

NHLBI Continues Its Support of the National Sleep Research Resource: A Community Platform for Connecting People, Tools, and Data to Advance Sleep Research

Brigham and Women's Hospital, June 9, 2020 – The National Heart, Lung, and Blood Institute (NHLBI), part of the National Institutes of Health (NIH), has announced that the National Sleep Research Resource (NSRR), hosted by Brigham and Women's Hospital, was awarded a five-year contract, facilitating an expansion of capabilities and providing support for increased community involvement.

The NSRR welcomes all interested researchers, educators, and trainees to join its user community by signing up at www.sleepdata.org. Over its first 5 years, the NSRR has shared more than 274 TB of data with its 1500+ users, leading to dozens of peer-reviewed publications. Given the emerging opportunities for big data analytics, the NSRR will be transitioned to a cloud-based platform and updated for compatibility with BioData Catalyst, NHLBI's developing cloud-based data ecosystem.

Currently hosting approximately 30,000 overnight sleep studies, the NSRR aims to work with the sleep scientific community to include over 50,000 sleep studies that are easily queryable and can be analyzed to address a wide range of research questions related to physical, psychiatric and cognitive health. This contract will sustain the NSRR's service to the sleep research scientific community, through expanding its offerings of sleep data, standardized vocabularies, and data exploration tools.

The NSRR's goals are to accelerate the discovery of predictive biomarkers of disease incidence and progression and to facilitate science that addresses critical questions regarding susceptibility to sleep disorders and subgroup differences not possible using data from single cohorts. The NSRR provides free web access to large collections of de-identified sleep physiological signals and clinical data elements collected in well-characterized cohorts and clinical trials to support research on risk factors and outcomes of sleep and related disorders.

"The NSRR already has supported 100's of investigators and trainees interested in asking novel questions regarding the roles of sleep disturbances in health and disease, catalyzing discoveries of new biomarkers of sleep disorders and algorithms for analyzing the rich data embedded in sleep records," said Dr. Susan Redline, primary investigator on the contract. "NIH's investment in NSRR will ensure that the NSRR will be sustained as a growing resource to the sleep medicine community, amplifying the NIH's initial investments in research sleep studies." Co-primary investigator, Dr. Shaun Purcell is optimistic that this initiative will similarly provide a boost for sleep research, noting that, "sharing data and tools between research groups – at national and international levels – has been intrinsic to recent advances in other biomedical fields, including human genetics". Other BWH scientists supporting the NSRR are Michael J. Prerau, Ph.D. (Assistant Professor at BWH) and Michael Rueschman, MPH (IS Project Manager).

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