

Research in the Harvard-VA Psychiatry Department

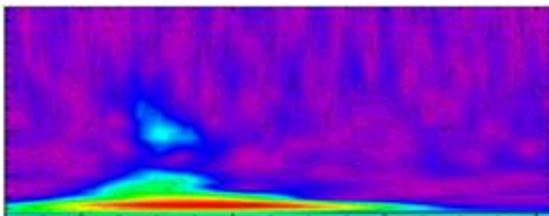
A. Departmental Research

Research in the Harvard-VA Department of Psychiatry covers the spectrum of modern behavioral and mental health research priorities. Faculty have numerous research grants from a wide array of organization including NIH, VA, Department of Defense, the Commonwealth of Massachusetts, and various foundations. Faculty received \$1.7M in NIH grants and \$3.1M in VA grants in FY17. Approximately 75 grant proposals are submitted annually through the Department.

Major research programs in the Department include the following:

- **Behavioral Neuropsychology/Neuroscience Research, including the Geriatric Neuropsychology Laboratory (GNL) and the National Network Center called the Translational Research Center for TBI and Stress Disorders (TRACTS)** (Milberg, McGlinchey): These programs conduct multidisciplinary studies aimed at understanding the behavioral, biomedical and neurobiological impact of aging, stroke, neurodegenerative disease, cerebrovascular risk factors, developmental disorders, and deployment trauma across the lifespan.
- **Geropsychology Research Program on Law, Ethics, and Aging - Including the Boston-Bedford Geriatric Research, Education, & Clinical Center (GRECC)** (Moye): This program focuses on improving: (1) capacity assessment, and (2) behavioral healthcare for multi-morbid older adults, as well as work on cancer survivorship. Several educational evaluation projects focus on geriatric education under the auspices of the GRECC.
- **Laboratories of Neuroscience – Basic Science Division** (Strecker, Brown, Basheer, McKenna, Gerashchenko, Kalinchuk, McNally, Zielinski, Yang): A team of 15 full-time scientists conducts basic neuroscience research on: (1) brain circuitry involved in sleep-wake regulation, functions of sleep and consequences of sleep loss; and (2) neural circuit abnormalities in rodent models of neuropsychiatric disorders, especially schizophrenia.
- **Mental Health Services Research** (Bauer, Miller, Kim): The multi-disciplinary VA Center for Healthcare Organization & Implementation Research (CHOIR) includes major research foci in mental health recovery and collaborative care, medication optimization, and health communications. Studies utilize a wide variety of health services research methodology, including controlled trials, big data analysis, qualitative data, and implementation science strategies.

- **The Schizophrenia and Other Psychoses Program** (Niznikiewicz, Spencer, Shenton, Del Re): This program includes research projects studying the neural substrates of psychosis in schizophrenia and bipolar disorder using advanced functional and structural neuroimaging and



electrophysiology. This program is funded by VA, NIH, and private foundation grants.

- **Etiologic and Treatment Studies of Serious Mental Illness** (DeLisi): Genetic and brain imaging studies are being performed in patients with schizophrenia, bipolar disorder and patient with PTSD and psychotic symptoms in order to understand the underlying pathways to illness from early illness to chronicity. In addition, participation in national multi-site clinical trials through the VA Cooperative Studies Program includes a multicenter treatment trial of lithium for repeated episodes of suicidality, regardless of diagnosis.
- **Families and Addiction Research Program** (O'Farrell): This psychosocial treatment outcome research on addiction focuses on couples therapy and on partner violence among substance use disorder patients. Recent work showed that couples therapy had better outcomes than more typical individual therapy among alcoholic and drug-abusing women, and that standard couples therapy did better than group couples therapy among alcoholic patients.
- **Substance Use Disorders Services Research** (Chang): This program focuses on two areas: (1) identification and treatment of alcohol use disorders among women veterans, and a multi-site study of screening measures among 1200 pregnant veteran and non-veteran women; and (2) clinical research to introduce junior faculty and trainees to clinical research topics and methods, e.g., evaluating predictors of treatment persistence among veterans with opioid use disorders.

B. The VA Boston Healthcare System Research Environment

VABHS received approximately \$61 million total funding in FY 2016, of which approximately \$41 million was provided by the VHA Office of Research and Development (ORD). VA research funding for VABHS is perennially among the highest in the nation with investigative programs funded in basic science, clinical research and clinical trials, and health services and implementation science. VABHS is fully accredited for animal (AAALAC) research and was fully re-accredited for human subject research (AAHRPP).

Currently VABHS Research includes 804 active projects and 291 active investigators covering basic science, animal and human research. VA grants are submitted four times per year (basic laboratory and clinical science are submitted for the spring and fall cycles and health services and rehabilitation research submitted during the summer and winter cycles). An average of 24 grants encompassing merits, pilot studies and career development are submitted each round, or close to 100 proposals annually.

VABHS is home to over 10 nationally competed research centers. Among those most relevant to the Harvard-VA Psychiatry Department are:

- Center for Healthcare Organization and Implementation Research (CHOIR; co-awarded to VABHS and Edith Norse Rogers VA in Bedford): the largest VA Health Services Research & Development Center of Innovation nationally, encompassing all aspects of health services research and implementation science.
- Two divisions of the VA National Center for Post-Traumatic Stress Disorder: the Behavioral Science Division, which specializes in the study of the role of behavior in adaptation to traumatic stress; and the Women's Health Science Division, which focuses on women's issues in the pathogenesis and recovery from PTSD. These divisions house over 50 staff including Principal Investigators and research and administrative support staff.
- Massachusetts Veterans Epidemiological Research and Information Center (MAVERIC), which also includes:
 - VA Cooperative Studies Coordinating Center and New England-wide clinical trials network
 - The Million Veteran Program, a national genomics project that to date has enrolled more than 550,000 research subjects nationwide, a lynchpin for VA's national precision medicine initiatives.
- One of only two VA-sponsored tissue & bio-repository facilities nationwide
- A highly recognized national research program in chronic traumatic encephalopathy (CTE) with brain banks for Alzheimer's disease, CTE, amyotrophic lateral sclerosis, and PTSD will all soon be located at the Jamaica Plain Campus in a newly renovated building.
- A state-of-the-art Research Neuroimaging Center, including the Neuroimaging for Veterans Research Center (NeRVe), focusing on advancing the understanding of normative and pathological conditions that impact Veterans' well-being, with an aim toward improving clinical care and optimizing cognitive and neural health. There are plans to expand the Neuroimaging Center into a new building dedicated primarily to Research in the Behavioral and Cognitive Neurosciences.

