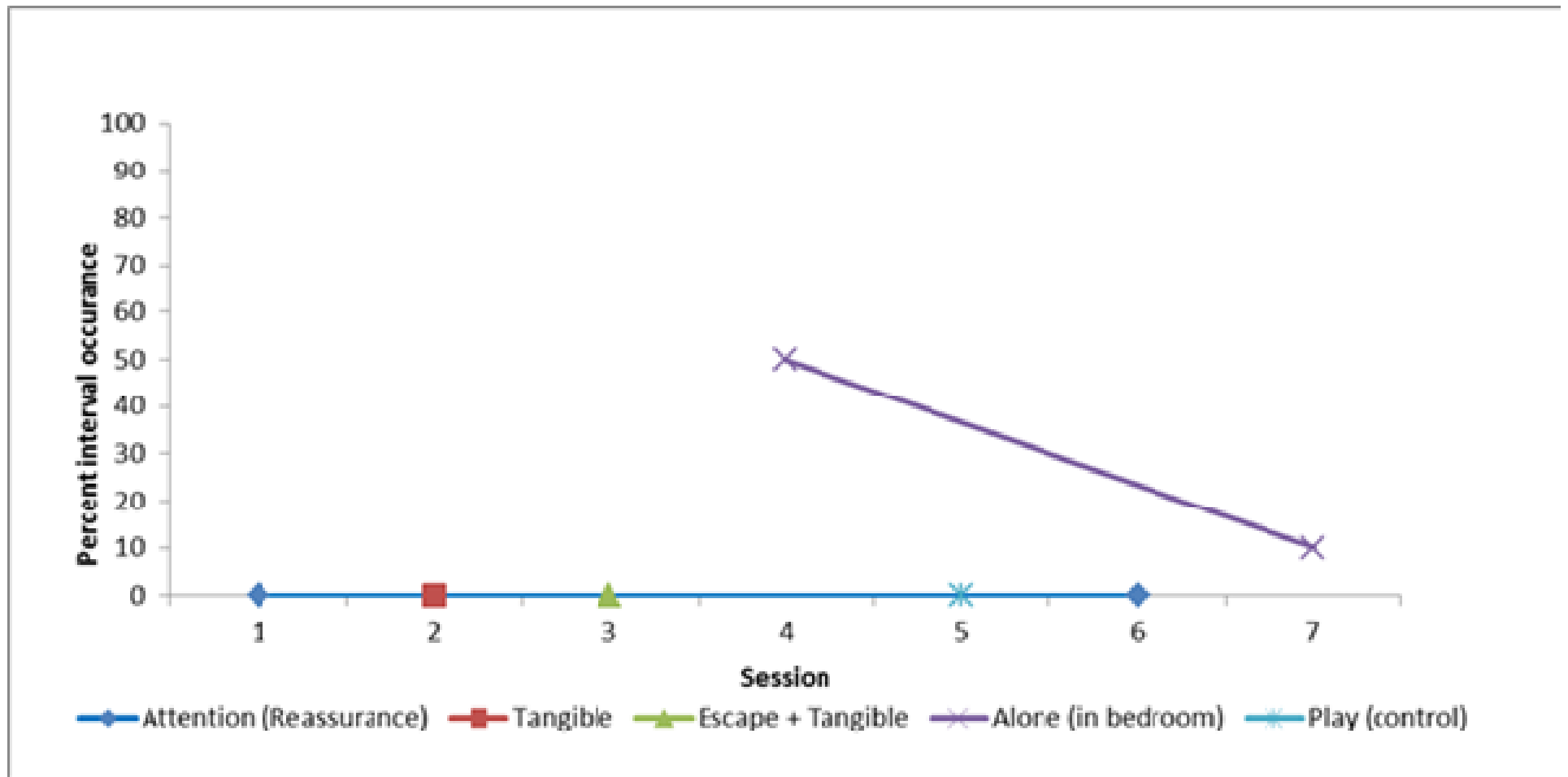
Functional Analyses of "Voices"



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

Functional Analyses of "Voices"



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

Pharmacological Assessment & Treatment

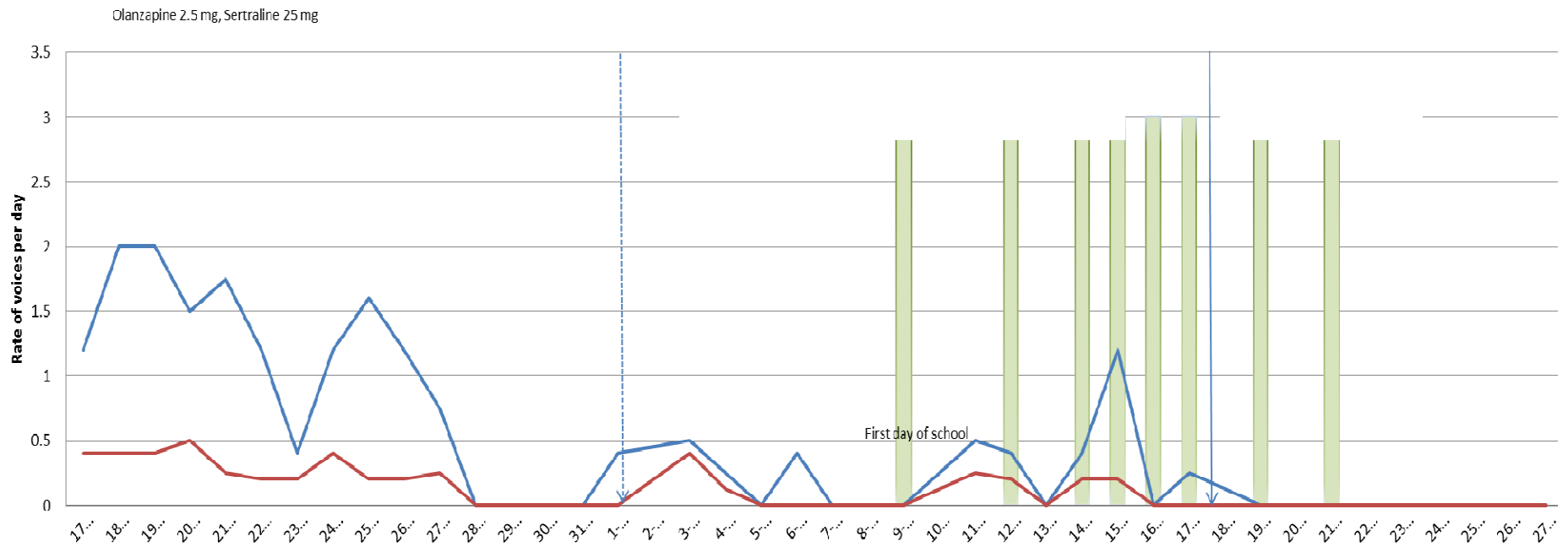
- Chronic anxiety: worrying about others perceptions, hand washing,
- family wary of medications after adverse effects
- Initially weaning of Olanzapine resulted in increased “voices”
- Collaboration Point:
 - Behaviour data suggested behaviours had a socially mediated function when patient is anxious and looking for reassurance (escape from anxiety)
 - Treatment of anxiety by starting and increasing Sertraline
 - Decreasing Olanzapine
- **IPC: Integrated and Shared Bio-Behavioural Care Plan**



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

Intervention for HV



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

Intervention:

6

BMAKKE
Aniya Nicole
Kellum

Hearing and Talking to voices

Data Collection

	Talking voices	Hearing
Thurs. Sept. 22/16	0	0
Friday Sept. 23/16	0	0
Sat. 24/16	0	0
Sunday 25/16	0	0
Monday Sept 26/16	0	0
Tue Sept 27/16	0	0
Wed. Sept. 28/16	0	0
Thurs. Sept. 29/16	0	0
Fri. Sept. 30/16	0	0

*maybe hungry or mom on phone
Jaden had a little leg squint*

thinking work

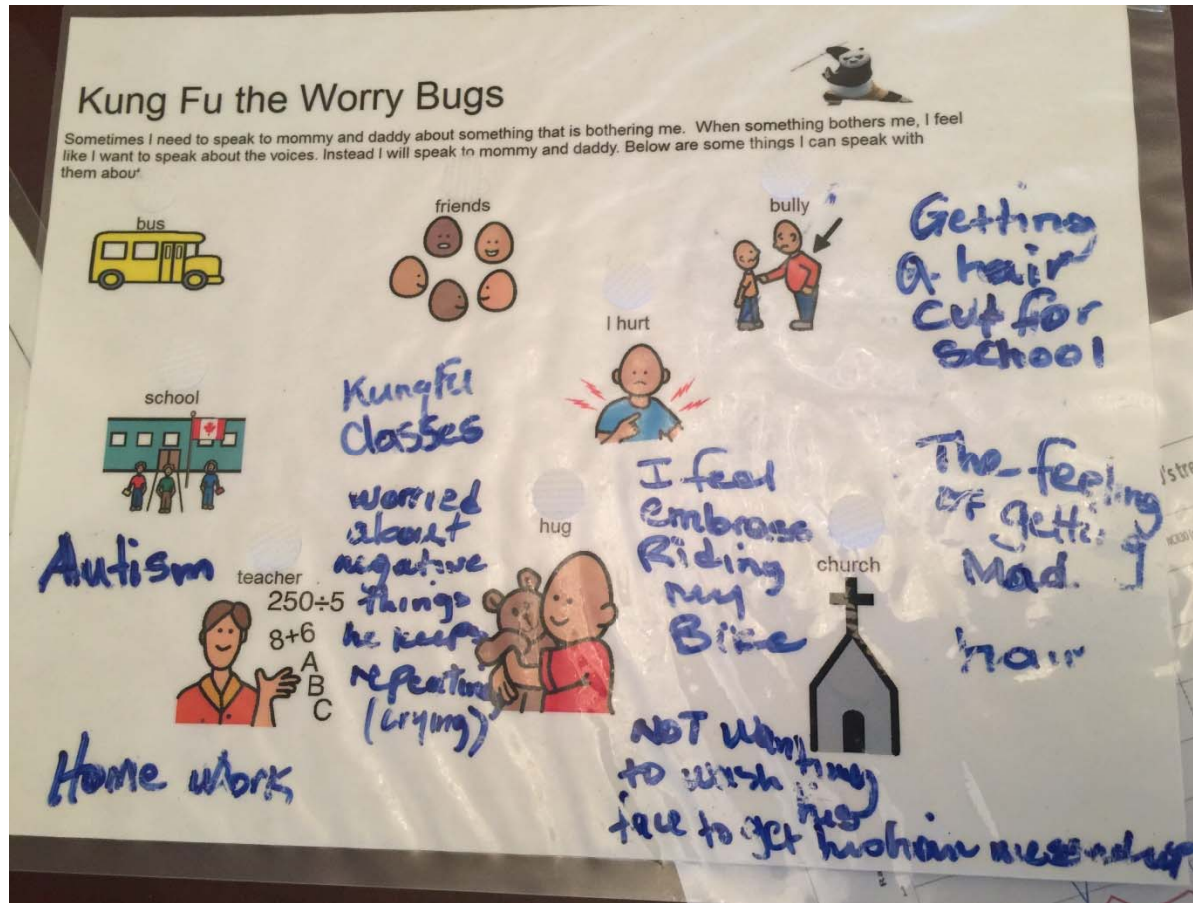
Sumner Place



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

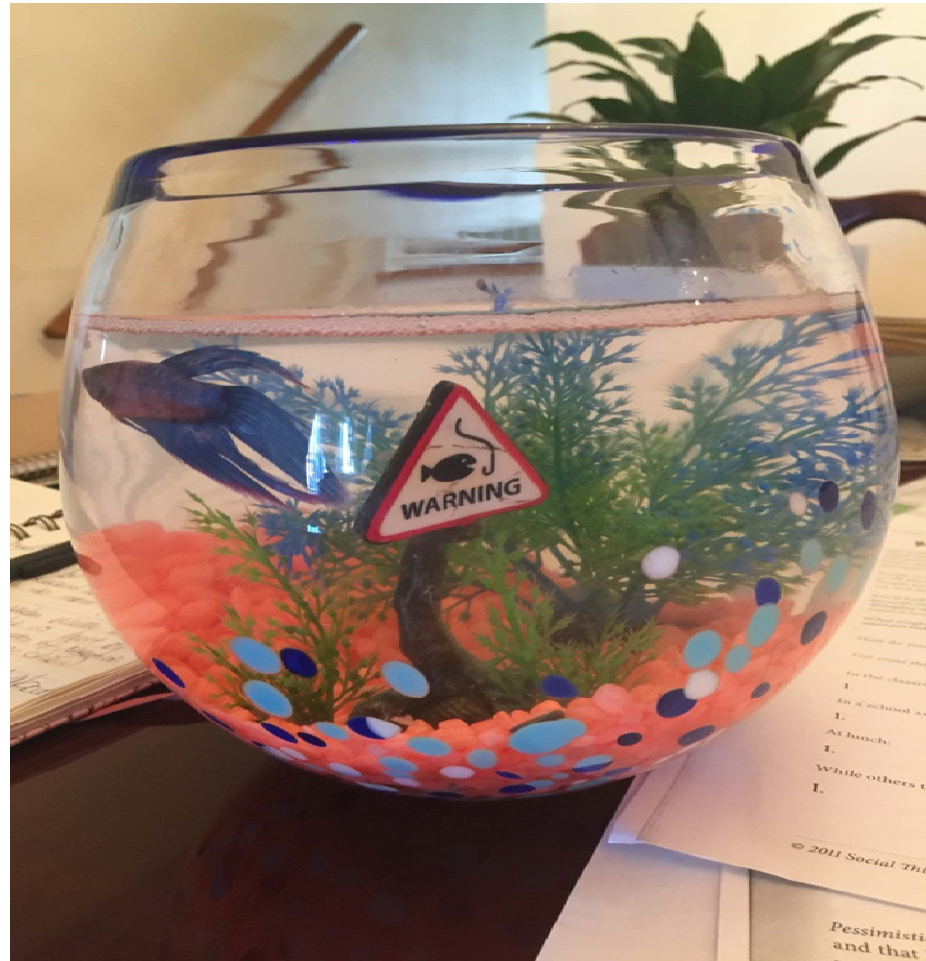
Worry bugs



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

Talk to Your Fish

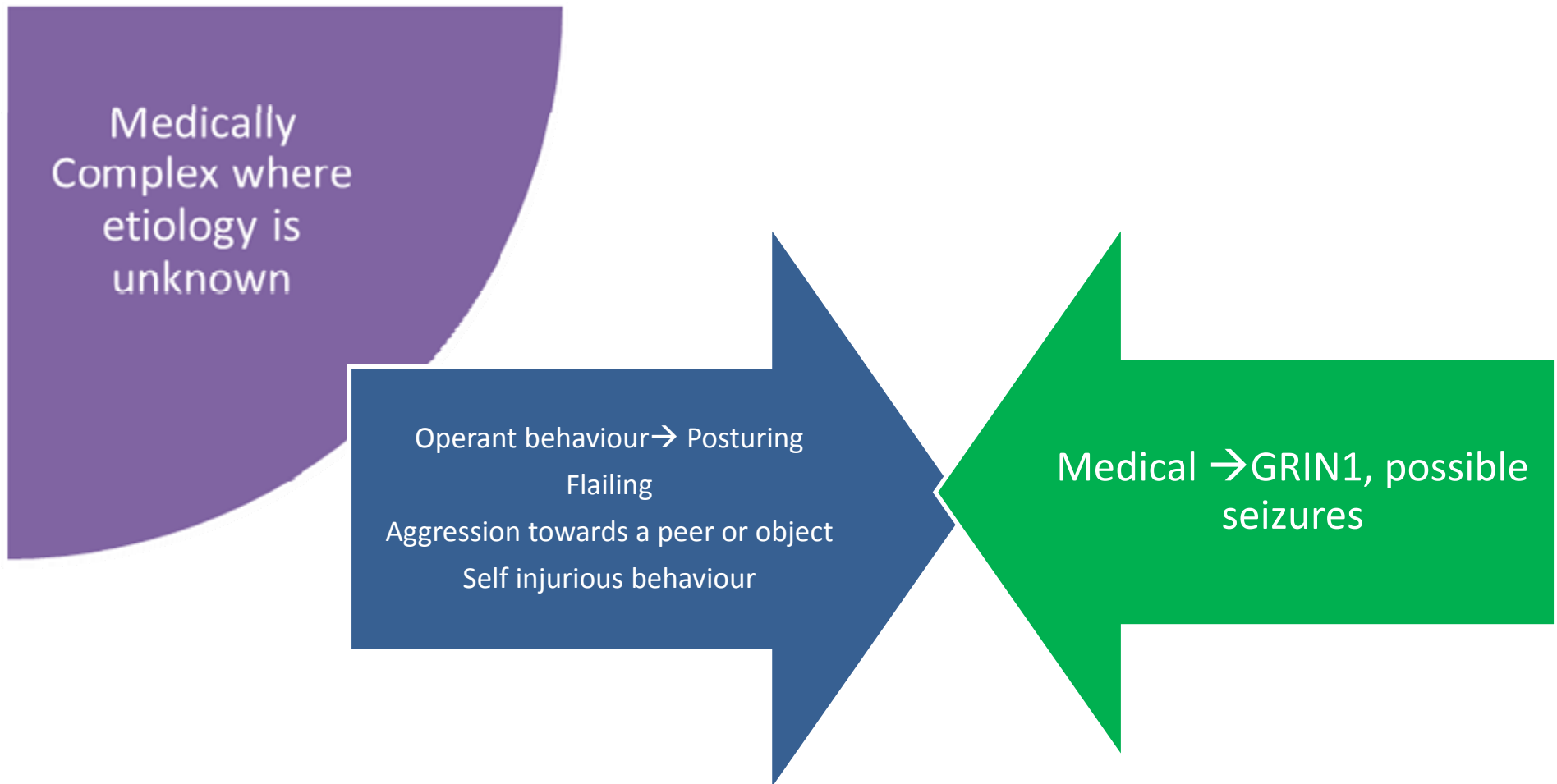


Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

Case #4: GRIN

Glutamate Ionotropic Receptor NMDA Type 1



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

Videos: GRIN



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

Functional Analysis of Disruptive Behaviour in GRIN



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

Tips for a Bio-Behavioral Assessment / Intervention

- **For complex cases, choose the target behaviour/specific symptom and expert clinicians needed for assessment**
 - EX: stereotyped movements:
 - were these seizures ? OR
 - a part of a movement disorder? OR
 - voluntary movements with a behavioural function?
 - Neurologist with movement disorder expertise
- **Comprehensive assessment considering contributing factors in Bio-Behavioural framework**



Collaboration Incentives for Medical Folk

- Medical practitioners should develop, through collaboration an understanding of learning theories, operant conditioning (process by which the immediate consequences of behaviour serve to strengthen or weaken that behaviour over time) intervention strategies
- Establish that a common goal is to improve patient care → this will help to make the collaborative process less frustrating (Granpeesheh et al., 2009)
- Understand the value of working with BCBA



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

Collaboration Reinforcers for Behaviour Analysts

- Behaviour analysts should develop, through collaboration an understanding of biological theory, genetic and medical factors associated with behaviours. As well as common anti-psychotic medications and common side effects
- Behaviour analysts collect objective measures of behaviour → medical practitioners can use these measures as a way to evaluate pharmacological effects
- Increased effort for frequent in-person communication → planned meetings, blocks of times to discuss process and client matters (Granpeesheh et al., 2009)
- Coordination around when ABA and medical treatment will start and stop, how can they be enhanced through collaboration (behaviour + medical = increased effect or should one treatment be tried a time) (Minshwi et al., 2015)



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

Download from
Dreamstime.com

Free! |
Good Source! | Dreamstime.com

Tips for collaboration

- Behaviour analysts should think about packaging and marketing our technology in a way that is accepted and easy to use (Allen et al., 1993)
- Think about synergistic collaboration instead of parallel development
- While there are many professions that make recommendations for behaviour problems. Board Certified Behaviour Analysts are trained in a the science of ABA



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

Because Process is Important !!

Reflection on the collaborative process

- We've discussed content and now it's important to reflect on the interprofessional collaborative process
- In your small group, reflect on:
 - Did everyone who wanted to, have the opportunity to contribute to the discussion
 - Did everyone feel heard ?
 - Were there different roles (facilitating, time keeping, reporting, recording) and how did members take on these roles (volunteer vs voluntold)



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

IPC Competencies

- Collaboration
 - Roles and Responsibilities
 - Teams and Teamwork
 - Self reflection
 - Facilitation and Leadership
- Communication
 - Listening, giving and receiving feedback
 - Sharing information effectively, common language
 - Conflict resolution
- Values/Ethics
 - Relational-centred, diversity sensitive
 - Interdependence, creativity/innovation

<http://www.ipe.utoronto.ca/sites/default/files/2012CoreCompetenciesDiagram.pdf>



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

Reflection

- What is one thing that you could implement from today's workshop?
 - Later this week at work
 - In the near future with additional resources



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

Questions



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

References & Resources

- Abramowitz, J. S., Whiteside, S. P., & Deacon, B. J. (2006). The effectiveness of treatment for pediatric obsessive-compulsive disorder: A meta-analysis. *Behavior Therapy, 36*(1), 55-63.
- Allen, K.D., Barone, V.J., & Kuhn, B.R. (1993) A behavioral prescription for promoting applied behavior analysis within pediatrics. *Journal of Applied Behavior Analysis, 26*, 493-502.
- Antonuccio, D. O., Thomas, M., & Danton, W. G. (1997). A cost-effectiveness analysis of cognitive behavior therapy and fluoxetine (Prozac) in the treatment of depression. *Behavior therapy, 28*(2), 187-210.
- Aman, M.G., Field, C.J., & Bridgman, G.D. (1985). City-wide survey of drug patterns among non institutionalized retarded persons. *Applied Research in Mental Retardation, 5*, 159-171.
- British Psychological Society & The Royal College of Psychiatrists. (2015) “Challenging Behaviour and Learning Disabilities: Prevention and interventions for people with learning disabilities who behaviour challenges” NICE Guideline 11, Methods, evidence and recommendations.



References & Resources

- Brown, K. E., & Mirenda, P. (2006). Contingency mapping use of a novel visual support strategy as an adjunct to functional equivalence training. *Journal of Positive Behavior Interventions, 8*(3), 155-164.
- Chapman, M., Gledhill, P., Jones, P., Burton, M., & Soni S. (2006). The use of psychotropic medication with adults with learning disabilities: survey findings and implications for services. *British Journal of Learning Disabilities, 34* 28-35.
- DeLeon, I. G., Arnold, K. L., Rodriguez-Catter, V., & Uy, M. L. (2003). Covariation between bizarre and nonbizarre speech as a function of the content of verbal attention. *Journal of Applied Behavior Analysis, 36*(1), 101-104.
- Derby, K. M., Wacker, D. P., Peck, S., Sasso, G. A. R. Y., DeRaad, A., Berg, W., & Ulrich, S. (1994). Functional analysis of separate topographies of aberrant behavior. *Journal of Applied Behavior Analysis, 27*(2), 267-278.
- Emerson, 1995, cited in Emerson, E (2001, 2nd edition): *Challenging Behaviour: Analysis and intervention in people with learning disabilities*. Cambridge University Press



References & Resources

- Epstein, L. H., & Masek, B. J. (1978). Behavioral control of medicine compliance. *Journal of applied behavior analysis*, 11(1), 1-9.
- Falkenstein, M.J., Mouton-Odum, S., Mansueto, C.A., Golomb, C.S., Haaqa, D.A. (2016). Comprehensive behavioural treatment of trichotillomania: A treatment development study. *Behavior Modification*, 40, 414-438.
- Fleming, I., Caine, A., Ahmed, S., & Smith, S. (1996). Aspects of the use of psychoactive medication among people with intellectual disabilities who have been resettled from long-stay hospitals into dispersed housing. *Journal of Applied Research In Intellectual Disabilities*. 9(3), 194-205.
- Granpeesheh, D., Tarbox, J., & Dixon, D. R. (2009). Applied behavior analytic interventions for children with autism: a description and review of treatment research. *Ann Clin Psychiatry*, 21(3), 162-173.



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

References & Resources

- Hassiotis, A., Strydom, A., Crawford, M., Hall, I., Omar, R., Vickerstaff, V., ... King, M. (2014). Clinical and cost effectiveness of staff training in Positive Behaviour Support (PBS) for treating challenging behaviour in adults with intellectual disability: a cluster randomised controlled trial. *BMC Psychiatry*, 14, 219. <http://doi.org/10.1186/s12888-014-0219-6>
- Health Council of Canada, (2009). *Teams in Action: Primary Health Care Teams For Canadians*.
- Himle, M.V., Chang, S., Woods, D.W., Pearlman, A., Buzzella, B., Bunaciu, & Piacentini, J.C. (2006). Effect of reinforcement probability and prize size on cocaine and heroin abstinence in prize-based contingency management. *Journal of Applied Behavior Analysis*, 39(4), 429-440.
- Holden, B., Gitlesen, J.P. (2004). Psychotropic medication in adults with mental retardation: prevalence, and prescription practices. *Research in Developmental Disabilities*. 25, 509-521.
- Katzenback, J.R. & Smith, D.K. (2003). *The Wisdom of Teams*: New York: Harper Collins Publishers.
- Kazdin, A. E. (1982). The token economy: A decade later. *Journal of applied behavior analysis*, 15(3), 431-445.



References & Resources

- Lancaster, B. M., LeBlanc, L. A., Carr, J. E., Brenske, S., Peet, M. M., & Culver, S. J. (2004). Functional analysis and treatment of the bizarre speech of dually diagnosed adults. *Journal of Applied Behavior Analysis, 37*(3), 395-399.
- Liberman, R. P., Kopelowicz, A., & Young, A. S. (1995). Biobehavioral treatment and rehabilitation of schizophrenia. *Behavior Therapy, 25*(1), 89-107.
- Minshawi N.F. et al, (2015). Multidisciplinary Assessment and Treatment of Self Injurious Behaviour in Autism Spectrum Disorder and Intellectual Disability: Integration of Psychological and Biological Theory and Approach. *Journal of Autism and Developmental Disorders, 2015*(45):1541-1568.
- Moore, T. C., Robinson, C. C., Coleman, M. B., Cihak, D. F., & Park, Y. (2016). Noncontingent Reinforcement to Improve Classroom Behavior of a Student With Developmental Disability. *Behavior modification, 40*(4), 640-657.



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness

References & Resources

- O'Brien, S., Ross, L. V., & Christophersen, E. R. (1986). Primary encopresis: Evaluation and treatment. *Journal of applied behavior analysis, 19*(2), 137-145.
- Pew-Fetzer Task Force on Advancing Psychosocial Health Education. (2000). *Health professions education and relationship-centred care*. San Francisco, U.S.A.: Pew Health Professions Commission and the Fetzer Institute
- Rahim, N. A. (2013). A Description of Psychotropic Medication Use in Institution and Community Settings in Ontario.
- Sanguino, D. C. (2014). Using Contingency Mapping to Decrease Problem Behavior and Increase Social Communication Skills in Children with Autism.
- Scahill, L., McDougle, C. J., Aman, M. G., Johnson, C., Handen, B., Bearss, K., ... & Stigler, K. A. (2012). Effects of risperidone and parent training on adaptive functioning in children with pervasive developmental disorders and serious behavioral problems. *Journal of the American Academy of Child & Adolescent Psychiatry, 51*(2), 136-146.



Our Values

Collaboration • Accountability • Innovation • Respect • Responsiveness