Michigan Autism Training Videos Presents:

Treating Habit Disorders in Children with Autism and Other Developmental Disabilities

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FOCUS OF PRESENTATION

• Habit disorders: repetitive behaviors that appear to serve no clear purpose, but result in some physical, social, or psychological impairment

• Habit disorders include…
  - Tic Disorders
  - Body-focused repetitive behaviors (BFRBs)
    - Trichotillomania, skin picking, or nail biting
HABIT DISORDERS

• Distinct from self-injurious behavior in intensity and form

• Distinct from stereotypy, which is less variable in topography
WHAT IS A TIC?

“... a sudden, rapid, recurrent, nonrhythmic, stereotyped motor movement or vocalization”
TOURETTE SYNDROME DIAGNOSIS

• Multiple motor and/or one or more vocal tics occurring many times per day

• For 1 year

• ± Distress/Impairment

• Onset is before the age of 18
TICS PHENOMENOLOGY

- Tics involuntary though may be suppressed
- Premonitory urges generally precede tics
  - Children with Autism may have hard time reporting this
- From simple to complex tics (examples)
  - Simple motor: eye blinking
  - Simple vocal: throat clearing
  - Complex motor: touching
  - Complex vocal: words and phrases
HOW MANY PEOPLE HAVE TS?

• Tics in 10-25% school age children

• TS affects an estimated 6 per 1000 school-age children.

• The prevalence of current TS is lower in adults

• Prevalence of tic disorders in autism spectrum is approximately 5%, making it the third most common psychiatric comorbidity in children with ASD
COURSE

• Starts in young children
• Starts with motor tics, then vocal
• Starts in the head and face, then in the body
• Starts with simple tics, then more complex tics
• Peak severity is in early to mid teens
• As children grow into adulthood, tics resolve in about one third of cases.
EFFECTS OF TIC DISORDERS

• Physical damage

• Negative social evaluation
  - Children with motor tics (Friedrich et al., 1996)
  - Adults with DD who exhibit motor or vocal tics (Long et al., in press)
  - Children with TS (Stokes et al., 1991)
BODY FOCUSED REPETITIVE BEHAVIORS

- **TTM**
  - Repetitive hairpulling that results in hair loss

- **Skin Picking**
  - Repetitive picking at skin that results in damage or scarring

- **Nailbiting**
  - Removal of the nails or surrounding skin with one’s own teeth
PREVALENCE OF BFRBS

- 6.4%-chronic nail biting (Teng et al., 2002)

- Prevalence in autism is unclear, but in persons with mental retardation (Long et al., 1998)...
  - Trichotillomania = 5%
  - Nailbiting = 13%

- High co-occurrence between BFRBs (Stein et al., 2008)
EFFECTS OF BFRBS

• Physical damage
  - Scarring, infections, baldness, dental problems, repetitive strain injuries, trichobezoars

• Psychological effects
  - Secondary depression, anxiety, low self-esteem, shame, guilt
    (may not be as big of an issue in autistic populations)
EFFECTS OF BFRBS

• Social effects
  - Negative peer evaluations, avoidance of social situations, failure to advance in jobs, missed work, financial impact
  - Negative social effects above traditional autistic symptoms
COURSE

• TTM Onset
  - “Baby TTM” – onset between ages 18 months – 4 yrs
  - Onset typically between ages 9 – 13
  - Predominately females, especially in clinical samples

• Skin Picking onset in early adolescence

• Nailbiting has earlier onset
ENVIRONMENT-TIC RELATIONSHIPS THAT MAINTAIN TICS

**Antecedents**
- Places/Situations
- Other People
- Activities
- Internal Experiences

**Consequences**
- Positive Reinforcement (e.g., others’ reactions to tics)
- Negative Reinforcement (e.g., escape from activities, relief from aversive unpleasant internal experiences)
CONSEQUENCE EVENTS THAT MAY IMPACT TICS

• Tics can be made more frequent by…
  - Social reactions (e.g., Watson & Sterling, 1998)
    - Parental attention or comfort
    - Peer attention
  - Escape from an aversive situation
  - Reduction of premonitory urge as a result of a tic
TREATMENT IMPLICATIONS FROM MODEL

- Identify antecedents that likely trigger pulling
- Make pulling more difficult
- Manipulate establishing operations of automatic reinforcers
- Heighten awareness of pulling episodes
- Provide strategies to stop behavior when recognized
- Work to reduce internal distress
FUNCTION-BASED INTERVENTIONS

• Purpose is to identify environmental events that be exacerbating or maintaining tics for a given child

• These events are then modified in the service of tic reduction
STEP 1: FUNCTIONAL ASSESSMENT

- Interview patient and parent asking about antecedents and consequences associated with notable exacerbations of different tics
FUNCTIONAL ASSESSMENT

Interview parent/caregiver
Example: Billy comes home from school stressed out and anxious. He goes to the den where his sister is watching TV and begins ticcing loudly. Billy’s Sister gets upset and teases Billy. Billy’s mom enters the room, sends his sister out of the room, comforts Billy, and lets him watch TV while he “gets himself together.” Now Billy tics a lot right after school, especially when his sister is watching television.

In doing a functional analysis, we look for antecedents (things that come before the tic) and consequences (things that may be reinforcing the tic).
FUNCTIONAL ASSESSMENT

Antecedents
  1) Billy’s tics get worse when anxious
  2) Billy tics more in the den

Consequences
  1) Teasing sister is sent to room
  2) Billy gets mom’s love and attention
  3) Billy gets TV to himself

Billy’s tics are reinforced
STEP 2.
DEVELOPING & IMPLEMENTING INTERVENTIONS

- Work with caregiver to develop different strategies to reduce tics given results of assessment

- Keep following points in mind….
  - Minimize or eliminate tic exacerbating situations when possible
  - Remove potentially reinforcing consequences to the tic in tic exacerbating situations
SAMPLE FUNCTION BASED INTERVENTIONS: CONSEQUENCE INTERVENTIONS

• If Social Attention is Endorsed
  - Parents/siblings/teachers/peers/coaches/spouses should...
    - No longer tell the patient to stop the target tic
    - No longer comfort the patient when target tic occurs
    - No longer laugh at the patient when target tic occurs
    - Provide specific instructions to peers not to react to the tics
SAMPLE FUNCTION BASED INTERVENTIONS: CONSEQUENCE INTERVENTIONS

• If Escape Items are Endorsed
  - The patient should not be encouraged to leave the room for mild tics
  - Child must begin homework after 30 min at home, should work until finished
  - Parents/spouse should prompt the use of CR
  - The child should not be sent from the table
  - Practice tic management strategies
HABIT REVERSAL-WHAT IS IT?

- Multi-component treatment (Azrin & Nunn, 1973)
- Used to treat tics
- 3 main components
  - Awareness Training
  - Competing Response Training
  - Social Support
HABIT REVERSAL: AWARENESS TRAINING

• Purpose
  - Help client discriminate episodes of behavior

• Two techniques
  - Response Description
  - Response Detection
RESPONSE DESCRIPTION

- Help patient define the tic in great detail, paying attention to muscular sensations and bodily placement
  - Fill in definition where necessary

- Describe sensations preceding tic

- Describe any bodily signals that suggest tic is imminent

- In nonverbal patients, this can be skipped
RESPONSE DETECTION & EARLY WARNING

- Therapist simulated practice (if necessary)

- Client practice
  - Client tics ➔ client acknowledges ➔ Praise client
  - Client tics ➔ client does not acknowledge ➔ prompt client
  - Continue until at least 80% correct

- Have client simulate tics if he or she is not ticcing during session

- The earlier you can catch this in the tic chain, the better
HABIT REVERSAL: COMPETING RESPONSE TRAINING

• Purpose
  - Give patient a behavior to do that is physically incompatible with the tic

• Three techniques
  - Choosing the Competing Response
  - Therapist simulation of competing response
  - Patient practice the competing response
CHOOSING THE COMPETING RESPONSE

• Three rules when choosing CR
  - Incompatible w/ tic
  - Less socially noticeable/interfering than the tic
  - Patient can do CR for the required duration across multiple situations
THERAPIST SIMULATION
OF COMPETING RESPONSE

- Demonstrate CR to patient
- Demonstrate proper implementation
- May need to shape the patient in doing the CR
- When doing the CR
  - Contingent on tic or warning sign
  - Held for 1 min
  - Can use shorter duration if necessary
PATIENT PRACTICES COMPETING RESPONSE

• Have patient demonstrate CR and provide corrective feedback if necessary

• Have patient practice implementing CR contingent on actual tic (or simulated tic if necessary)

• Have patient practice implementing CR contingent on links in the tic chain

• Therapist should prompt and praise as appropriate

• May use tangible reinforcers in persons with more severe disabilities
HABIT REVERSAL: SOCIAL SUPPORT

• Purpose
  - Reinforce and prompt use of competing response

• Caregivers prompt use of CR
  - May have to use physical prompts

• Caregivers praise correct use of CR

• Caregivers may also provide tangibles or other secondary reinforcers for correct use of CR
MOTIVATIONAL STRATEGIES

• Token Economy or other Reward Systems
  - Done to enhance compliance with CR
  - Can also be done to reward tic reduction, but preferable to use DRA rather than DRO
Efficacy of Comprehensive Behavioral Treatment for Tics

Behavior Therapy for Children With Tourette Disorder: A Randomized Controlled Trial

John Piacentini; Douglas W. Woods; Lawrence Scahill; et al.


http://jama.ama-assn.org/cgi/content/full/303/19/1929

Supported by NIMH R01 MH070802 (Piacentini)
YGTSS-TOTAL TIC SCORE (ADJUSTED MEANS) ACUTE PHASE COMPARISON

*CBIT<PST, p<.01 - 10 week Effect Size d=.68
Medication status did not moderate outcome
CGI-IMPROVEMENT ACUTE PHASE COMPARISON

% Responders at 10 Weeks

*CBIT > PST, p < .0001
Medication status did not moderate outcome
HABIT REVERSAL TRAINING

• Increase awareness of pulling behaviors

• Engage in competing behavior contingent on the earliest point in the pulling chain

• Social Support

• Be very direct and rule-specific

• Consider utilizing tangibles for rewarding use of CR, as normal social reinforcers may not work

• HRT originally developed based on work in this population
STIMULUS CONTROL/ FUNCTION BASED TECHNIQUES

• Identify high-risk situation and conduct functional assessment

• Supplementary Habit Blockers
  - Discard implements, eyeglasses, synthetic nails

• Stimulation replacement
  - Scalp stimulation/finger activities/koosh balls/loose threads

• Stimulation Reduction
  - Relaxation, exercise
STIMULUS CONTROL/
FUNCTION BASED TECHNIQUES

• Environmental Changes
  - “high risk” activities in public, bathroom scheduling

• Elimination of socially reinforcing consequences

• Reminders
  Notes, signs, symbols to engage in HRT
RESOURCE WEBSITES

• www.tsa-usa.org
  - Tic Disorder Information

• www.trich.org
  - BFRB Information
  - Trichotilamania Learning Center

• Self-Help Sites
  www.stoppulling.com
  www.stoppicking.com
  www.tichelper.com