Insights from a Second User Meeting on NightWare for PTSD-Related Nightmares: Using NightWare Data Effectively

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Abstract:
This white paper presents a summary of a NightWare user meeting, providing valuable insights for healthcare professionals treating Nightmare Disorder and PTSD-associated nightmares. NightWare, a novel, non-pharmacological, non-invasive digital therapy using smartwatch technology, is discussed as a promising solution for detecting and disrupting nightmares. The meeting, attended by experts in sleep medicine, psychiatry, and other healthcare domains, covered key areas such as optimal utilization of NightWare data, effective patient selection, potential factors influencing NightWare's function, and methods for integrating NightWare data into existing clinical workflows. These critical insights hold the potential to refine therapeutic strategies, augmenting patient care through a more personalized and data-driven approach. As a comprehensive review of the meeting's discussions, this paper will enable healthcare professionals to better understand and harness the potential of NightWare in treating Nightmare Disorder and PTSD-associated nightmares.

Introduction:
Nightmare Disorder, characterized by frequent distressing nightmares, disrupts daily functioning, and many patients can benefit from a non-invasive, clinically proven treatment. NightWare, a novel non-pharmacological and non-invasive digital therapy using smartwatch technology, provides a promising alternative by detecting and disrupting nightmares. This white paper distills insights from a NightWare user meeting, aiming to guide healthcare professionals treating Nightmare Disorder or PTSD-associated nightmares.

Participants:
The meeting was moderated by COL (Ret.) Brian Robertson, MD, Chief Medical Officer of NightWare and attended by seven clinicians supporting active duty military personnel representing psychiatry, psychology, and sleep medicine. Clinicians preferred to not disclose their names.

Methods:
The user meeting was attended by sleep medicine doctors, psychiatrists, and other healthcare providers who treat patients with nightmare disorder. The meeting was designed to gather feedback from prescribers about the use of NightWare in clinical practice, including best practices to get the most out of NightWare data. The meeting was structured as a moderated discussion, and the insights gained were recorded and summarized.

Results:
The user meeting generated several insights that have important implications for clinicians who treat patients with Nightmare Disorder. These insights are organized into the following categories: utilization of NightWare data, patient selection and clinical efficacy, factors that may affect NightWare, and data interpretation and clinical workflow.

Utilization of NightWare Data:

- **NightWare data can aid in assessing patient compliance, intervention metrics, and sleep duration**
- **Can help identify potential issues including comorbid conditions**

Among the most emphasized topics in the discussion was the valuable role NightWare data plays in clinical decision-making. The data aids clinicians in assessing the compliance of patients, the frequency of interventions during nightmares, sleep duration trends, and the overall effectiveness of the device in managing symptoms. It further serves as a tool for identifying potential issues, monitoring the progress of patients, and making necessary adjustments to treatment plans. This enables a more personalized, data-driven approach to patient care, underscoring the importance of understanding and effectively utilizing NightWare data.

Patient Selection and Clinical Efficacy:

- **Patients with sympathetic activation symptoms see best outcomes**
- **If untreated, sleep apnea can interfere with NightWare efficacy**

Every patient experiencing nightmares has a multitude of factors affecting them, thus making every experience with NightWare different. Patients that exhibit sympathetic activation symptoms, such as palpitations and sweating, have had the best outcomes with NightWare, provided sleep apnea is ruled out or treated. The potential utility of the device in patients experiencing dreams that evoke anxiety but do not present classic nightmare symptoms, however, remains unestablished.

Factors that May Affect NightWare:

- **Some patients can have lowered dosage of Prazosin while using NightWare**
- **Menstrual cycles and beta-blockers interact with NightWare therapy**

The panel deliberated on the impact of NightWare on patients concurrently using Prazosin. The shared anecdotal evidence hinted that the device might potentiate the therapeutic effects of prazosin, potentially enabling a reduction in dosage for some patients. A novel observation that prompted significant discussion was the potential association between the menstrual cycle and an increase in nightmares. While no formal literature documents this correlation, the rich data generated by NightWare opens the door for in-depth investigation into this intriguing association. The discussion also brought attention to potential complications arising from the use of NightWare in patients undergoing beta-blocker therapy. Given that the device relies heavily on heart rate variations to detect nightmares, the impact of beta-blockers, which are known to modulate heart rate, remains a significant area of concern requiring further research.

Data Interpretation and Clinical Workflow:

- **Metrics discerned from NightWare data that can give insight to patient improvement: adherence, duration, interventions**
- **Patient feedback compliments NightWare data as it is coming from subjective lens**

The thorough interpretation and seamless integration of NightWare data into existing clinical workflows was a significant theme. NightWare possesses a learning curve due to its novelty. Clinicians can discern valuable parameters from NightWare data such as usage regularity, duration, intervention metrics, and patient-reported outcomes. The frequency of interventions, a potential marker for the severity of nightmare disorder or PTSD, and shifts therein, can signify disorder progression or improvement. Patient-reported benefits, meanwhile, provide a lens into NightWare's subjective efficacy, warranting assessment alongside other parameters for a holistic understanding of treatment effectiveness. The incorporation of this data into current workflows might necessitate case-based review frequencies; patients newly on NightWare or with severe symptoms may require more frequent data reviews.

Conclusion:

The challenge of treating Nightmare Disorder and PTSD-associated nightmares persists, with many patients in need of effective, non-invasive treatment options. The NightWare digital therapeutic device, by virtue of its innovative approach, appears to be a promising solution. The insights drawn from this user meeting, as shared in this white paper, attest to NightWare's potential in enhancing patient care, with emphasis on its data-driven capabilities in clinical decision-making. Considerations around patient selection, interplay with other medications, and

the integration of NightWare data into existing clinical workflows have been underscored, shedding light on how best to optimize this technology for patient benefit. The continued exploration and understanding of these factors will enable healthcare professionals to provide comprehensive, personalized care, potentially transforming the therapeutic landscape for Nightmare Disorder and PTSD-associated nightmares.

Meeting insights will be incorporated into the NightWare Clinical Treatment Guidelines which provides prescribing clinicians the best practices for maximizing outcomes through utilizing NightWare. If you would like to request access to this document you may email nightwareprofessionaleducation@nightware.com or visit the Prescriber Resources section at www.nightware.com.