

# Maryland Behavioral Health Integration in Pediatric Primary Care

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## Practical Considerations for Identifying Tics in Primary Care

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Maryland BHIPP Resilience Break Presentation

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# Disclosures

- Consultant for Emalex Biosciences
- Consultant for Noema Pharma

# Objectives

- Recognize and identify tics in pediatric patients
- Describe brief rating scales to assess for tics
- Understand evidence-based treatment of tics in pediatric patients

# Tics and Tourette Syndrome

- Tics are common (Kurlan et al. 2001, CDC, 2024 )
  - Childhood onset
  - 20% of children have tics
  - 1-2% of children meet criteria for a persistent tic disorder or Tourette's Disorder
- Tic disorder diagnostic criteria
  - Motor tics only → Persistent Motor Tic Disorder
  - Vocal tics only → Persistent Vocal Tic Disorder
  - Motor tics and at least one vocal tic →....
    - Tourette's Disorder / Tourette Syndrome



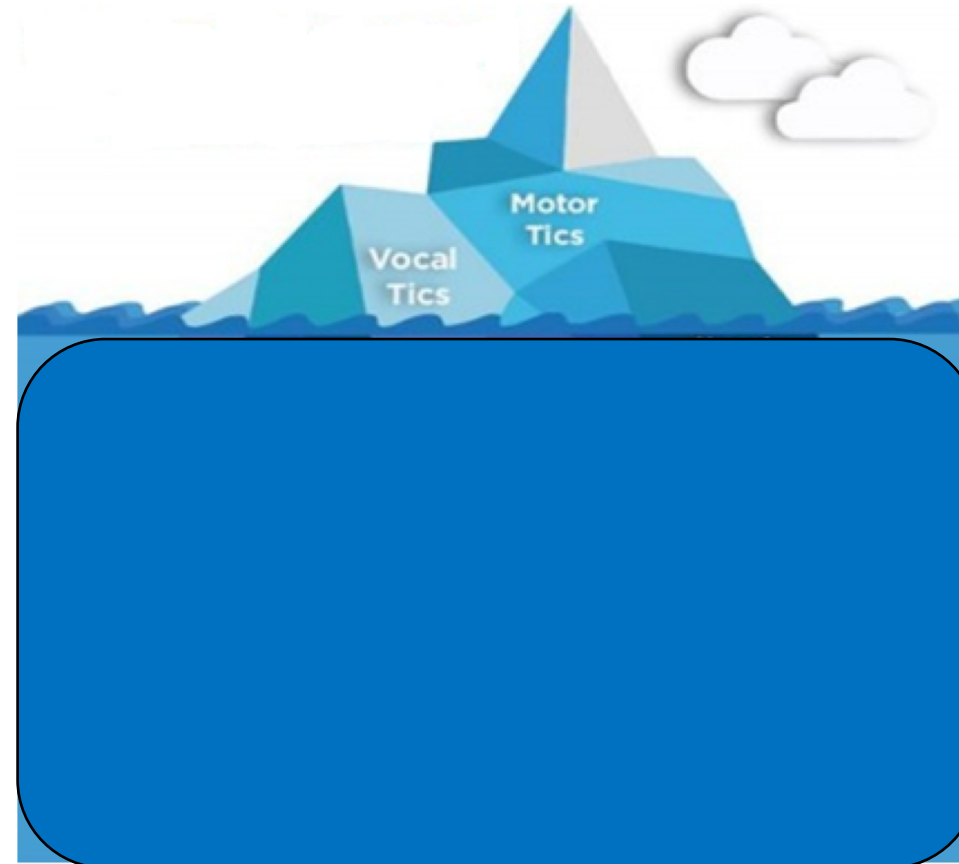
# Tics and Tourette Syndrome

- Symptom presentation (Bloch & Leckman, 2009)
  - Rostro-caudal development
  - Tic types (McGuire et al. 2013; McGuire et al. 2015)
    - Motor tics
      - Eye blinking, eye movements, face movements, head movements, and shoulder movements
    - Phonic / vocal tics
      - Sniffing / snorting, throat clearing, grunting, coughing, animal noises, and atypical breathing
  - Coprophenomena
    - ~10% of individuals with TS



# Tics and Tourette Syndrome

- Comorbid challenges
  - Inattention / hyperactivity
  - Impulsivity
  - Obsessive-compulsive symptoms
  - Fear and anxiety
  - Irritability and frustration
  - Disruptive behaviors
  - Suicidal thoughts / behaviors



# Tics and Tourette Syndrome

- Premonitory urges / sensory phenomena
- Functional impairment
- Quality of life
- Developmental Trajectory (Reagan, Myers, & McGuire, 2022)



# Evidence-Based Assessment

- Diagnostic interview
  - **Symptoms:** Motor, Vocal, or Motor + Vocal
  - **Duration:** Shorter / Longer than 1 year
  - **Onset:** Did tics start prior to 18 years old
  - Rule out other conditions....



# Evidence-Based Assessment

- Clinician-rated assessment (Leckman et al. 1989; McGuire et al. 2018)
  - Yale Global Tic Severity Scale (YGTSS-R)
- Self-report and parent-report ratings
  - Parent Tic Questionnaire (PTQ)
  - Adolescent / Adult Tic Questionnaire (ATQ)

# Evidence-Based Assessment

- Brief screening tools for tics and TS
  - Motor or Vocal Inventory of Tics (MOVeIT)  
(Adams et al. 2023)
  - Description of Tic Symptoms (DoTS)  
(Bitsko et al. 2023)
  - Motor tic, Obsession and compulsion, and Vocal tic Evaluation Survey (MOVES)  
(Lewin et al. 2023; Vermillion et al. 2023)
    - 6-item version

# Practice Parameters & Treatment Guidelines

- Conduct evidence-based assessment of tics

European clinical guidelines for Tourette Syndrome and other tic disorders. Part III: behavioural and psychosocial interventions

Cara Verheulen · Jolande van de Griendt ·  
Andreas Janz · Sara Murphy ·  
the ESSTS Guidelines Group

**Canadian Guidelines for the Evidence-Based Treatment  
of Tic Disorders: Pharmacotherapy**

Tamara Pringsheim, MD, MSc<sup>1</sup>; Asif Doja, MD, MEd<sup>2</sup>; Daniel Gorman, MD<sup>3</sup>;  
Duncan McKinlay, PhD<sup>4</sup>; Lundy Day, BSc<sup>5</sup>; Lori Billingham, MD, MSc<sup>6</sup>;  
Alan Carroll, DPM, MFRCPS<sup>7</sup>; Yves Dion, MD<sup>8</sup>; Sandra Luscombe, MD<sup>9</sup>;  
Thomas Steeves, MD, MSc<sup>10</sup>; Paul Sandor, MD, FRCPC (Psych)<sup>11</sup>

- Psychoeducation for mild tics / tic severity

- Behavior therapy for moderate tics / tic severity

**Practice Parameter for the Assessment and  
Treatment of Children and Adolescents With  
Tic Disorders**

Allyce K. Murphy, MD, Adam J. Lerner, MD, Eric A. Storch, PhD, Sandra Steingard, MD,  
and the American Academy of Child and Adolescent Psychiatry (AACAP)  
Committee on Quality Issues (CQI)

**Practice guideline recommendations summary:  
Treatment of tics in people with Tourette  
syndrome and chronic tic disorders**

Tamara Pringsheim, MD, MSc, Michael S. Okun, MD, Kirsten Müller-Vahl, MD, Davide Martino, MD, PhD,  
Joseph Jankovic, MD, Andrea E. Cavanna, MD, PhD, Douglas W. Woods, PhD, Michael Robinson,  
Elizabeth Jarvie, MSW, LCSW, Veit Roessner, MD, Maryam Oskoui, MD, Yolanda Holler-Managan, MD, and  
John Piacentini, PhD

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- Pharmacotherapy for severe tics / tic severity

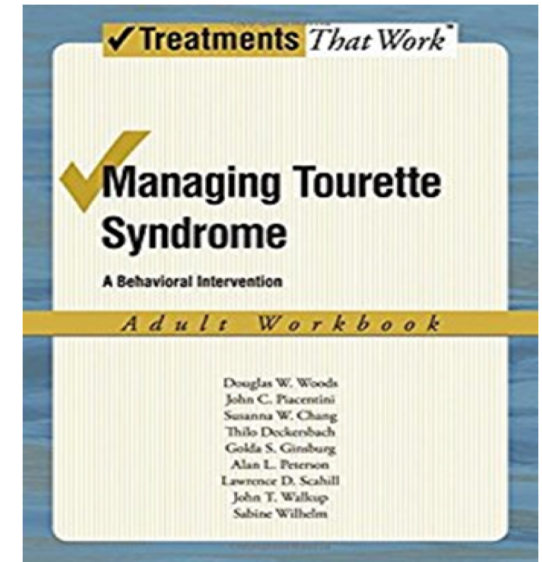
# Evidence-Based Treatment

- Psychoeducation about TS
  - Etiology
  - Clinical course
  - Comorbidity
  - Evidence-based treatment
    - When and what are important



# Evidence-Based Treatment

- Behavior Therapy for TS
  - Habit reversal training (HRT)
    - Psychoeducation
    - Awareness training
    - Competing response training
  - Comprehensive Behavioral Intervention for Tics (CBIT)
    - Core HRT components
    - Relaxation Training
    - Function-based assessment / intervention



# Evidence-Based Treatment

- Therapeutic outcomes from behavior therapy
  - Large treatment effects (McGuire et al. 2014)
    - Effects = .67 - .94
  - Treatment response rates (Piacentini et al. 2010; Wilhelm et al. 2012)
    - 38% - 53% experience a treatment response
  - Remission of individual tic symptoms (McGuire et al. 2015)

# Evidence-Based Treatment

- Factors that influence treatment outcomes

- Co-occurring ADHD

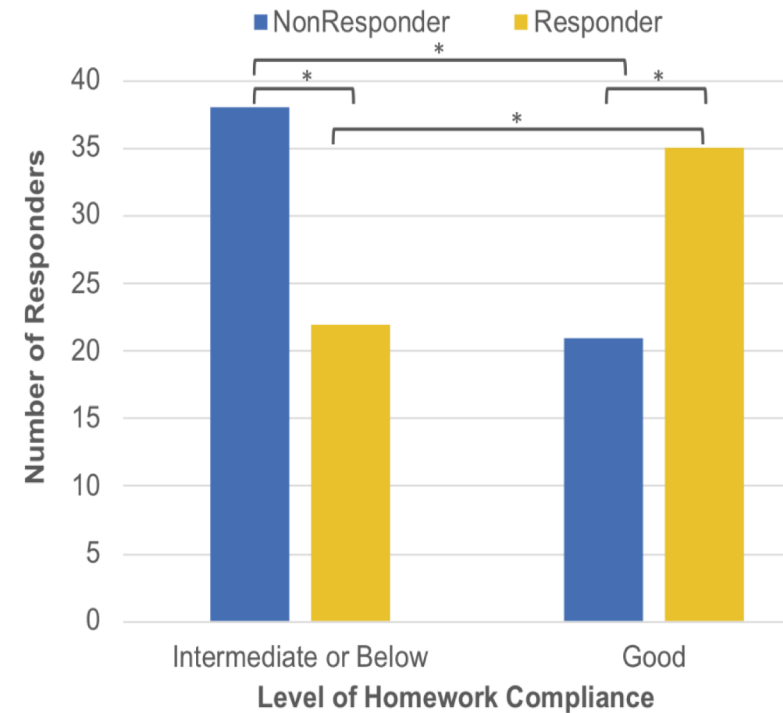
(McGuire et al. 2014)

- Tic medication

(Sukhodolsky et al. 2017)

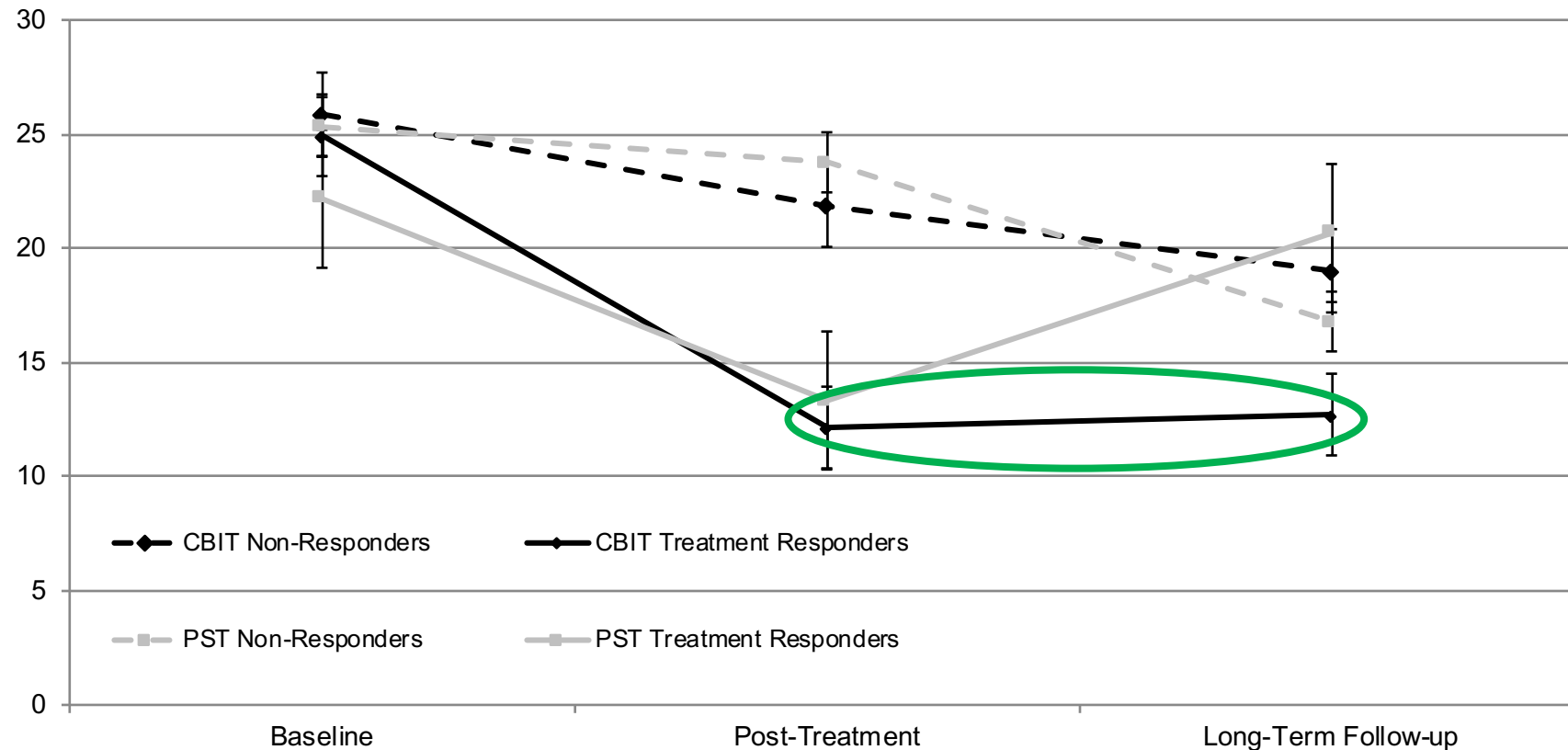
- Homework adherence

(Essoe et al. 2021)



# Evidence-Based Treatment

- Long-term outcomes from behavior therapy



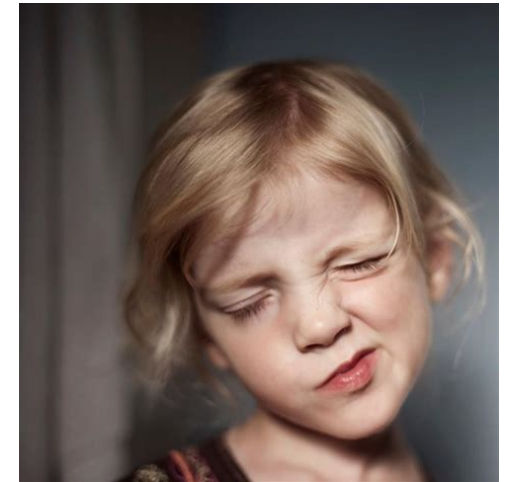


# Evidence-Based Treatment

- Pharmacotherapy (Augustine & Singer, 2019)
  - Antipsychotic medications
    - Haloperidol, pimozide, and aripiprazole
    - Risperidone, ziprasidone
  - Alpha-2 agonists
    - Guanfacine and clonidine
- Therapeutic effects (Weissman et al. 2012)
  - Alpha-2 agonist effect size = .31\*
  - Antipsychotic effect size = .58

# Summary

- Developmental trajectory of tics for patients with TS
- Evidence-based Interventions positively alter that trajectory
- Early identification of tics in primary care plays an critical role
- Collaborative effort between providers and clinical researchers
  - Listen and learn from PCPs to receive feedback
  - Turn feedback and insights into helpful tools



# Resources

- CDC
  - <https://www.cdc.gov/ncbddd/tourette/data.html>
  - <https://www.cdc.gov/ncbddd/tourette/stories.html>
- Tourette Association of America (TAA)
  - <https://tourette.org/>
- Johns Hopkins Medicine / Kennedy Krieger Institute
  - [www.jhucoach.org](http://www.jhucoach.org)
  - <https://www.kennedykrieger.org/patient-care/centers-and-programs/tourette-syndrome-center-of-excellence>

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- Questions...
- Comments...
- Personal feelings

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