

Treating Encopresis: A Toileting Challenge with an Interdisciplinary Approach



Children'sSM
Healthcare of Atlanta



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Disclosures

- Organization for Autism Research Applied Research: *An Interdisciplinary Approach to the Treatment of Encopresis in Children with Autism Spectrum Disorders*
- DoD CDMRP AR160059: *A Multidisciplinary Intervention for Encopresis in Children With ASD*

Background

- Typically developing children achieve continence by 2-4 years of age¹
- Children diagnosed with autism often achieve continence later in life or never at all²
 - As many as 59% are not bladder or bowel trained by 3.5 years of age



Impact of Incontinence

- Increased stress experienced by caregivers¹
- Negative impact on hygiene, physical comfort, and independence^{2,1}
- Social stigma limits exposure to important life experiences⁴
- Increased economic burden^{2,3}
- Without effective treatment, problems generally persist into adulthood⁵



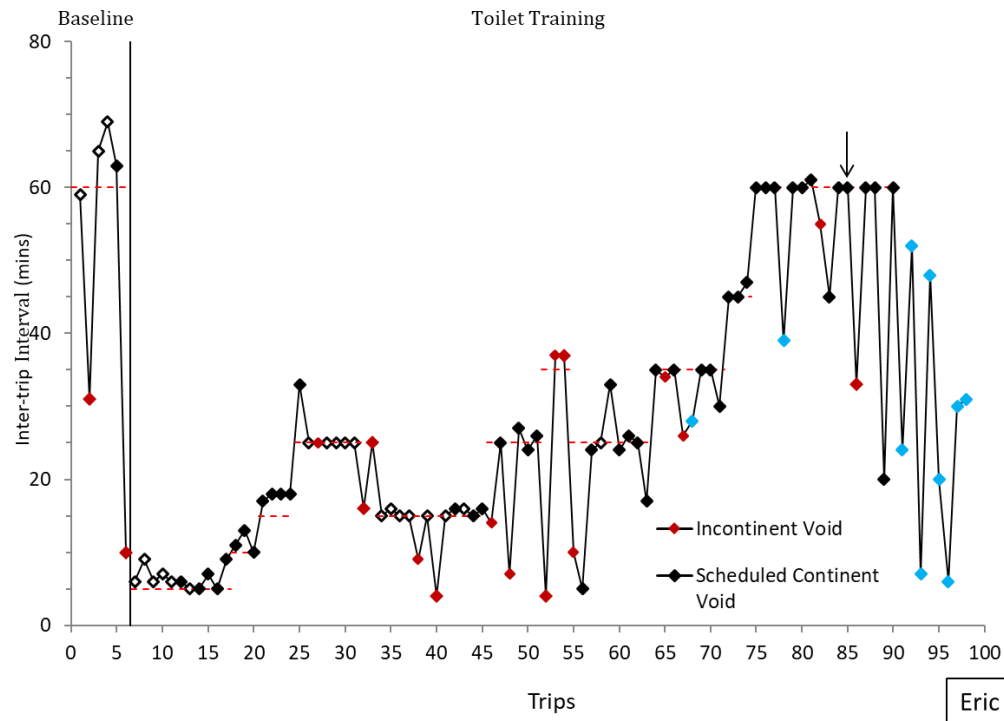
¹Macias, et al., 2006 ; ²Cicero & Pfadt, 2002; ³Sells-Love, et al., 2002;

⁴Demsey, 2005; ⁵Bennings, et al., 2004

Behavioral Treatment of Enuresis

- Progressive Sit Schedule^{1,2}

Level	Duration of Sit	Inter-trip Interval
1.	10 min	5 min
2.	10 min	10 min
3.	5 min	15 min
4.	5 min	25 min
5.	5 min	35 min
6.	5 min	45 min
7.	5 min	60 min
8.	5 min	90 min
9.	5 min	2 hours



- Fluid Loading^{1,2}
- Differential Reinforcement for continent voids (Praise + Preferred Item)^{1,2}
- Use of underwear
- Communication Training (to establish self-initiation)

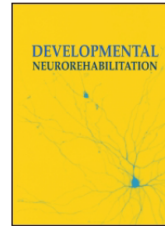
¹Azrin and Foxx, 1971; ²Leblanc, et. al., 2005

Outcomes of Enuresis Training

Consecutive case-series analysis¹

- Reviewed all cases over a 2-year period
- n = 37
- History of incontinence
 - Average % continence prior to treatment = 15%
- Average age= 7.86 years (range, 3-20)

ASD	36
Down Syndrome	1
ADHD	1
Cerebral Palsy	3
CHARGE Syndrome	1



Developmental Neurorehabilitation

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A consecutive case series analysis of a behavioral intervention for enuresis in children with developmental disabilities

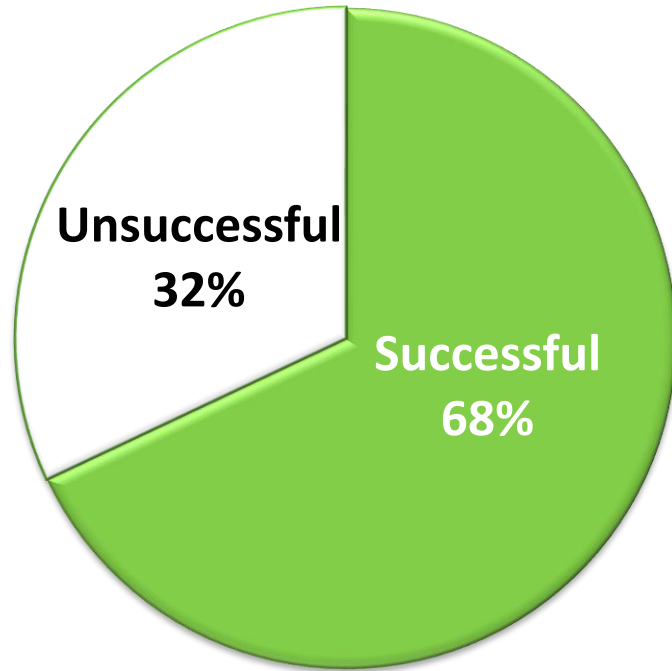
Joanna Lomas Mevers, Colin Muething, Nathan A. Call, Mindy Scheithauer & Shannon Hewett

% Continence at Baseline	% Continence on the Last Day of Treatment	T-test
15.17%	65.84%	($t(36)=9.48$ $p<.001$)*

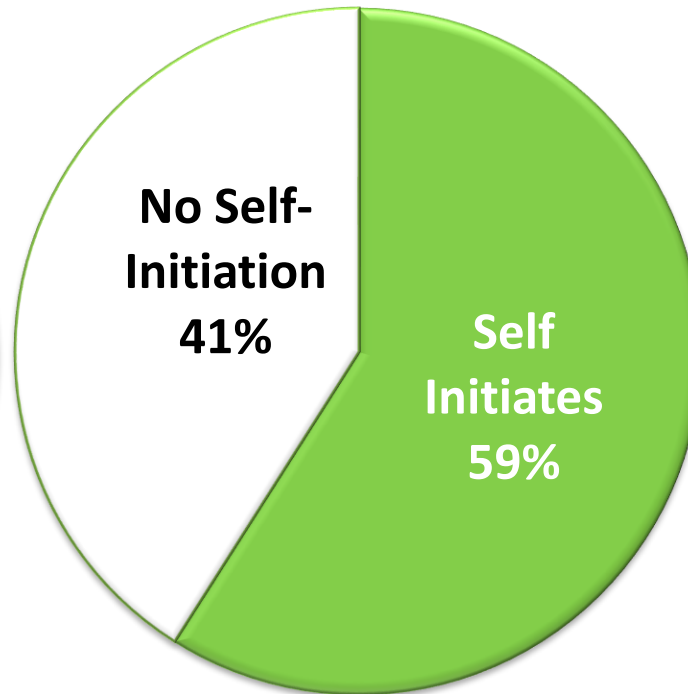
¹ Lomas Mevers et al., 2018

Urine Continence at Follow-up

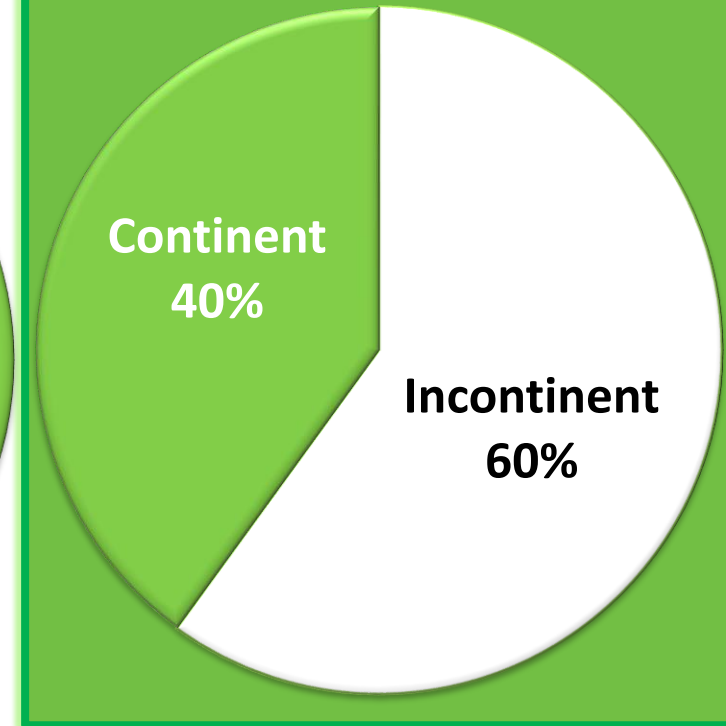
Urine Continence at Follow-up
(Success \leq 1 accidents/day)



Self-initiation at Follow-up



Bowel Continence at Follow-up



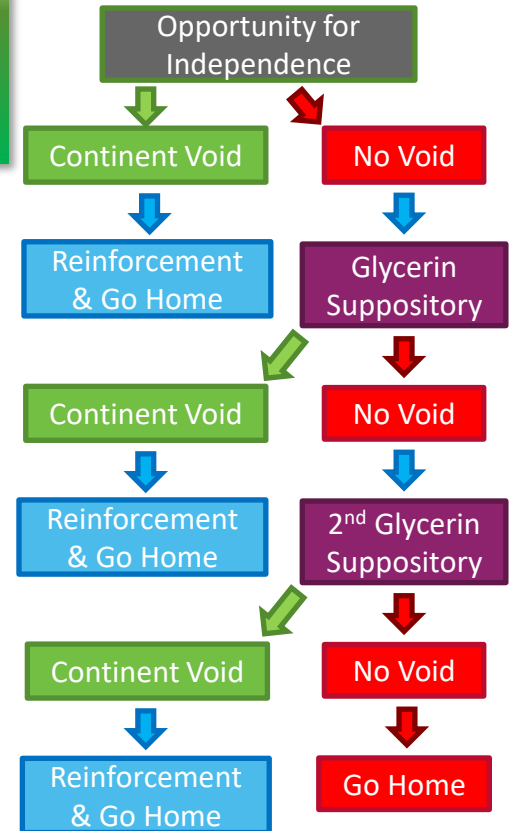
n = 34

Multidisciplinary Intervention for Encopresis (MIE)

1

Screening by Pediatric GI to rule out conditions that may prevent bowel continence (e.g., spina bifida); clear use of suppositories; and address constipation (if any) medically

- | | | |
|---|-------------------------------|--|
| 2 | <i>Preference Assessments</i> | Identify preferred items to use as reinforcers for continent BMs. |
| 3 | <i>Rules and Visuals</i> | Explain and show the “rules” of what treatment will involve to the child. |
| 4 | <i>Antecedent Changes</i> | Make the toileting environment comfortable for the child. |
| 5 | <i>Scheduled Sits</i> | Have the child sit on the toilet for up to 30 min. Reinforce* continent BM. |
| 6 | <i>Suppository</i> | Administer a glycerin suppository, if no BM occurs in the first scheduled sit. |
| 7 | <i>Second Scheduled Sit</i> | Have the child sit on the toilet for up to 30 min. Reinforce* continent BM. |
| 8 | <i>Suppository Fading</i> | Reduce the suppository by 50% every two consecutive days with a continent BM. |
| 9 | <i>Parent Training</i> | Behavioral skills training on scheduled sits, suppository administration, and fading |



Use of Suppositories

- Over the counter glycerin
 - Switched to bisacodyl if a child had no bowel movements in clinic or at home for > 2 days
- Many caregivers reported prior history with suppositories to address constipation
- Discontinued attempt if there was any indication of more than minimal discomfort
- Did not attempt systematic desensitization if there was resistance



RCT of MIE


- n = 20
 - 10 MIE
 - 10 waitlist control
- History of incontinence (average % continence at Baseline = 13%)
- Diagnosis: ASD
- Age = 8 (range, 5-16)
- Gender = 5 female, 15 male
- Follow-up conducted 1 month post treatment

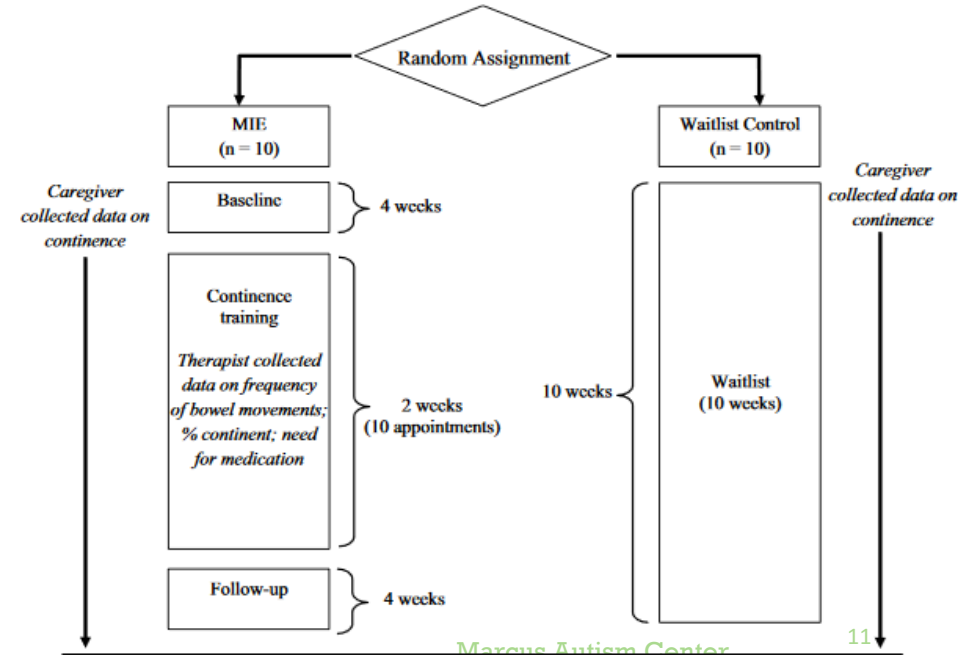
Journal of Autism and Developmental Disorders (2020) 50:757–765
<https://doi.org/10.1007/s10803-019-04305-5>

ORIGINAL PAPER



A Pilot Randomized Clinical Trial of a Multidisciplinary Intervention for Encopresis in Children with Autism Spectrum Disorder

Joanna Lomas Mevers^{1,2,3}  · Nathan A. Call^{1,2,3} · Kristina R. Gerencser^{1,2,3} · Mindy Scheithauer^{1,2,3} · Sarah J. Miller⁴ · Colin Muething^{1,2,3} · Shannon Hewett² · Courtney McCracken¹ · Lawrence Scahill¹ · Barbara O. McElhanon^{1,3}



RCT of MIE: Results

Definition of Continence: 5 of 7 consecutive days with a continent bowel movement and no incontinent bowel movements for 1 out of those 7 days

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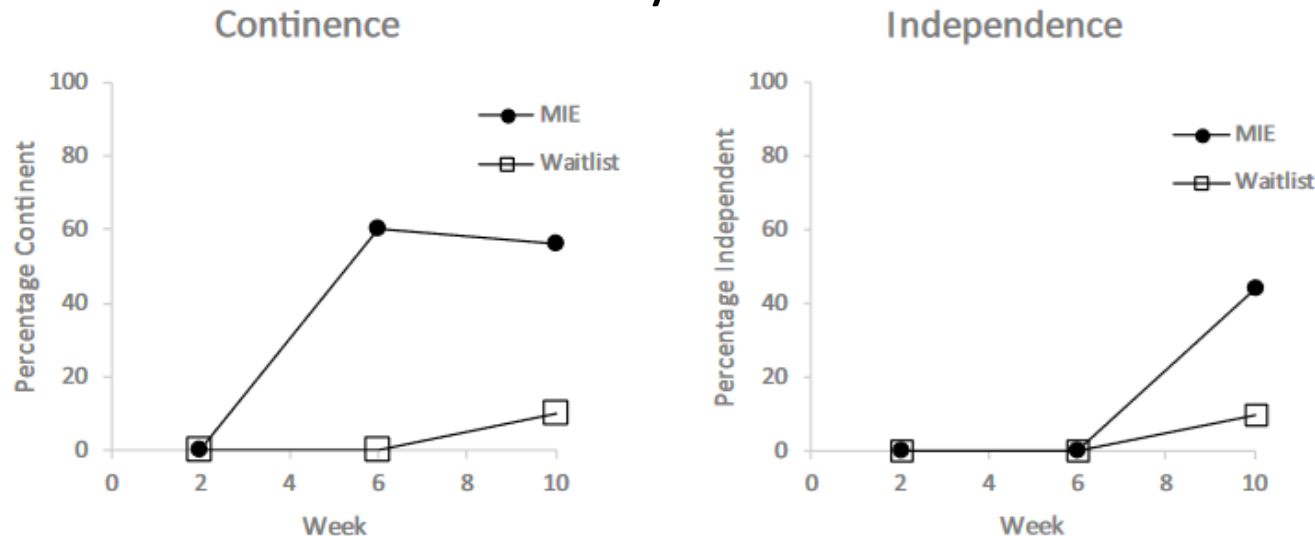


Fig. 2 Continent/Independent defined as 60% of days during a 7 day period (i.e., ≥ 5 out of 7) with no incontinent/dependent bowel movements more than 15% of days (i.e., 1 out of 7)

Larger RCT (DoD Clinical Trial Award)

- **n = 91** (age 5-12) with autism and encopresis
- 8-week RCT comparing MIE to treatment as usual
- TAU = medical treatment of constipation and consultation with a behavioral clinician with expertise in toileting



Outcome Measure	MIE	TAU	
Continence at week 8	36%	11%	(p = 0.006)
CGI-I Positive Response	45%	16%	(p = 0.003)
Caregiver Strain Questionnaire	↓.22	↑.01	(p = 0.001)

Overall Summary

- Most participants attain urine continence (65%) via behavioral intervention
- MIE improved encopresis compared to waitlist and treatment as usual, and improved caregiver stress
- Most participants maintained continence at follow-up
 - 68% (Enuresis)
 - 56% (Encopresis)
- Some enuresis participants developed bowel continence (40%) and self-initiation (59%) skills without directly targeting those skills



What's Next (NICHD R01)



- Extend MIE to a **caregiver-mediated** delivered via **telehealth**
- Children with both enuresis and encopresis will receive best-practice treatment for enuresis and be monitored to evaluate **the impact of successful enuresis treatment on bowel continence**
- Participants who remain encopretic will proceed to an **RCT comparing CM-MIE to a Parent Education**



Questions?



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