The opportunity

- Central disorders of hypersomnolence are characterized by excessive daytime sleepiness (EDS) and disrupted nighttime sleep (DNS).
- Takeda is conducting clinical trials to investigate EDS and DNS in these disorders and is committed to developing novel digital biomarkers to identify EDS and DNS symptoms.

The impact

✔ Daytime nap detection from digital wearable devices may enable the objective quantification of EDS in patients with central disorders of hypersomnolence.
✔ Takeda is developing a novel nap detection algorithm using actigraphy data to quantify daytime napping events objectively. The algorithm draws on identifying total napping time as a core digital measure of sleep and daytime sleepiness as a key symptom.

The resources

- The Core Digital Measures of Sleep provide key support to developing novel digital biomarkers for sleep-wake disorders, including central disorders of hypersomnolence.
- Drawing on patient voices, the Conceptual Model identifies clinically relevant symptoms for measurement in clinical trials, including daytime sleepiness and unplanned daytime sleeping.
- The industry-leading ontology from the Core Digital Measures of Sleep provides an essential framework for developing new ways to measure clinically relevant symptoms.
- The formal definition of total napping time as a core measure reinforces the importance of developing novel digital tools for measuring EDS.