

# Early CGM use and mealtime behavior in parents of young children recently diagnosed with type 1 diabetes (T1D)

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**INTRODUCTION**

- Managing nutritional intake is a core component of type 1 diabetes (T1D) management.
- Early childhood developmental issues at meals may be potential risk factors for food-related behavior and disordered eating behavior.
- Among parents of young children recently diagnosed with T1D, we aimed to identify:
  - Which parents struggled the most at mealtime
  - Which problematic parent mealtime behaviors occurred most often

**METHODS**

- Participants: 157 parents of children (ages 1-6) within 2 months post T1D diagnosis
- Baseline surveys in a behavioral RCT included the Behavioral Pediatric Feeding Assessment Scale (BPFAS)
  - Scored on 5-point scale (Never to Always)
  - Parent Frequency= how often parents use ineffective behavior management strategies at meals
  - Parent Problem= how concerned the parent is about the behavior

**RESULTS**

- Problem parent mealtime behaviors were moderately frequent (M=18.84, SD= 4.95) and problematic (M=1.26, SD=2.16)
- Parents of children using CGM at baseline reported more frequent ineffective mealtime behaviors and rated them as more problematic

**DISCUSSION**

- Parents of young children often report frustration, worry, coaxing their child, and preparing alternate foods shortly after T1D diagnosis.
- Aspects of CGM may contribute to mealtime stress or parents that struggle with managing mealtimes may seek out CGM sooner

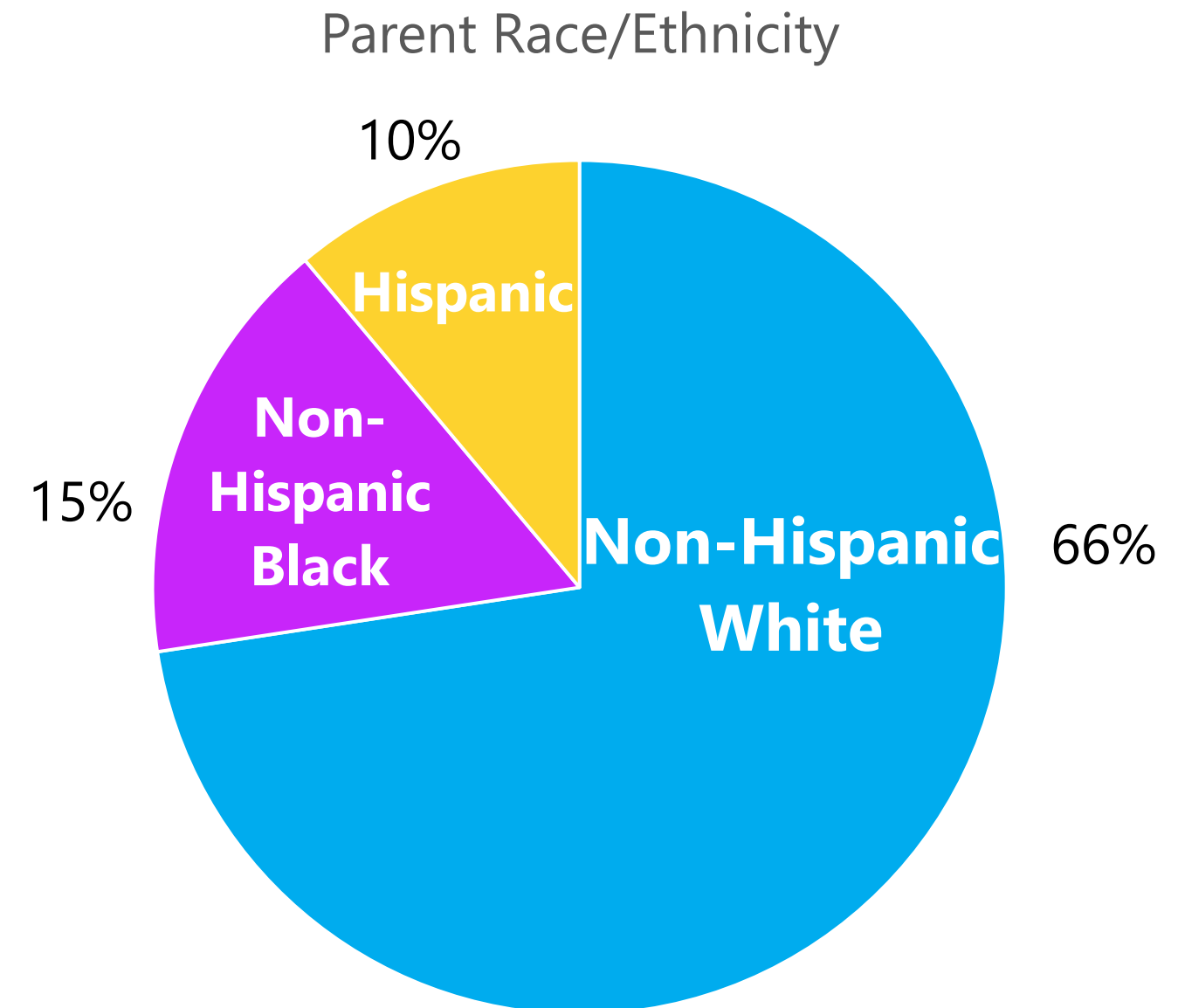
Challenges at mealtimes were often present soon after a new T1D diagnosis, and parents often reported coaxing their child to eat or “short-order cooking”.

Parents of young children using continuous glucose monitoring (CGM) reported more mealtime problems than those not using CGM.

**TABLES AND FIGURES**

*Participant Characteristics*

n=157	%
Parent sex, female	90%
Parent employment, Full-time	57%
Child sex, female	55%
CGM use at baseline	20%
Child insurance status, public insurance	27%



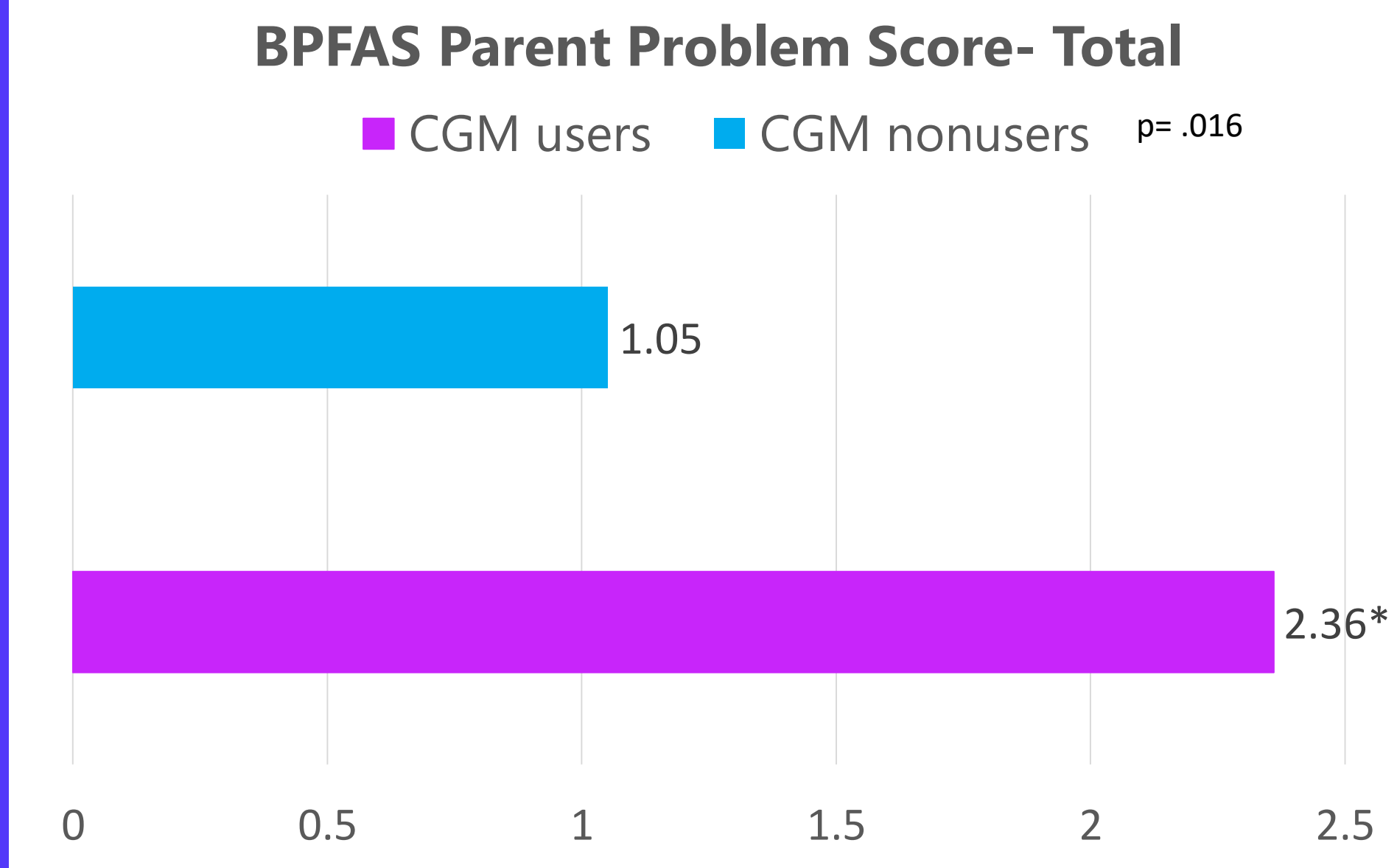
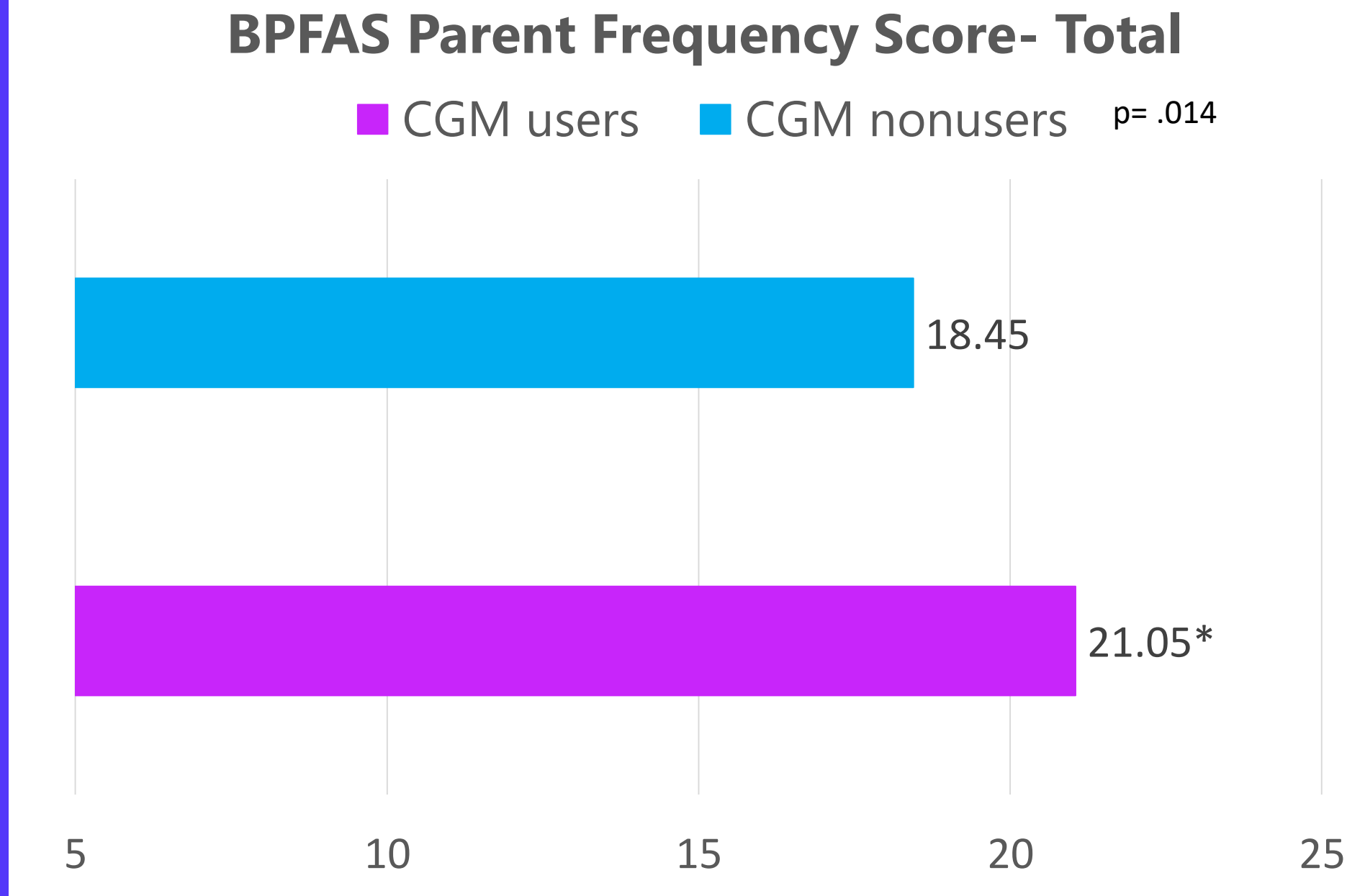
*BPFAS Most Endorsed Items*

- Mode= 3 or “Sometimes” for all items listed

Item	Mean (SD)
“If my child does not like what is served, I make something else”	3.2 (1.2)
“I get frustrated or anxious when feeding my child”	2.4 (1.0)
“I coax my child to get him/her to take a bite”	2.4 (1.1)

*BPFAS Scaled Scores*

- Clinical cutoffs: Parent Frequency Score= 20 and Parent Problem Score=2

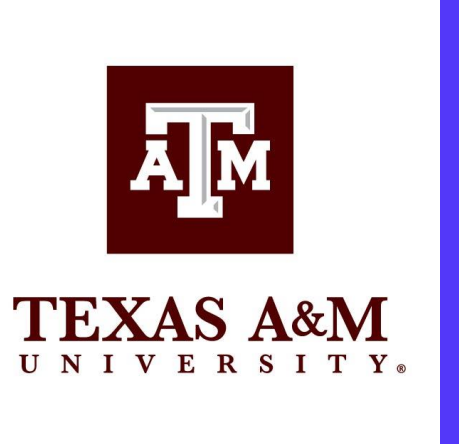


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Poster available at:  
<https://tinyurl.com/GonynorSPPAC2020>

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**Introduction:** Research describing the developmental trajectories of disordered eating behaviors (DEB) in early childhood and shortly after T1D diagnosis is rare and could inform efforts to prevent maladaptive eating behaviors later in life. Family/child demographics have been associated with differences in parent mealtime behaviors, which may be early precursors of DEB. We sought to compare clinical and demographic factors in parent mealtime behaviors within two months post-diagnosis, with non-white mothers of girl CGM-nonusers hypothesized to report the highest frequency and perceptions of problem mealtime behaviors.

**Methods:** Participants were 157 parents of young children (age 1-6) newly diagnosed with T1D, enrolled in a behavioral RCT. At baseline, parents' mealtime behavior was measured using the Behavioral Pediatric Feeding Assessment Scale (BPFAS) Parent Frequency and Problem scales. Clinical/demographic variables included parent/child sex, parent race/ethnicity, and continuous glucose monitor (CGM) use. T-tests were conducted to determine differences in scores across clinical/demographic variables.

**Results:** Problem parent mealtime behaviors were moderately frequent ( $m=18.84$ ,  $SD=4.95$ ) and highly problematic ( $m=1.26$ ,  $SD=2.16$ ). There was a significant difference in problem mealtime behaviors between parents using CGM (19%) and not using CGM (81%): BPFAS-Parent Frequency scores ( $t(153)=-2.61$ ,  $p=.01$ ) and BPFAS-Parent Problem scores ( $t(153)=-2.65$ ,  $p<.05$ ) were higher in CGM-users (Frequency:  $m=21.05$ ,  $SD=5.28$ ; Problem:  $m=2.36$ ,  $SD=2.52$ ) than nonusers (Frequency:  $m=18.45$ ,  $SD=4.80$ ; Problem:  $m=1.05$ ,  $SD=2.00$ ). BPFAS scores did not differ across other clinical/demographic variables.

**Conclusions:** Shortly following T1D diagnosis, many parents struggle with their parenting behaviors at mealtimes. Contrary to hypotheses, CGM-users reported the most problem mealtime behaviors, suggesting some aspects of using CGM may increase mealtime stress, or parents who are struggling more may seek technologies like CGM sooner post-diagnosis. Future research on characteristics of families with more mealtime-related difficulties early in life and early post-diagnosis may reveal important precursors of later eating behaviors.