Abstract P3 Table 1

Patient Characteristic	Result
Gender (n=41)	▪ 27 (66%) M ▪ 14 (34%) F
Age at establishment on respiratory support, years (n=41)	▪ Median 11.8 years, 5.8 -14.4 IQR ▪ Range 0.4 – 17.4 years
Respiratory support (n=41)	▪ 28 (68%) CPAP ▪ 13 (32%) Bi-level
Duration of respiratory support, years (n=41)	▪ Median 3.6 years, IQR 1.8-9.2 ▪ Range 0.3–19.3 years
History of adenotonsillectomy (T&A) (n=41)	▪ 34 (83%) underwent T&A ▪ 3 (7%) awaiting T&A ▪ 5 (12%) underwent revision surgery post T&A ▪ 4 (9%) no T&A
Adherence (n=41)	▪ 14 (34.1%) adherent ▪ 27 (65.9%) non-adherent
Long-term outcomes (n=41)	▪ 5 (12%) transitioned to adult services - Of these, 2 had acceptable adherence ▪ 2 (5%) transferred respiratory care - Of these, 1 had acceptable adherence ▪ 0 weaned to cessation from respiratory support ▪ 11 (27%) continue on respiratory support under paediatric care ▪ 23 (56%) continue under paediatric care and are non-adherent

P4 DARIDOREXANT IMPROVES TOTAL SLEEP TIME (TST) IN INSOMNIA PATIENTS WITHOUT ALTERING THE PROPORTION OF SLEEP STAGES

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Daridorexant, a dual orexin receptor antagonist, improved sleep parameters and daytime functioning in two pivotal Phase 3 trials in patients with insomnia (Trial-1, NCT03545191; Trial-2, NCT03575104). We report the effects of daridorexant on TST and sleep stages from both trials.

Eligible patients with insomnia (DSM-5 criteria) were randomized (1:1:1) in Trial-1 (N=930) to daridorexant 25mg, 50mg, or placebo and in Trial-2 (N=924) to daridorexant 10mg, 25mg, or placebo. Oral treatment was administered each night during a 3-month double-blind treatment period. Assessment of TST and sleep stages (non-rapid eye movement [NREM], N1, N2, N3, REM), measured by polysomnography in sleep laboratory, was performed on two consecutive nights during single-blind placebo run-in (baseline) and Months 1 and 3 (M1 and M3) of double-blind treatment. Change from baseline in TST and sleep stages were exploratory endpoints in both trials. Data for M3 (mean ± standard deviation) are presented as change from baseline.

Daridorexant dose-dependently increased TST(minutes) from baseline to M3 versus placebo in Trial-1 (25mg, 55±56; 50mg, 61±53; placebo, 40±56) and Trial-2 (10mg, 37±57; 25mg, 50±53; placebo, 35±56).

In both trials, sleep stage proportions were preserved from baseline to M3, with no relevant changes in any group. Baseline time spent in each sleep stage (% of TST) was consistent across groups in both trials. In Trial-1, the change from baseline to M3 in% of TST spent in N1-N3, and REM was low and numerically similar across treatments. In Trial-2, change from baseline to M3 in% of TST spent in each sleep stage was consistent with Trial-1, with no dose effect. Mean changes from baseline (% of TST) for each sleep stage appeared to be independent from increasing TST.

Daridorexant versus placebo increased TST in a dose-dependent manner without affecting the proportion of sleep stages in patients with insomnia.

Support: Idorsia Pharmaceuticals Ltd.

P5 WHAT FEELINGS DO PARENTS EXPERIENCE IN RELATION TO THEIR SLEEP-RELATED ROUTINES WITH THEIR 1–3 YEAR OLDS?

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Introduction Routines, particularly at bedtime are often recommended as a first line treatment for many common child sleep problems (CSPs). Research has demonstrated the benefits of consistent routines for child sleep in a number of domains, however many parents report using routines inconsistently. Research has found that positive caregiver feelings about bedtime routines can motivate their implementation, while negative feelings have been associated with reduced use of routines. Caregiver feelings about sleep-related routines could also affect child sleep directly through the pre-sleep emotional climate experienced by the child and could have repercussions for caregiver mental health. However the range of caregiver feelings in relation to their children's sleep-related routines has not been fully explored. This study therefore set out to answer the research question 'What feelings do parents

experience in relation to their sleep-related routines with their toddlers?'

Method This was a qualitative study based on semi-structured online interviews with 21 mothers of 1–3 year olds. Parents were asked to narrate the sleep-related practices they typically used over the 24-hour sleep/wake cycle with their toddlers and how they felt during and about their routines. Data were analysed using reflexive thematic analysis.

Results Nine themes were identified, two with associated subthemes. Participants reported positive feelings of happiness and enjoyment, relaxation and freedom, and negative feelings of guilt, sadness, restriction, frustration, worry and uncertainty about their sleep-related routines. Many also reported a neutral feeling of acceptance.

Discussion Caregivers can experience a wide range of positive and negative feelings in relation to their sleep-related routines with their 1–3 year olds, which may be beneficial or detrimental to both their child's sleep and their own mental health. Assessment of routines and advice on implementation should take account of caregivers' emotional experiences and be tailored to individual families' values, preferences and priorities.[1–9]

REFERENCES

1. Braun V, Clarke V. Using thematic analysis in psychology. *Qualitative Research in Psychology*, 2006;**3**(2):77–101. https://doi.org/10.1191/1478088706qp063oa
2. Braun V, Clarke V. *Thematic analysis: A practical guide*. SAGE. 2022.
3. Dahl RE. The regulation of sleep and arousal: development and psychopathology. *Development and Psychopathology*, 1996;**8**(1):3–27. https://doi.org/10.1017/S0954579400006945
4. Hoyniak CP, Bates JE, McQuillan ME, Albert LE, Staples AD, Molfese VJ, Rudasill KM, Deater-Deckard K. The Family Context of Toddler Sleep: Routines, Sleep Environment, and Emotional Security Induction in the Hour before Bedtime. *Behavioral Sleep Medicine*, 2021;**19**(6):795–813, https://doi.org/10.1080/15402002.2020.1865356
5. Jones CHD, Ball HL. Napping in English preschool children and the association with parents' attitudes. *Sleep Medicine*, 2013;**14**(4):352–358. https://doi.org/10.1016/j.sleep.2012.12.010
6. Jones C, Ball H. Exploring socioeconomic differences in bedtime behaviours and sleep duration in English preschool children. *Infant and Child Development*, 2014;**23**(5):518–531. https://doi.org/10.1002/icd.1848
7. Kitsaras G, Goodwin M, Kelly M, Pretty I, Allan J. Perceived barriers and facilitators for bedtime routines in families with young children. *Children*, 2021;**8**(50). https://doi.org/10.3390/children8010050
8. Mindell J, Williamson A. Benefits of a bedtime routine in young children: Sleep, development, and beyond. *Sleep Medicine Reviews*, 2018;**40**:93–108. https://doi.org/10.1016/j.smrv.2017.10.007
9. Sundnes A, Andenaes A. Parental regulation of infant sleep: Round-the-clock efforts for social synchronization. *Infant Mental Health Journal*, 2016;**37**(3):247–258. https://doi.org/10.1002/imhj.21568

P6 THE EFFECTS OF PARTIAL SLEEP RESTRICTION AND SUBSEQUENT CAFFEINE INGESTION ON NEUROVASCULAR COUPLING IN YOUNG HEALTHY ADULTS

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Habitual poor sleep is associated with cerebrovascular disease, and acute total sleep deprivation alters the ability to match brain blood flow to metabolism (neurovascular coupling, NVC) though it is not known how partial sleep restriction affects NVC. Furthermore, caffeine disrupts NVC in the rested state, but its effects in the sleep restricted state are unknown. The purpose of this study was therefore to investigate the effects of partial sleep restriction and subsequent caffeine ingestion on NVC.

Seventeen healthy adults (age 27 ± 5 years, 9 female) completed three separate overnight experimental conditions with morning supplementation: normal sleep plus placebo (Norm_Pl), normal sleep plus caffeine (Norm_Caf), and partial (50%) sleep restriction plus caffeine (PSR). PSR involved participants staying awake during the first half of the night and waking at their normal wake time. Participants completed a visual search induced NVC assessment, with posterior cerebral artery blood velocity (PCAv) measured using transcranial Doppler ultrasound. NVC was assessed the evening before and twice the morning after each sleep condition – pre and 1 hour post caffeine ingestion.

NVC responses as a percent increase from baseline and as incremental AUC were not significantly different at any timepoint, across all conditions ($P > 0.87$). PCAv at baseline, peak, during the final 10 seconds of the visual search task, and as total area under the curve (AUC) were significantly lower 1 hour after caffeine ingestion in both the Norm_Caf and PSR conditions as compared to post placebo in Norm_Pl ($P < 0.05$), with no difference between Norm_Caf and PSR ($P > 0.14$).

In conclusion, NVC was unaltered after partial sleep restriction, and caffeine did not modify the magnitude of the NVC response in either the rested or sleep deprived state. Future research should explore how an accumulation of habitual poor sleep affects cerebrovascular function.

P7 A COMPARISON IN APNOEA-HYPOPNOEA INDEX CALCULATION BETWEEN RESPIRATORY POLYGRAPHY & CPAP-GENERATED AUTO SCORE IN CHILDREN

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Introduction Modern CPAP devices have an inbuilt algorithm to detect reductions and cessations in patient-generated airflow, generating an estimated apnoea-hypopnoea index (AHI) for each therapy session. This data is often used by clinical teams to guide the management of patient's CPAP therapy. Whilst previous comparison studies have shown good agreement with scored AHI from respiratory polygraphy and polysomnography, CPAP-generated AHI is poorly validated in paediatric populations. To address this, we compared same-night CPAP-AHI with physiologist-scored respiratory polygraphy AHI in children.

Methods 31 patients (20 male/11 female, mean [SD] age 11.4 years [4.3], mean [SD] weight 65.9 kg [35.4]) on CPAP therapy for sleep-disordered breathing underwent a respiratory polygraphy study (pressure flow, thoracic & abdominal effort, ECG, SpO2) on their CPAP device for therapy optimisation as part of their routine clinical care. Each study was scored by an experienced sleep physiologist to generate an AHI (poly-AHI). Each CPAP device (ResMed Ltd) was interrogated the following morning via remote monitoring (Airview, ResMed Ltd) to obtain the CPAP-AHI from the same night. Poly-AHI and CPAP-AHI were compared using Bland-Altman analysis and Wilcoxon signed-rank test (Graphpad Prism 9.0, GraphPad Software).