

World Sleep Society (WSS) Task Force Summary Debriefing of World Health Organization (WHO) Global Sleep Health Webinar | April 12, 2022

The WSS is grateful for the opportunity to share and discuss the substantial evidence-based research supporting the statement that *sleep is an essential pillar of health* at the recent WHO webinar led by Dr. Fiona Bull. Presentations by WHO Technical Units provided an excellent overview of their activities. The WSS was impressed and excited to learn of the many sleep-related initiatives that are already underway as well as those being considered. It was clear that these WHO Technical Units recognized the importance of sleep across the entire lifespan and the importance of understanding the social and environmental determinants of sleep along with the impact of sleep on adolescent development, obesity, mental/brain health, and non-communicable diseases – all high research priorities of the international sleep and circadian medicine field.

We are encouraged by the leadership of Dr. Fiona Bull and offers by WHO Technical Units to continue a dialogue between the WHO and WSS Task Force on Global Sleep Health. We are particularly enthusiastic about opportunities to collaborate on data collection and conducting research, including Dr. Naoko Yamamoto's call to take the initiatives already developed by the WHO Technical Units and accelerate implementation of evidenced-based strategies that enhance sleep health. WHO and WSS share a common interest in promoting global sleep health. Work on our common interests could be coordinated by (1) growing relationships between WSS taskforce members and WHO Technical Units to **accelerate** WHO sleep initiatives; and (2) keeping open direct lines of communication between Dr. Bull and the WSS taskforce chairs, Dr. Zee and Dr. Eastwood. Together, we hope that WHO and WSS can formulate next steps and plans to address sleep health promotion, particularly in populations at high risk for poor sleep and the negative consequences related to mental and physical health, work productivity, and road safety.

WHO Initiatives of Global Sleep Health that align with the WSS

We note the very positive opening comments from Dr. Naoko Yamamoto, regarding the importance of cross-cutting science of sleep and its impact on a diverse set of the health outcomes. She further highlighted the opportunity for all interested WHO departments to meet with members of the World Sleep Society to hear the current status of evidence. Lastly, she called for the WHO to explore their role of providing public health guidance on sleep. Dr. Yamamoto's statement resonates with the WSS taskforce goals and sets the stage for future productive collaborations aimed at improving global sleep health.

Shortly after the webinar the WSS taskforce and faculty discussed the comments of Dr. Yamamoto and other WHO contributors, which we have summarized below. In reviewing each presentation, the WSS identified content experts from the Task Force who could be the best point of contact for communication with each of the WHO Technical Unit members. We propose that these task force members will each lead a small working group, involving the world's best content experts, who would be available at short notice to contribute to any specific question raised by the WHO and could provide resources to help accelerate and coordinate potential sleep health related initiatives within each of the Units.

1. **Comment from Dr. Juana Williamson/Physical Activity:** We know there is a gap in the global guidelines of childhood obesity where not only physical activity, but sleep should be addressed.

Drs. Peter Eastwood and Diane Lim have been tasked with leading a working group within the WSS whose focus will be on sleep, metabolism, and physical activity.
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2. **Comment from Dr. Tarun Dua/Brain Health:** While we have posted the definition of sleep-wake disorders for ICD-11, sleep disorders are not yet related to primary health, neurology, or mental health. While the action plan for neurological disorders is already significant, there is a need to better relate them to sleep disorders to better diagnose and treat brain disorders. We would like to have an off-line discussion of sleep as a protective factor.

Drs. Phyllis Zee, Charles Morin, and Birgit Högl will lead a working group within the WSS whose focus will be on how to better integrate sleep as a protective factor of brain and mental health.
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3. **Comment from Dr. Regina Guthold/Adolescents & Young Adult Health:** Much data surrounds the links between adolescent health to sleep including obesity, mental health, academic performance, safety and risky behaviors such as smoking and substance abuse. We will be happy to support any research undertaken in these areas collaboratively.

Dr. Fang Han will work with Drs. Mary Carskadon and Judith Owens (pediatric experts) to form a working group within the WSS whose focus will be on adolescent & young adult sleep health.
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4. **Question/Comment from Dr. Ivan Ivanov/Occupational and Workplace Health:** From the perspective of the bidirectional work-sleep relationship e.g., losing your job because of sleepiness or falling asleep at work or job strain leading to poor sleep, what is the data of interaction between sleep and occupational risks? We may need to understand the cost-effective interventions at the workplace, especially high-risk occupations, to develop a global framework for healthy, safe, and resilient workplaces.

Drs. Chandra Jackson and Phyllis Zee have been tasked with formulating a working group within the WSS whose focus will be on sleep and occupational and workplace health.

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5. **Comment from Dr. Yuka Sumi/Aging and Health:** The relevance of poor sleep quality and its association to biological and neurological changes that occur with normal healthy aging is an important area of research to maximize quality of life. There is much to do, and we are happy to engage in all activities.

Drs. Dalva Poyares and Charles Morin have been tasked with formulating a working group within the WSS whose focus will be on sleep and healthy ageing.

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6. **Comment from Dr. Juan Pablo Peña-Rosas/Nutrition and Food Safety:** Nutrition, diet and food safety are always mentioned when talking about sleep disorders. Currently we have included sleep disorders as a risk factor for obesity but would like to expand our recommendations to several other areas including the science behind elevated levels of ghrelin, bariatric surgery, etc. We look forward to collaborating in a joint effort.

Drs. Birgit Högl and Diane Lim have been tasked with formulating a working group within the WSS whose focus will be on sleep, nutrition & food safety.

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7. **Comment from Dr. Nhan Tran/Sustainable Mobility and Road Safety:** We would like to explore communication and collaboration to collect and report data on road safety, including risk factors on the link between sleep and road safety, which countries do have data and how can we elaborate/present this data in a more compelling way.

Drs. Allan Pack and Arezu Najafi have been tasked with formulating a working group within the WSS whose focus will be on sleep, sustainable mobility, and road safety.

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Next Steps identified by the WSS taskforce to explore collaborations with the WHO and strategic plans for sleep health guidance and education.

1. In order to identify the current evidence of sleep health across the world, and the gaps and opportunities in which sleep health guidance will have the greatest impact on population health, the WSS will financially support a white paper summarizing the current knowledge of sleep health on a global scale. This white paper is intended to provide a road map of 'where we are' and 'where we need to be' for researchers and clinicians and to raise sleep health awareness in the public health sector. We anticipate (Aug 2022) sharing a draft with all interested parties - Dr. Bull, the NIH, individual sleep societies around the world - to obtain comments and suggestions. This paper will:
 - a. Summarize the evidence presented during the WHO Global Sleep Health Webinar:
 - i. Defining and Measuring Sleep Health
 - ii. Sleep and Cardiovascular and Metabolic Health
 - iii. Sleep and Mental/Brain Health
 - iv. Sleep Health Equity and Disparities
 - v. Sleep and Transportation/Road Safety
 - vi. Current Recommendations by Country for Sleep Health
 - b. Identify gaps in data
 - i. List countries/regions around the world where data is urgently needed
 - ii. List sleep disorders to obtain prevalence
 - c. Strategic intent to obtain data
 - i. Develop a roadmap of how to prioritize data collection, describe and review the model strategy developed by WHO Physical Activity Unit for use in the sleep field
 - ii. Develop methods to screen for sleep disorders
2. The WSS taskforce is enthusiastic to participate in a conference with the WHO, where we can discuss more concrete strategies (both short- and long-term) to prioritize and accelerate the implementation of initiatives to improve global sleep health. Such initiatives could include educational programs and population-based research on the state of sleep health in the world, incorporating the context of diversity, equity, and inclusion. These initiatives will benefit from prior successful efforts the WHO has implemented, such as those that resulted in the establishment of the Physical Activity Unit, led by Dr. Bull. Dr. Zee and Dr. Eastwood will continue to explore synergies between WHO and WSS to move sleep health onto the world stage.

