

Sleepless in Houston: Sleep Habits of Entering Pediatric Residents

Teri L Turner, MD, MPH, MEd¹, John A
Turner, MD², and Mark A Ward, MD¹



Texas
Children's
Hospital

BCM

Baylor College of Medicine

¹Department of Pediatrics, Baylor College of Medicine and
Texas Children's Hospital, Houston, TX and ²Private Practice,
Sleep Medicine and Internal Medicine, Houston, TX

Disclosure

- Teri Turner is an educational consultant for Abbott pharmaceuticals.
- John Turner and Mark Ward have nothing to disclose.



Acknowledgements

- Association of Pediatric Program Directors
- Texas Children's Hospital Educational Project Scholarship Awards
- Scott Turner



Texas
Children's
Hospital

BCM
Baylor College of Medicine

Background

- Sleep deprivation adversely affects performance¹
- Most patients (70%) would request another physician if they knew their doctor was fatigued²
- Work hours have been revised as a countermeasure to fatigue³



1. Ulmer C. et al. National Academies Press 2008.
2. Reported in Blum AB. et al. BMC Med June 2010.
3. Nasca TJ. et al. NEJM July 8, 2010.

Objectives

- To determine baseline sleep habits/attitudes
- To measure the level of daytime sleepiness prior to beginning residency training



Methods

- Surveyed all pediatric interns (n=43) in June prior to the start of training
- Utilized survey from “Sleep Alertness/Fatigue Education in Residency” (SAFER Program)
- Developed by the American Academy of Sleep Medicine



Texas
Children's
Hospital

BCM
Baylor College of Medicine

Methods continued...

- Survey questions assessed
 - Level of daytime sleepiness
 - Sleep behaviors
 - Sleep attitudes



Texas
Children's
Hospital

BCM
Baylor College of Medicine

Epworth Sleepiness Scale Results

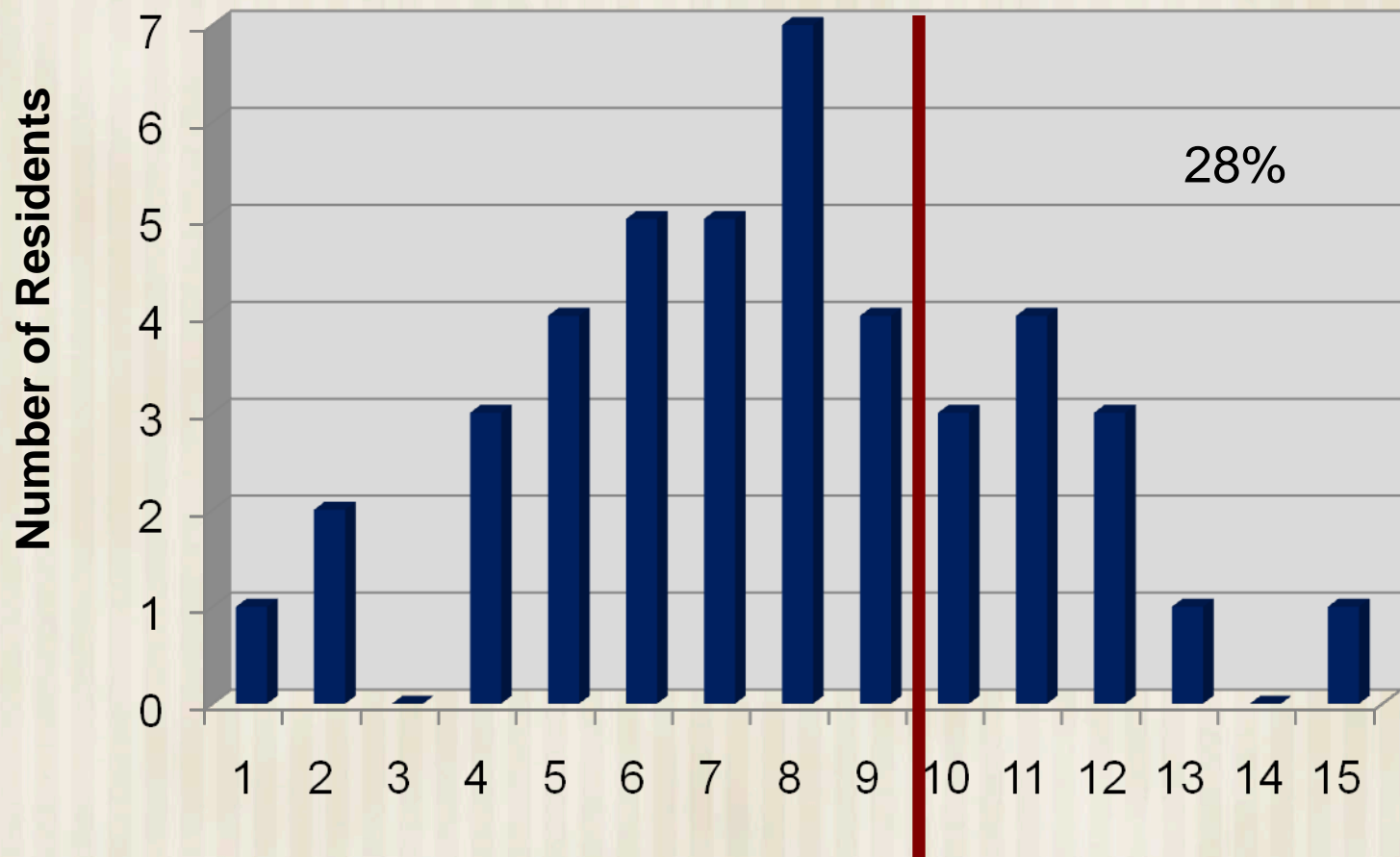
Situation	Mean* (SD)
Lying down to rest in the afternoon when circumstances permit	2.12 (0.9)
Sitting and reading	1.47 (0.9)
As a passenger in a car for an hour without a break	1.42 (0.8)
Watching TV	1.12 (0.5)
Sitting quietly after lunch without alcohol	0.74 (0.6)
Sitting and inactive in public place (theater or meeting)	0.67 (0.8)
In a car while stopped for a few minutes in traffic	0.09 (0.4)
Sitting and talking to someone	0.09 (0.3)
Total ESS score	7.72 (3.1)



Texas
Children's
Hospital

BCM
Baylor College of Medicine

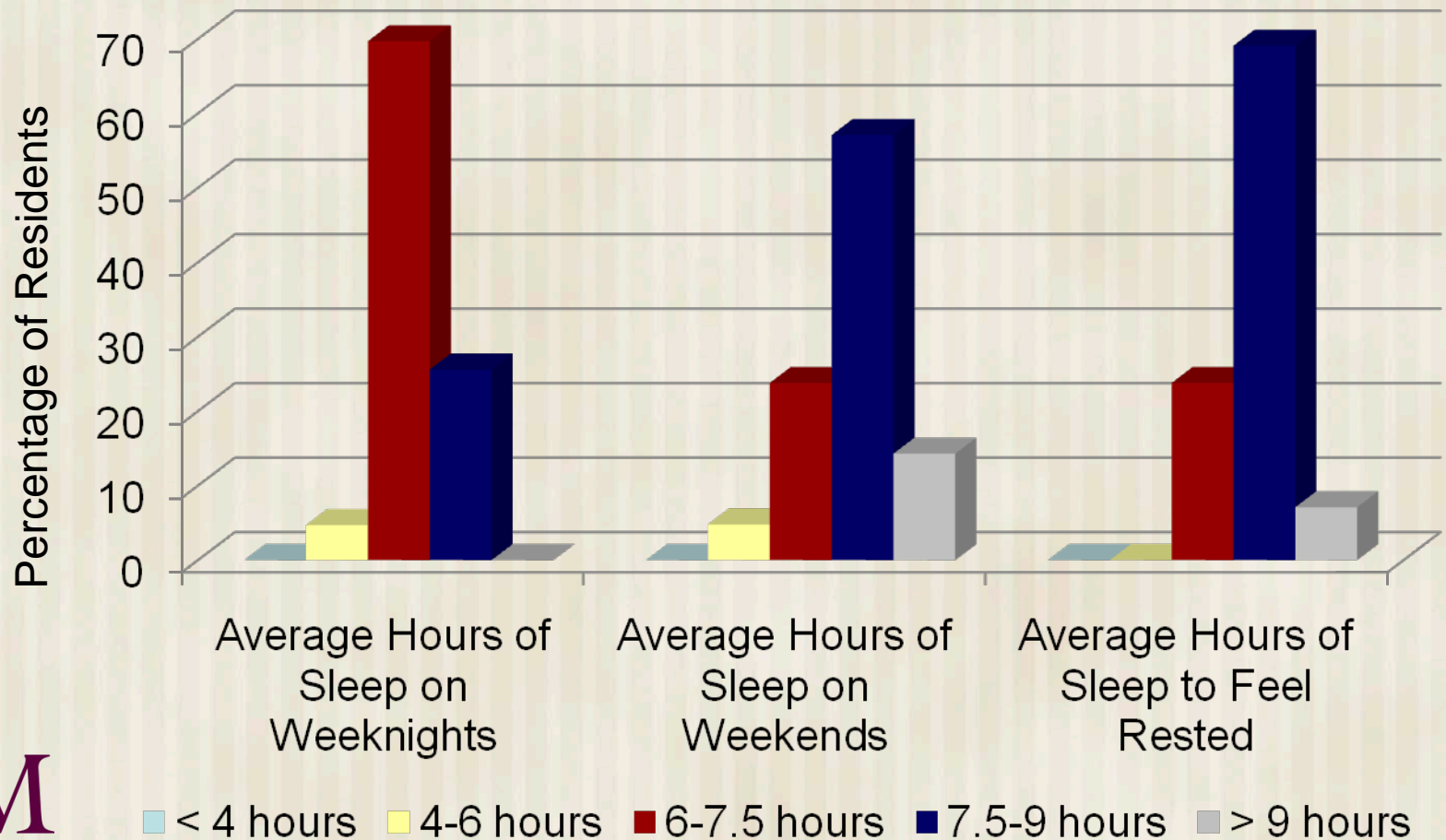
Epworth Sleepiness Scale Score Distribution



Texas
Children's
Hospital

BCM
Baylor College of Medicine

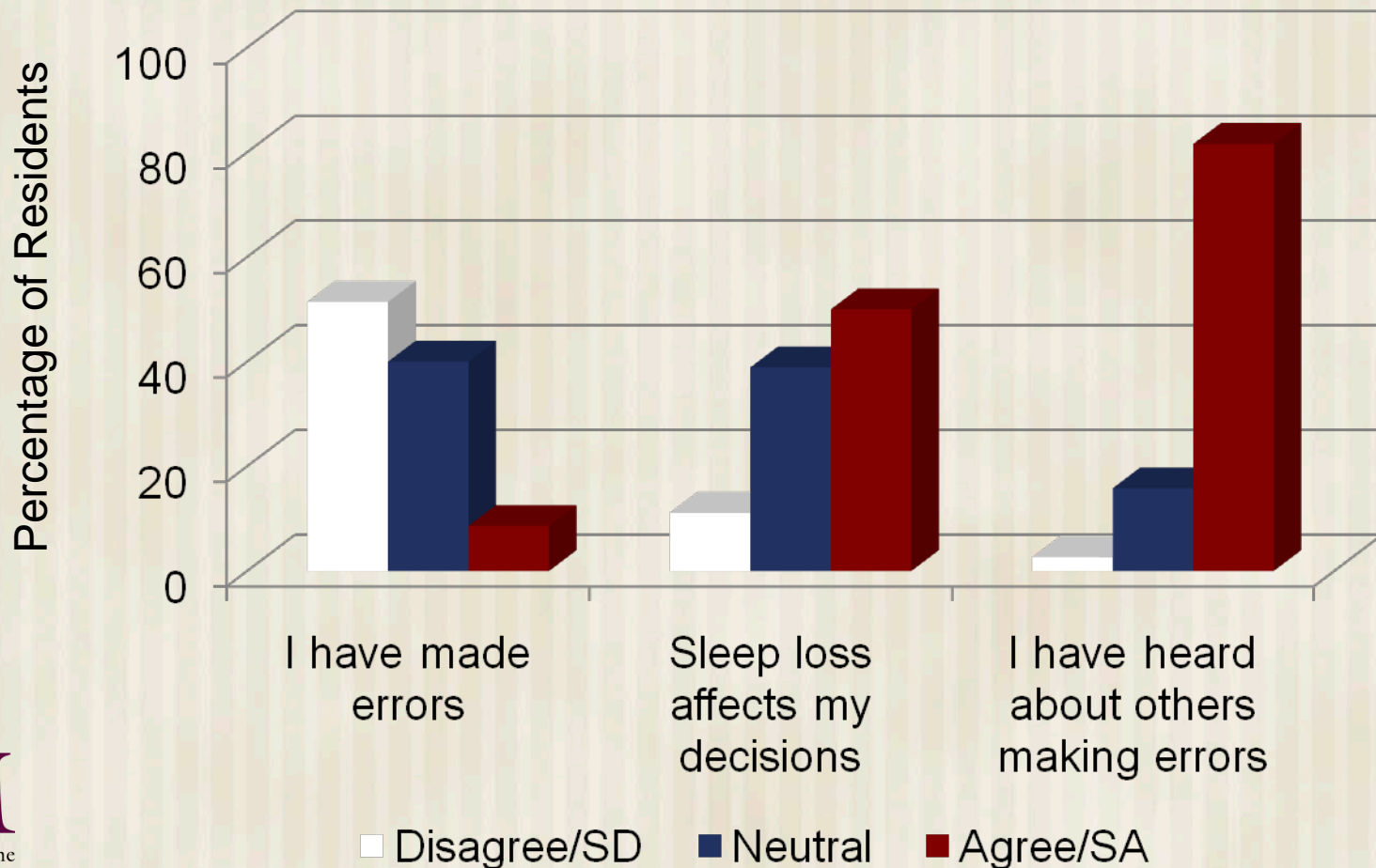
Sleep Behaviors



Texas
Children's
Hospital

BCM
Baylor College of Medicine

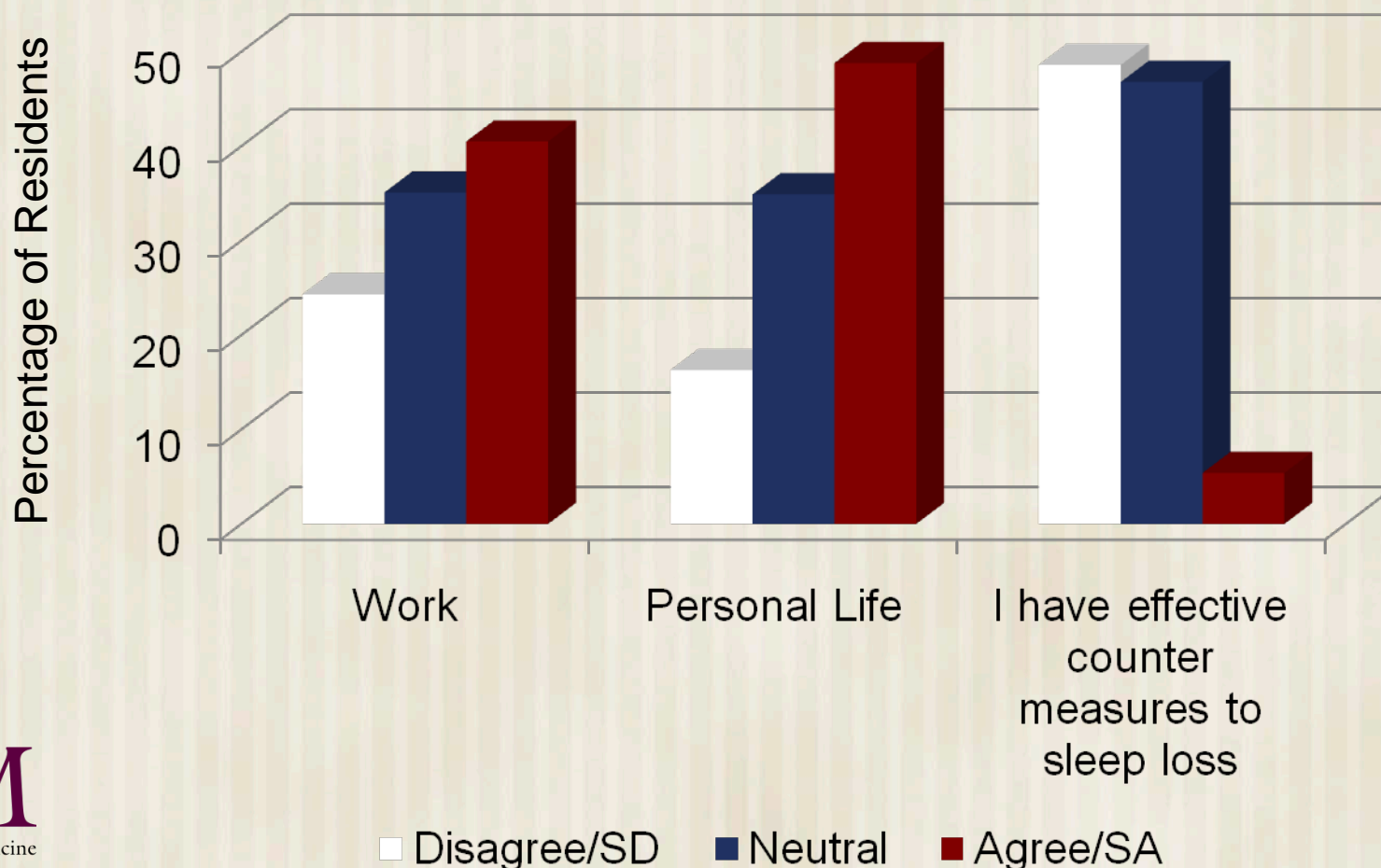
Perceived Effects of Sleepiness on Medical Errors



Texas
Children's
Hospital

BCM
Baylor College of Medicine

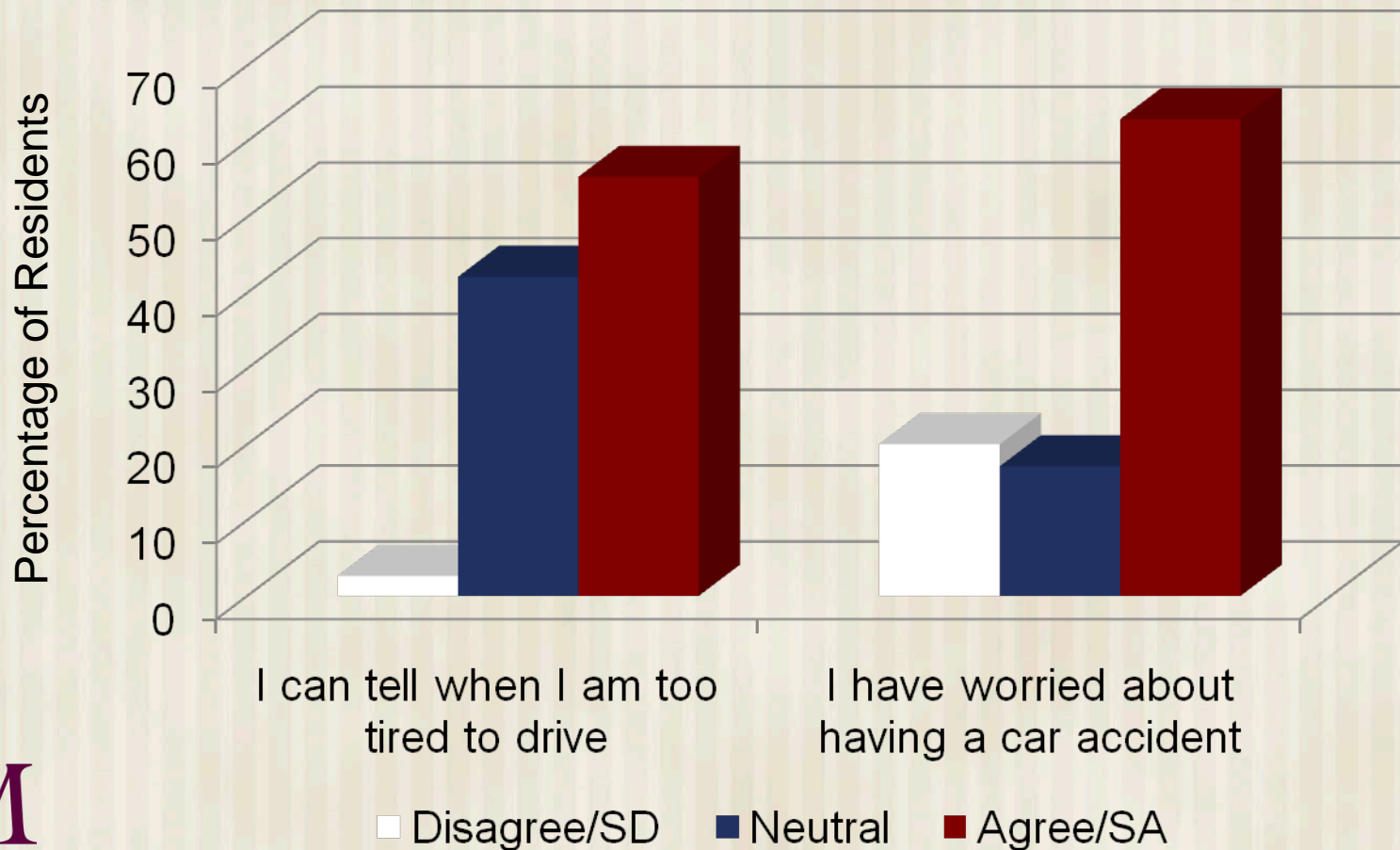
Perceived Negative Effects of Sleepiness on Work and Personal Life



Texas
Children's
Hospital

BCM
Baylor College of Medicine

Attitudes about Sleepiness and Driving



Texas
Children's
Hospital

BCM
Baylor College of Medicine

Limitations

- Lack of generalizability
- Small sample size
- Cross-sectional survey
- Self-reported data



Texas
Children's
Hospital

BCM
Baylor College of Medicine

Conclusions

- $\frac{3}{4}$ of all interns were not getting enough sleep before residency began
- More than $\frac{1}{4}$ had an ESS score outside the range of normal
- Future efforts need to focus on identifying when poor sleep habits develop and helping residents develop priorities for sleep



Texas
Children's
Hospital

BCM
Baylor College of Medicine