

# Challenges in Diagnosis of Shift Work Disorder in Primary Care Practice

Practice Gaps Identified From an Online Patient Simulation

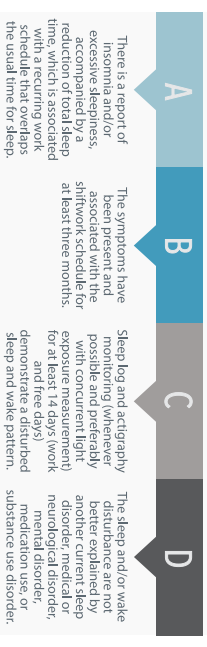
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Activity supported by Tewa CNS  
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## 1. Introduction

Shift Work Disorder (SWD) is a circadian rhythm sleep disorder in which an individual's circadian rhythm and work/sleep schedule is misaligned.<sup>1</sup> Diagnosis is based on symptoms of excessive sleepiness and/or insomnia associated with the misaligned sleep schedule. SWD could be identified in primary care practices, yet remains significantly undiagnosed and is rarely addressed thus posing a significant public health problem.

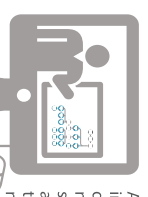
ICSD-3 criteria,<sup>1</sup> Criteria A-D must be met:



### Percentage of shift workers in selected industries<sup>2</sup>

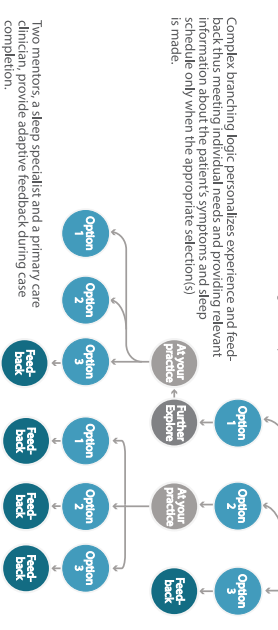


## 2. Discovery Learning Design



A certified Continuing Medical Education (CME) program<sup>3</sup> incorporating an online patient simulation was developed to determine experience, knowledge, competence, and performance in assessment and diagnosis of SWD. Utilizing a novel simulation platform, the case was designed to particularly assess skills in taking a sleep history including relevant symptom assessment. The case was made available via an online medical education community for primary care clinicians.

Relevant information is revealed only when appropriate selection(s) made, simulating clinical practice.



Time, additional visits & associated cost estimates are tracked

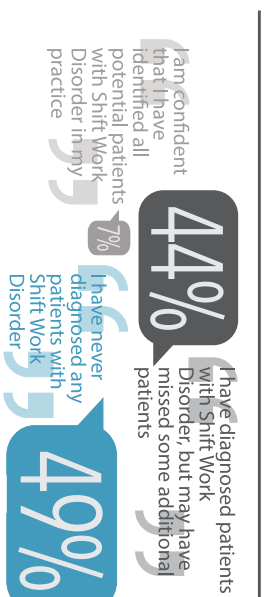
References: <sup>1</sup>American Academy of Sleep Medicine (AASM) International Classification of Sleep Disorders Diagnostic Manual, Third Edition, 2014; <sup>2</sup>McKenahan TK et al Monthly Labor Rev, 2007;1:3029-11; <sup>3</sup>http://www.pri-med.com/PMD/Activity.aspx?activity=222015 Accessed May 28, 2014.

## 3. Primary Care Participants

1,941 primary care participants started the activity.



## 4. SWD is Underdiagnosed in Primary Care



## 5. Tiredness May Not be Explored as Priority

The patient (Christina, aged 45) presented with a primary initial complaint of tiredness and expressed concern about weight gain and irritability and wondered if she was perimenopausal. Clinicians first thoughts in exploring her complaint...



## 6. Timing of Sleep Least Likely to be Explored



**Christina's Sleep Habits**

While Christina has shared some information about her general well-being, you can learn more about her sleep habits by asking her any of these questions.

Select a question to reveal Christina's answer.

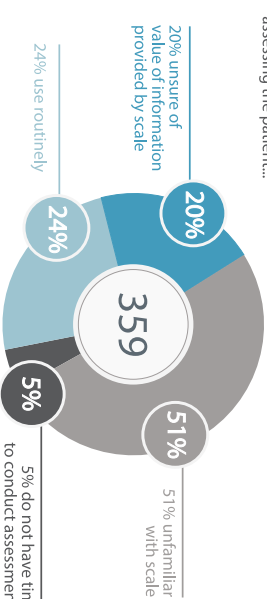
- On average how much sleep per night are you getting?
- Do you ever wake up during the night?
- Have you been told that you snore loudly. ( louder than talking or loud enough to be heard through closed doors) or do anything else unusual in your sleep?
- What time do you go to bed and when do you get up?
- Do you ever feel tired or exhausted during the day?
- Do you have any problems falling asleep?

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39% In taking a sleep history, questions relating to timing of sleep were least popular with 39% of participants omitting those questions prior to correction with adaptive mentor feedback.

## 7. Familiarity With Sleep Scales & Tools is Low

Of those who made the appropriate decision to use the Epworth Sleepiness Scale in assessing the patient...



64% chose sleep hygiene as primary option (alone or in combination with medications) but...

26% unfamiliar with sleep hygiene principles

31% Not confident that sleep hygiene improves sleep disorders

## 8. Diagnosis of SWD May be Delayed

61% who received corrective feedback incurred unnecessary additional patient visits, thus delaying appropriate diagnosis and increasing costs.



## 9. Simulation Engages Learners



## 10. Conclusion

These findings suggest that despite a high prevalence in primary care, there is a lack of understanding of basic sleep assessments and management of SWD. Providing standard assessments and resources with education programs without assessing learners' competence in their use may limit the positive impact on patient care.

Further education on diagnosis and management of SWD in primary care is required.

Detailed training on tools and resources for diagnosis and management of Sleep Disorders with practical application in practice.

These insights informed content in subsequent activities, ensuring:

- Faculty engagement in teaching
- Efficient use of resources
- Content where need was greatest