

# Up All Night? Sleep In Parents Of Young Children Newly Diagnosed With Type 1 Diabetes



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# Financial Disclosure



No disclosed conflict of interest

**Study was supported by:**

National Institutes of Health (1R01DK102561, PI: Streisand)

# Background

Parents of young children with type 1 diabetes (PYC-T1D) may be **susceptible to poor sleep** due to the 24/7 demands of diabetes care and concerns about overnight hypoglycemia.



**Little is known about the sleep patterns of PYC-T1D shortly after T1D diagnosis.**



### Our study aimed to:

1. describe the sleep of PYC-T1D (ages 1-6 years) in the first 2 months post-diagnosis
2. explore any differences in sleep patterns with CGM use

### Our hypothesis:

1. PYC-T1D would report poor sleep quality (PSQI scores  $\geq$  clinical threshold of 5) and short sleep duration at an early stage after diagnosis
2. PYC-T1D whose children use CGM technology would have better sleep quality (i.e., lower PSQI scores and higher % PSQI scores  $<$  5)

# Methods

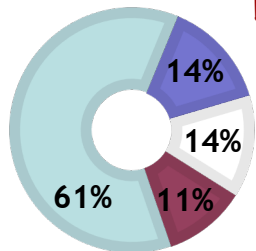
PYC-T1D

(Participants at baseline of a behavioral RCT, within 2 months of T1D diagnosis)



90% Mothers

Diverse Race/Ethnicity



- White/Non-Hispanic
- Black/Non-Hispanic
- Hispanic
- Other/Non-Hispanic

Mean Child age  
=  $4.5 \pm 1.6$  years



Mean T1D duration  
=  $27 \pm 15$  days

20% of children used CGM

Parents self-reported about sleep (Pittsburgh Sleep Quality Index, PSQI), T1D-specific sleep disruptions, and child's use of CGM.

# Results

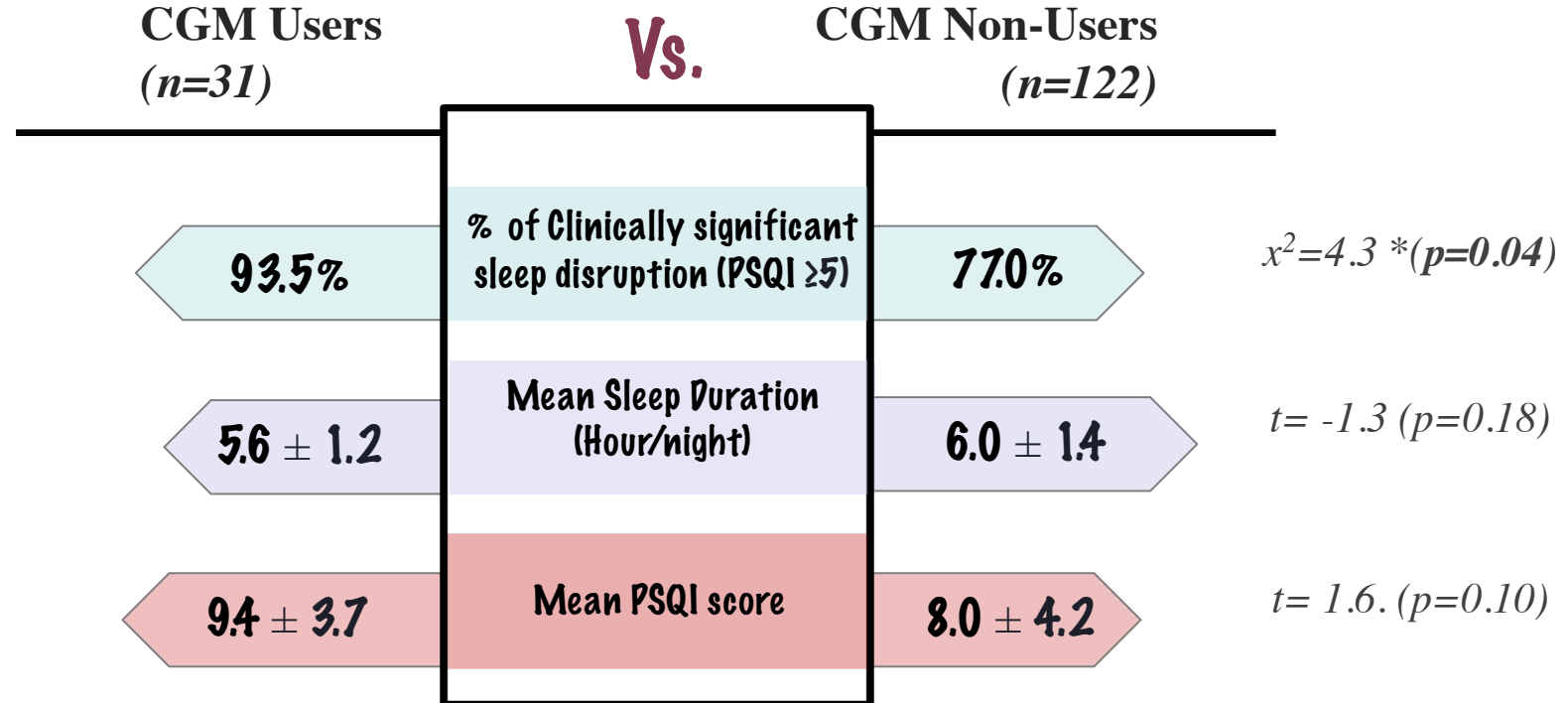


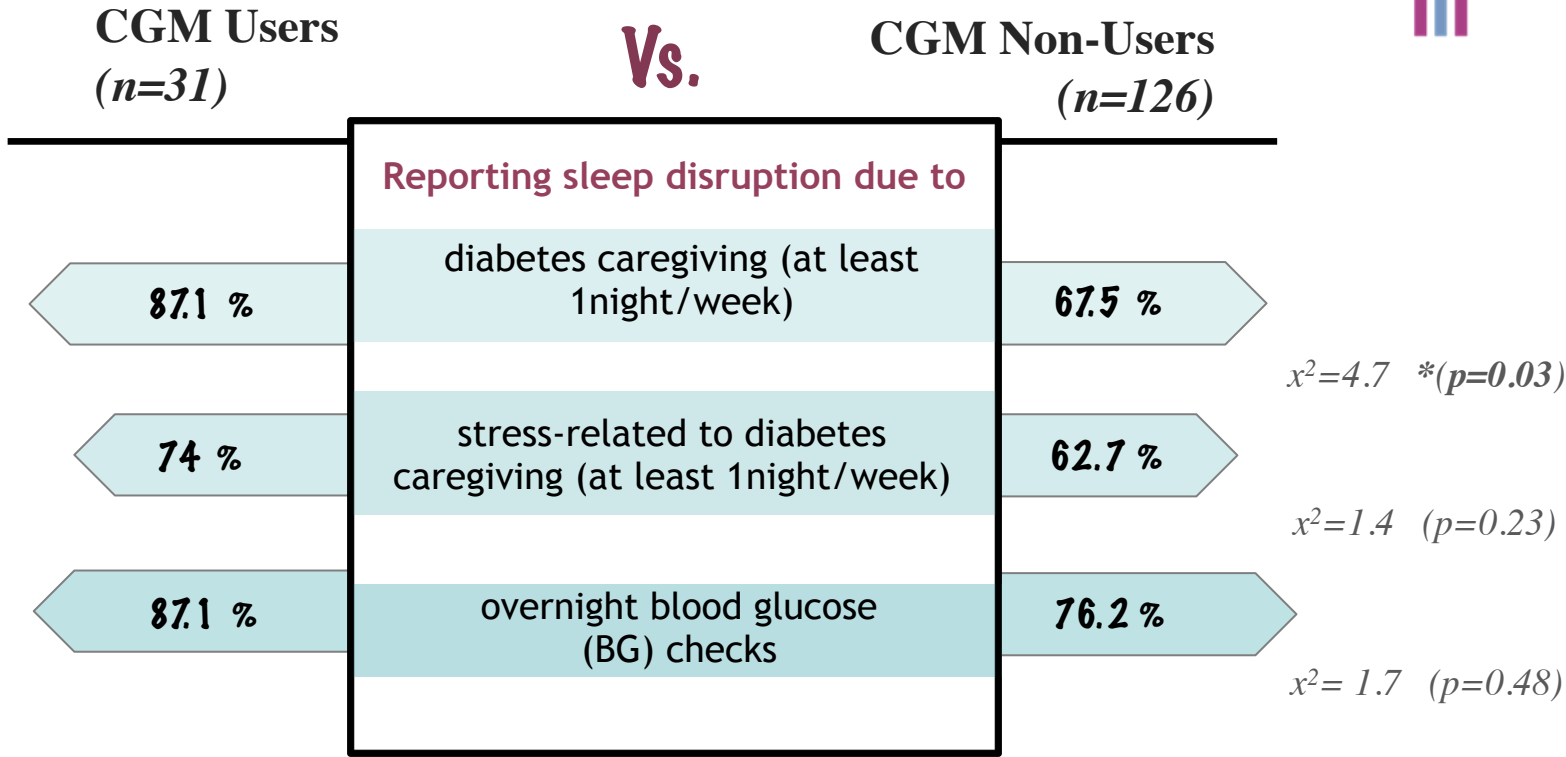
**80%** of PYC-T1D had PSQI  $\geq 5$  indicating  
**clinically significant sleep disturbance**  
(Mean PSQI scores =  $8.3 \pm 4.1$ )



Mean parental sleep duration was  $5.9 \pm 1.4$  hours per night

# Parents' sleep disruptions related to T1D







**CGM Users**  
(n=31)

**Vs.**

**CGM Non-Users**  
(n=126)

**Reporting nighttime BG checks**

**63.3 %**

On every night of the week

**63.5 %**

$x^2=0.00$  ( $p=0.99$ )

**48.4 %**

At least twice per night

**24.6 %**

$x^2= 6.8$  \*( $p=0.01$ )

- (74%) Routine BG checks •
- (39%) Low BG at bedtime •
- (16%) CGM alarm/failure •
- (13%) Restless •

**Most common reported reasons for nighttime BG checks**

- Routine BG checks (87%)
- Low BG at bedtime (24%)
- Refusing to eat(6%)  
bedtime snack

# Conclusion

Sleep disruption is a pervasive problem among PYC-T1D soon after diagnosis, with the **majority of parents not meeting recommendations for sleep duration and having clinically elevated sleep disturbances**



Though some **aspects of parental sleep disruption** were **higher in CGM users**, we cannot infer causality and **poor sleep was prevalent regardless of CGM use**