

FACILITIES & RESOURCES

Scientific environment: The University of Pennsylvania consistently ranks among the top universities in the annual U.S. News & World Report survey. Its reputation for educational excellence is complimented by 174 research centers and institutes and several infrastructure cores including, though not limited to, the Institute of Translational Medicine and Therapeutics (ITMAT), The Clinical and Translational Research Center (CTRC), The Center for Clinical Epidemiology and Biostatistics (CCEB) and The Clinical Research Center for Sleep (CRCS).

Host Program: The BSMP (Behavioral Sleep Medicine Program, directed by Michael Perlis PhD) was established in September of 2008. It is one of several sleep medicine and sleep research programs at University of Pennsylvania including: The Penn Sleep Disorders Center and the Division of Sleep Medicine (Allan Pack MB ChB PhD, Center and Division Head), the Division of Sleep and Chronobiology (David Dinges PhD, Division Head), The VA Sleep Disorders and Research Programs (Samuel Kuna MD and Richard Ross MD); The Sleep Research and Medicine program within the School of Nursing (Kathy Richards, Program Director); and the Sleep Center at the Children's Hospital of Philadelphia (Carole Marcus MD, Center Director).

The central mission for the Behavioral Sleep Medicine Program (BSMP) is to apply cognitive, behavioral and neuropsychological principles to the study of sleep and the treatment of sleep disorders. Our program includes all three of the areas that are typical for academic medicine: Clinical service, Education, and Research. With respect to research, it is our plan to expand our research program so that our narrow focus/scope (insomnia) will be balanced by a profound depth of field (spanning from bench to bedside and from bedside to dissemination and implementation research). We are working to accomplish this vision by not only establishing collaborations with other prominent Behavioral Sleep Medicine programs but also by reaching out to programs across a wide range of disciplines, both within the university and nationally, so that our complimentary interests and skills can serve as a strong platform for novel investigations.

BSMP Faculty and Staff. The BSMP has three full time faculty (Clinical Psychologists [Michael Perlis PhD, Phil Gehrman PhD and James Findley PhD], one part time Psychiatrist who specializes in Sleep Medicine and Addictions Psychiatry (Subhajit Chakravorty MD), one primary Psychiatric collaborator who specializes in Sleep Medicine and Geriatric Psychiatry (Nalaka Gooneratne MD); one Post Doctoral Fellow (Michael Grandner, PhD [co-mentored with Allan Pack MD]) who specializes in the issue of short sleep, two clinical research coordinators (one of whom is a nurse), a half time business and grants administrator, and 1-2 work study students.

BSMP Physical Plant. The program maintains a suite of offices (6 units), storage space, and a small library that are co-housed with the Mood and Anxiety Disorders Treatment and Research Program (MAD-TRP) on the 6th floor of the Science Center at 3535 Market Street in Philadelphia.

BSMP Computing Resources. Thirteen computers support day-to-day operations including 7 Dell desktops and 6 Dell laptops. Complimenting this, we have an on-line recruitment web site (www.sleeplessinphilly.com) and a series of study specific internet data portals (e.g., www.vistasleepassessment.com).

Center for Clinical Epidemiology and Biostatistics (CCEB): The CCEB operates a state-of-the-art research computing facility in support of biostatistical, epidemiologic, basic, clinical and translational health research. The CCEB's computing environment is the responsibility of the Clinical Research Computing Unit (CRCU), a designated "Core Research Facility" situated within the CCEB. The CRCU offers two distinct types of services: research computing, data and project management for clinical trials, epidemiologic studies and cooperative basic-science studies; and research computing and information technology support to faculty, fellows, trainees and staff within the CCEB. Our relationship with the CCEB will be directed by Knashawn Morales PhD (See Key Personnel).

Clinical Research Center for Sleep (CRCS): The CRCS is a self contained 4 bedroom unit (2,838 sq. ft. space) located at the University of Pennsylvania Hospital on the 11th floor of Gates Building. The center, which also serves as a core laboratory for Penn's Clinical Translational Research Center, is accredited by the American Academy of Sleep Medicine and is entirely devoted to sleep-related research. The facility includes a central control area, 5 offices, 3 storage/equipment rooms, and a lunch/break room. The 4 bedrooms, 185 sq. ft. each, have fully-appointed private bathrooms, TVs, and a table and chair set for paperwork or administration

of computer-based tasks. Adjoining the CRCS is a separate space with 4 offices for business staff, a secure file room, and a dedicated mail/copy/fax/supply room.



CRCS Technical Capabilities. In addition to routine polysomnographic assessment (PSGs and MSLTs), the lab is set up to undertake several procedures including Quantitative EEG analyses, airway challenge tasks (P_{crit}) and neuropsychological testing as well as routinely offers several standardized protocols including single and serial Psychomotor Vigilance Tasks testing and partial or total sleep deprivation protocols. H&Ps can also be conducted at this site and nursing support may be extended to this site from the CTRC for the collection of biologic samples (e.g., blood and urine samples).

CRCS Staff. The lab is managed by a Chief Technologist/Technical Supervisor(RPSGT); in addition, there are 2 full-time technologists for scoring (1 RPSGT), 1 full-time daytime technologist (RPSGT) for managing home-based study projects, training new staff, scoring, and performing MSLTs, 2.5 night technologists (1 RPSGT) to perform overnight PSGs and P_{crit} studies.

CRCS Equipment. The CRCS has 4 PSG acquisition workstations for in-lab sleep data collection (Sandman SD23 digital system with Sandman 8.0 data collection and analysis software) and 4 sleep study scoring stations. Each station consists of a networked PC. The 4 sleep study scoring stations have internet access for e-mail communication and transfer of data files via web portal. Raw data is saved to CD or DVD and scored data archived manually over a LAN network to a Negear NAS server setup for double backup. The facility also hosts home studies with ambulatory equipment (Compumedics' Safiro, Embla's Embletta and Titanium). Finally, the facility also has dedicated copy machines, fax machines, and a scanner.

CRCS Data Management. All investigators are provided individual reports from each protocol and aggregated data (across subjects) for all measured variables in spreadsheet formats. All subject information is de-identified.

CRCS Computer Resources: Thirty desktop computers support day-to-day operations.