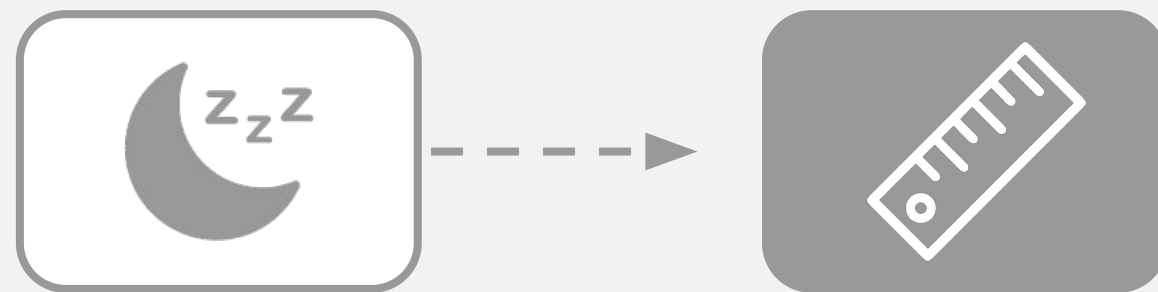


# Nocturnal Scratch:

## Ontology & Terminology



# NOCTURNAL SCRATCH



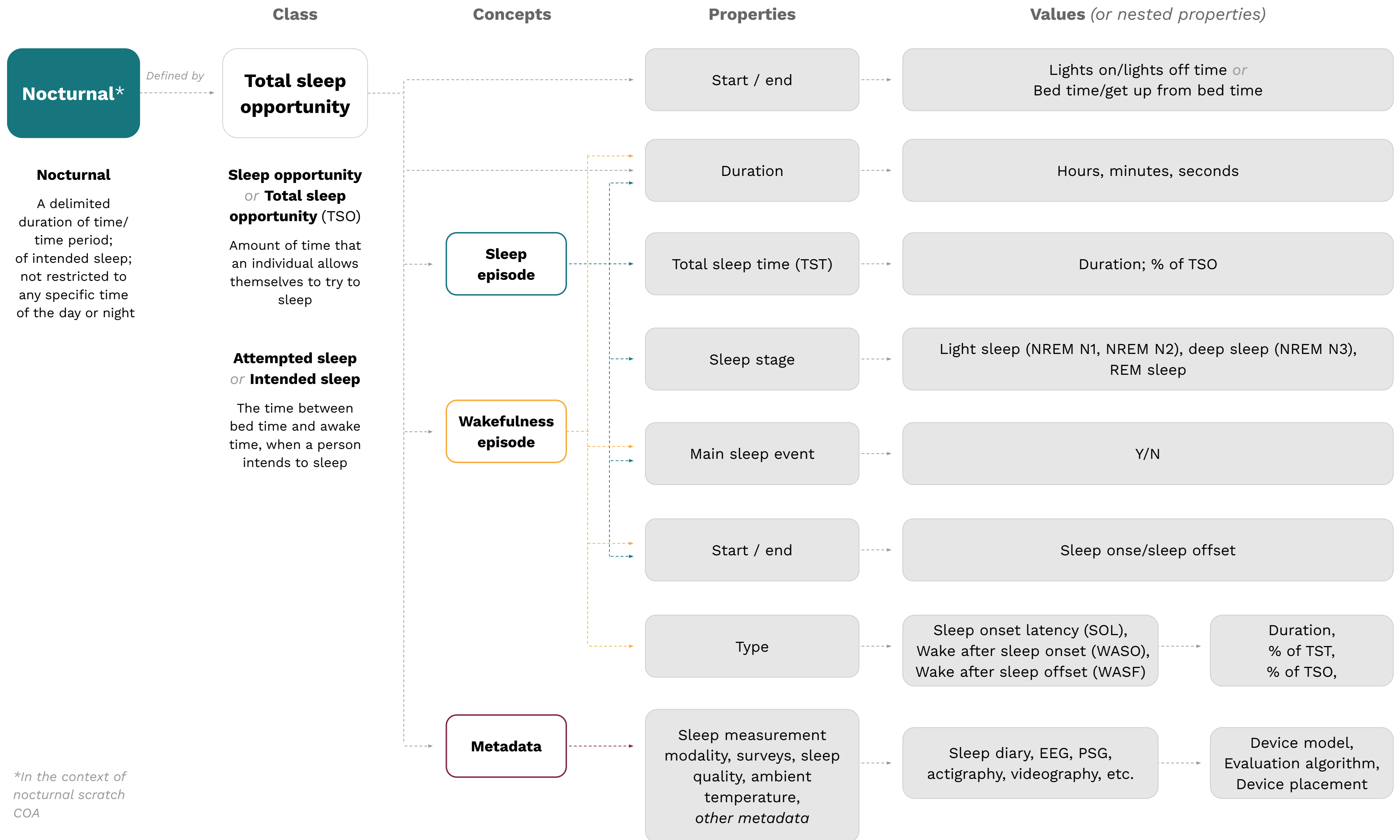
*Digital Measures Development*

[www.dimesociety.org/tours-of-duty/digital-measures-nocturnal-scratch](http://www.dimesociety.org/tours-of-duty/digital-measures-nocturnal-scratch)

A project by the



# Ontology of "Nocturnal"

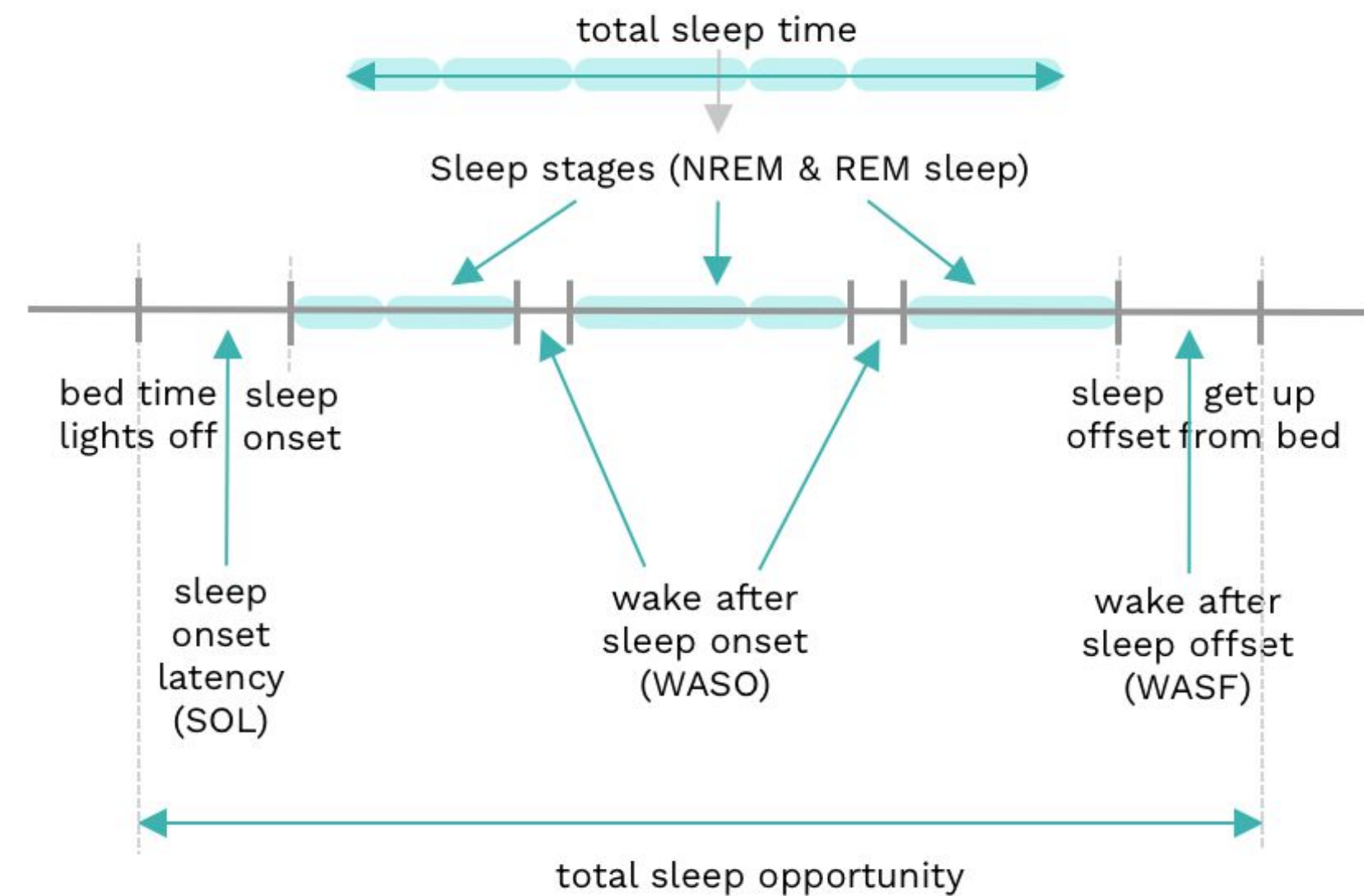


\*In the context of nocturnal scratch COA

# Measurement of Nocturnal

## "Nocturnal" period in the measurement of nocturnal scratch

- Defined in the context of sleep as the **total sleep opportunity** delimited by bed time (start)/getting up from bed (end)
  - Start/end times should be determined by a suitable measurement modality (sleep diary, EEG, PSG, actigraphy, videography, etc.)
- Each of the "optional" sleep outcome measures needs to be defined if they are included as a part of the measurement (YES/NO). The more optional sleep outcome measures are included, the more granular the measurement will be



“ For nocturnal scratch, in the context of use as a COA, total sleep opportunity is more relevant to support the COA content validity, because scratching before falling asleep contributes to the impact of nocturnal scratch behavior on patient sleep quality.”

-Nocturnal Scratch Project Team

# Table 1. Measurement of nocturnal period as defined by sleep outcome measures

Nocturnal scratch outcome measures	Property	Use of property
<b>Total sleep opportunity</b>	Start/end time of TSO (bed time/get up from bed)	Required
	Duration of TSO	Required
<b>Sleep episodes</b>	Main sleep event (Y/N)	Optional
	Sleep stages	Optional
	Start/end time of sleep episodes (wake up/fall asleep)	Required <i>(*if sleep episodes are measured)</i>
	Sum of all sleep episodes (= total sleep time, TST)	Required <i>(*if sleep episodes are measured)</i>
<b>Wakefulness episodes</b>	Type (SOL, WASO, WASF)	Optional
	Main sleep event (Y/N)	Optional
	Start/end time of wakefulness episodes (wake up/fall asleep)	Required <i>(*if sleep episodes are measured)</i>
	Sum of all sleep episodes (= time spent awake)	Required <i>(*if sleep episodes are measured)</i>
<b>Metadata</b>	Sleep measurement modality	Required
	Ambient temperature	Optional
	Surveys	Optional
	Other metadata	Optional

“ We believe here is where we should propose a new name - such as "sleep-time scratch", since "nocturnal" implicitly means "during the night." New term anchored in sleep context is more patient-centric, as some patients may not sleep mainly during the night (e.g. infants, shift workers).”

-Nocturnal Scratch Project Team

# Summary: Definition & outcome measures of nocturnal scratch

## Definition of nocturnal scratch

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**Scratching** is an action/behavior, of rhythmic and repetitive skin contact movement

Performed during a delimited time period of **intended and actual sleep**; not restricted to any specific time of the day or night

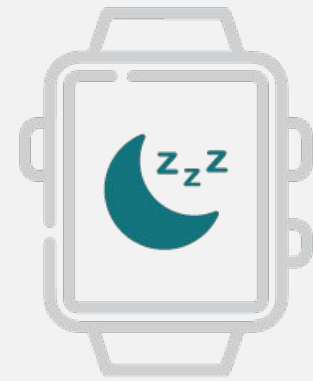
## Outcome measures of nocturnal scratch

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**Total scratch time** (sum of all scratch bouts) measured during a delimited measured period of intended and actual sleep within the **total sleep opportunity**

Total scratch time can be also represented as a percentage of the measured total sleep opportunity period

# NOCTURNAL SCRATCH



*Digital Measures Development*



## Additional Relevant Resources

- *Publication of the literature review will be available here*

## Acknowledgements

DiMe and the project team would like to express their gratitude and appreciation to the experts that took a crucial part in development of these resources:



- Will Wang, Biomedical Engineering
- Jessilyn Dunn, Assistant Professor of Biomedical Engineering

**Let us know how you've used this  
resource in action!**



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about how others are using DiMe resources*