



Psychiatry and Behavioral Sciences

and the Norman and Ida Stone Institute of Psychiatry



Nationally recognized for excellence in clinical care, research and teaching, we are deeply committed to providing contemporary care and new hope for patients diagnosed with mental illness.

Highlights include:

- Advanced neuroimaging and computer technology for brain mapping and the development of more effective tools for diagnosing schizophrenia
- Leading-edge research and expert clinical care for specialties including anxiety disorders, drug and alcohol abuse, mood disorders, psychotic disorders and adolescent and women's behavioral health
- Development of innovative treatment strategies that integrate psychopharmacology and neuromodulation with evidence-based psychotherapies including cognitive behavioral therapy, behavioral activation and dialectical behavioral therapy
- A range of neuromodulation therapies including transcranial magnetic stimulation, electroconvulsive treatment and deep brain stimulation
- Contemporary inpatient care in a state-of-the-art facility
- Outpatient care on the downtown Chicago medical campus and in the community
- 24/7 Psychiatry Emergency Service

For more information about Psychiatry and Behavioral Sciences, please visit psych.nmh.org.

To Our Colleagues:

We are ushering in a new era of compassionate, innovative and personalized care for our patients. Whether care is delivered through our comprehensive outpatient programs or in our new state-of-the-art Norman and Ida Stone Institute of Psychiatry inpatient unit, our clinical team is deeply committed to providing the most effective care to address the full spectrum of mental health needs.

We are working to improve our understanding of the causes and mechanisms that underlie psychiatric disorders. Our hope is that this work will lead to new treatments that will allow our patients to fully resume their lives. By sharing knowledge and training the next generation of leaders in psychiatry we are improving mental healthcare at Northwestern and beyond.

I am honored to be leading this new era and I welcome your interest and support as we work to better understand mental illness, dispel the stigma that still surrounds this area of human experience and set a new and better standard for psychiatric care within the Chicago area and across the nation.

Sincerely,



John G. Csernansky, MD

Chair, Department of Psychiatry

Stone Institute of Psychiatry

Northwestern Memorial Hospital

Lizzie Gilman Professor and Chair

Department of Psychiatry and Behavioral Sciences

Northwestern University Feinberg School of Medicine



Caring for Patients in Crisis

We are reinventing inpatient psychiatry through a contemporary approach to care at the new Norman and Ida Stone Institute of Psychiatry inpatient unit.

Highlights

- **Best practices and combinations of pharmacologic, psychotherapeutic and somatic therapies help accelerate recovery from acute psychiatric illness.**
- **Behavioral activation principles and techniques are incorporated into all aspects of the inpatient milieu, making us the first psychiatric unit in the country to develop an inpatient environment based on this therapy.**
- **An exercise room integrates physical health and mental therapy.**
- **Overhead lighting mimics circadian rhythms to promote the restoration of healthy sleep.**
- **The “neighborhood” model of care relates the inpatient unit to the routines of everyday life, assisting and promoting the transition to outpatient treatment.**
- **Our “Reinventing Inpatient Psychiatry” conference held in September of 2011 drew more than 120 mental health professionals from across the nation to learn about our new model of inpatient care.**

Northwestern Memorial Hospital opened its new 29-bed inpatient unit in the heart of the medical campus in September of 2011.

A healing environment, evidence-based psychotherapy, expert pharmacology and a range of neuromodulation therapies support our goal to accelerate recovery and prepare our patients to transition back into the community. We are the first unit in the country to introduce behavioral activation as part of the milieu for inpatient psychiatric care.

The unit has been designed to support the delivery of high-intensity care in a setting that promotes a sense of community, healing and comfort and helps to restore healthy patterns of mental and physical activity.



Three dayrooms, one quiet and two for socialization, provide comfortable spaces.

“At Northwestern Memorial, we are reinventing the inpatient model of care by using all that we have learned from clinical neuroscience research to provide more effective care.”

John G. Csernansky, MD

Clinical Innovation

Our goal is to engage and intervene early, and to work with the patient and the patient's family to achieve meaningful recovery from mental illness. We have incorporated new concepts of care delivery and novel methods of treatment in order to design a unique treatment program for each patient.

- Incorporating the most up-to-date advances in neuroscience, we combine medications, neuromodulation and psychotherapy to produce better outcomes. Several clinical trials are underway to develop new therapies and enhance existing ones.
- Behavioral activation, which is an essential element of cognitive behavioral therapy, is integral to the culture and helps patients actively manage their illness. All members of our mental healthcare team are trained experts in the delivery of this therapy.
- Neuromodulation therapies, including transcranial magnetic stimulation, electroconvulsive treatment and deep brain stimulation, are available to help patients for whom less intensive therapies are not effective.

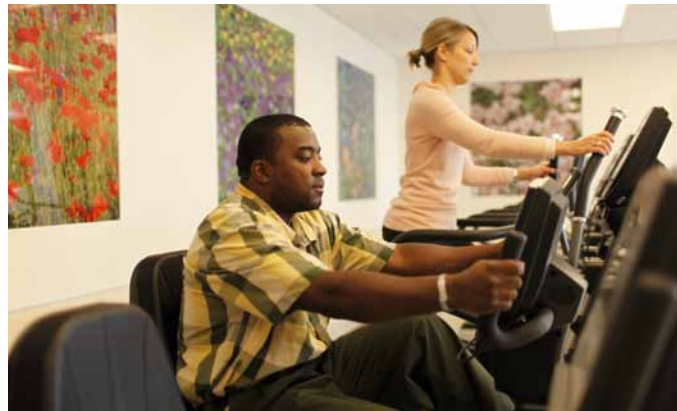


Floor-to-ceiling windows, as shown here in the occupational therapy room, maximize exposure to natural light.

Patient-Focused Design

The thoughtful planning and design of our new inpatient unit supports our ability to treat more severely ill patients in shorter periods of time. Patient-focused concepts, such as programming overhead lighting to mimic circadian rhythms and a “neighborhood” model of care that replicates the movements of everyday healthy living, prepare patients to transition back into their communities.

- Each of the 25 single and two double-bedded patient rooms is located around the perimeter of the floor in order to provide mood-enhancing natural light through floor-to-ceiling windows.
- Patient care areas are separated from visitor and staff areas that are not essential to direct care to preserve privacy and allow caregivers to focus solely on their patients.
- Nursing stations are in open areas to facilitate engagement between staff and patients.
- Healing art has been carefully chosen to add warmth and promote calm reflection and orientation.
- Physical health is integrated with mental therapy through individual exercise in a health club atmosphere and group classes such as yoga.



An exercise room is available on the unit for all patients. Exercise serves as a natural antidepressant, decreases anxiety and stress and increases alertness, energy and motivation.

A Comprehensive Continuum of Care

Patients in the community and beyond benefit from expert diagnosis, early intervention, continuity of care and access to new therapies and clinical research.

Highlights

- **The First Contact Early Intervention Clinic offers integrated services at the initial onset of symptoms.**
- **Neuromodulation therapies, including transcranial magnetic stimulation, electroconvulsive therapy and deep brain stimulation, are available to help patients with severe forms of mental illness.**
- **Innovative treatment strategies are being developed that combine pharmacotherapy with cognitive behavioral therapy and dialectical behavioral therapy.**
- **Outpatient care is offered on the academic medical center campus and in the community.**
- **A Consultation-Liaison Service provides psychiatric evaluation and treatment to patients hospitalized here for other illnesses.**

Through multiple outpatient settings, our treatment philosophy empowers patients with mental illness to lead meaningful lives with the greatest degree of independence possible. Disease-specific programs, which emphasize early intervention, offer individualized care and are paired with related clinical or translational research programs. As critical supplements to our core programs, we offer structured psychotherapy and specialized care such as neuromodulation for patients who do not respond to conventional treatments.



Above: Patients entering supportive housing live in Emergency Housing and later graduate to other levels that require fewer staff interventions.

Left: Group therapy sessions in our outpatient clinics teach life skills such as cooking, budgeting and computer use to support independent living as the patient gets well.

Outpatient and Community Services

Both on the medical campus and in the community, we offer treatments for patients who need psychiatric care outside of the hospital setting. Evidence-based pharmacotherapy and behavioral interventions are used to relieve residual symptoms, minimize unwanted side effects and improve quality of life. Ancillary services go beyond symptom relief and include patient and family education, training in illness self-management and supportive services. We make quality mental healthcare available to those least able to afford it through programs at the Lawson House YMCA in Chicago, the largest single-room occupancy supportive housing facility in the Midwest.

- The Department of Psychiatry and Behavioral Sciences Outpatient Clinic and the Stone Mental Health Center offer cognitive therapy and dialectical behavioral therapy in both group and individual formats.
- The Stone Institute's Warren Wright Adolescent Center tailors care to the needs of young patients and their families.
- The Stone Mental Health Center Satellite Clinic at the Lawson House provides comprehensive psychiatric services in the community to patients in need.
- Also at the Lawson House, the Stone Institute's Supportive Housing Programs provide graduated levels of structured housing and support in finding permanent housing for homeless individuals with severe and persistent mental illness.



In the patient-staffed library at the Stone Mental Health Center, books, DVDs and other resources are available.

Treatments for Specific Patient Populations

In addition to our focus on acute adult psychiatry, we offer mental health treatments for a wide range of patient populations. Through the use of innovative treatment models, we tailor care to meet the individual needs of each patient.

- We offer special disease-related programs for patients who suffer from anxiety disorders, mood disorders and psychotic disorders as well as programs to meet the special mental health needs of adolescents, women and older adults.
- The Stone Institute's First Contact Early Intervention Clinic partners with schools, family counseling centers and primary healthcare providers to offer an integrated assessment and early intervention to patients experiencing the initial onset of symptoms.
- A 24/7 Psychiatric Emergency Service located within Northwestern Memorial's Emergency Department provides immediate psychiatric evaluation, easy access to outpatient and inpatient care for patients in crisis and an emergency phone line.
- A Consultation-Liaison Service supports patients being hospitalized here for medical and surgical reasons. Led by a team of experts in psychosomatic medicine, the service offers comprehensive psychiatric evaluations and recommendations for patients admitted to areas of the hospital other than the inpatient psychiatric unit.



We offer three types of neuromodulation therapy in inpatient and outpatient settings. Options include transcranial magnetic stimulation (pictured), deep brain stimulation and electroconvulsive therapy.

Moving Psychiatry Forward

Advances in neuroscience research are being made to promote and restore mental well-being and to bring innovative treatments to inpatient and outpatient care.

Highlights

- **Researchers are using advanced neuroimaging and computer technology to develop models of brain development in health and disease to aid in the early diagnosis of serious mental illnesses.**
- **The first-of-its-kind Chicago Adolescent Longitudinal Project will identify early markers of mental illness and facilitate early intervention.**
- **We are investigating new ways to combine medication, brain stimulation and psychotherapy to improve clinical outcomes.**
- **Through clinical studies and trials, we are discovering treatments for forms of severe mental illness that fail to respond to conventional treatments.**

With grants from the National Institutes of Health and private foundations, as well as hospital support, researchers are working to improve our understanding of the causes of psychiatric disorders and our ability to diagnose early in the course when the possibility of recovery is greatest. In addition, clinical trials are underway to develop disease-altering treatments that bring hope for a symptom-free life to those diagnosed with mental illness. Areas of special emphasis include neuroimaging, neuromodulation and psychotherapies designed to impact underlying neurobiological processes.



From left to right: Hans C. Breiter, MD; Jacqueline K. Gollan, PhD

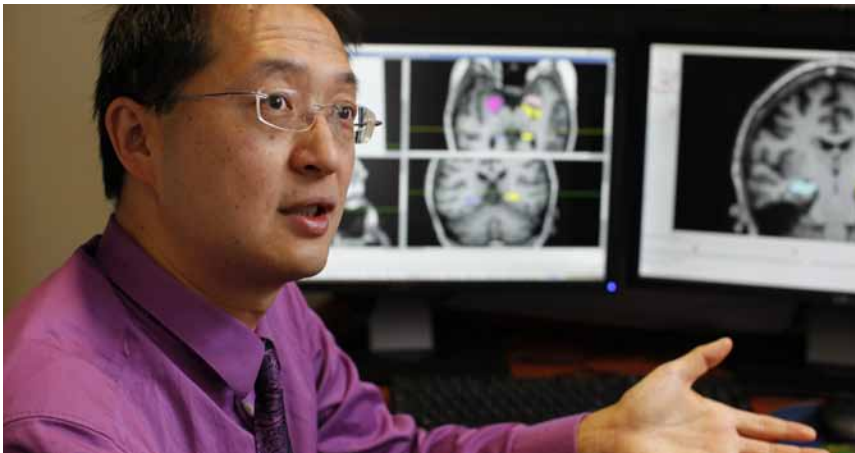
Translational Neuroscience Research

Our basic, translational and clinical neuroscience research programs are generating new knowledge and practical solutions for patients. A major focus is to develop biomarkers, or biological measures, for psychiatric disorders that will provide objective data to help validate the clinical evaluation of patients. For example, abnormalities in the trajectory of brain development have been recently linked to the diagnosis of schizophrenia and related psychotic disorders. With the aid of such biomarkers, we can help patients and their families make better informed decisions about their healthcare.

- Basic research programs are focused on the biological and psychological events that trigger depression and psychosis and age-related cognitive decline. This type of research is based on the study of the molecular and neuronal processes that underlie normal and abnormal experiences.
- Scientists are investigating how brain structure and function change over the lifespan to build a profile of the development of the healthy brain. This model will provide a scientific foundation to more clearly understand the differences in brain structure and function between individuals with and without mental illness. Ultimately these findings will help us create diagnostic aids and new targets for drug and non-drug treatments. With new treatments based on a better understanding of the developing brain, researchers will be able to intervene earlier and more effectively in patients with mental illness.
- Researchers are investigating the brain processes that govern thoughts, feelings and behaviors, and how they are impacted by psychotherapies. With a better understanding, researchers will design new or improve existing psychotherapies to achieve better clinical outcomes.

Clinical and Community-Based Research

- In the spring of 2012, we are launching the Chicago Adolescent Longitudinal Project. In this first-of-its-kind study, we will use genetic testing in combination with repeated neuroimaging and behavioral evaluations to follow adolescents who show vulnerabilities to mental illness. We aim to discover early predictors of adult mental illness and determine what early interventions will allow adolescents to enter adulthood without the burden of such illness.
- Research is underway using multimodal imaging of brain structure, connectivity and function. Combining this comprehensive approach to neuroimaging with mathematical psychology and genetics, we will develop a normative model of the brain as a foundation for understanding the biology of mental illness. Hans C. Breiter, MD, scientific director at the Stone Institute's Warren Wright Adolescent Center and a professor of Psychiatry and Behavioral Sciences at Feinberg, joined the staff in 2011 from Massachusetts General Hospital and Harvard Medical School to lead this new area of scientific study.
- In a National Institute of Mental Health-supported study, we are investigating whether patients with depression experience unique physiological changes during behavioral activation, a specific form of cognitive behavioral therapy. Jacqueline K. Gollan, PhD, assistant professor of Psychiatry and Behavioral Sciences at Feinberg, leads this innovative trial and also helped to incorporate behavioral activation as a central component of the culture of our new inpatient unit.
- Working in collaboration with scientists at other academic medical centers and with the support of the National Institute of Mental Health, we are establishing a nationwide database of information collected from structural neuroimaging, genetic testing and neurocognitive assessment. This will allow for the rapid testing of hypotheses related to the biology of psychotic disorders and will make this unique information available to the schizophrenic research community at large. Lei Wang, PhD, assistant professor of Psychiatry and Behavioral Sciences and Radiology at Feinberg, leads this project.
- We have developed and implemented protocols on our new inpatient unit to replace conventional visual observation for patients at risk of self harm or harm to others. Richard Ray, Jr., RN, MS, and other Northwestern Memorial staff nurses developed the innovative protocols. Outcomes associated with the use of these new methods showing a reduction in patient anxiety and agitation and a decrease in the need for seclusion and restraint have been published in an international journal.
- To make advances in psychiatric care widely available in the community, we are working to identify social disparities and the social policies that influence them. Psychosocial research projects are underway to collect data from disadvantaged populations and to use this information to improve our understanding of existing barriers to psychiatric interventions and to assess the impact of new treatments at the social level.



From left to right: Lei Wang, PhD; Richard Ray, Jr., RN, MS

Developing the Next Generation of Mental Health Leaders

An intense learning experience embedded in clinical practice provides students from a range of mental health disciplines with first-hand experience connecting them to innovative research, a wide range of patient populations and evidence-based treatments.

Highlights

- **More than half of all U.S. graduating medical students entering psychiatry apply to the McGaw residency program here.**
- **Trainees gain experience with diverse patient populations that encompass many socioeconomic, racial and ethnic groups, including immigrant, refugee and homeless mentally ill individuals.**
- **We are training leaders in the various fields of mental healthcare through administrative rotations and opportunities to participate in patient advocacy.**
- **Residents complete their medicine and neurology requirements in the first six months of their training.**
- **The hospital and university offer funding support to trainees for presentation of their scholarly projects at national meetings.**

Training opportunities are made available to students from every mental health discipline. Each year, more than 200 trainees and students gain experience in clinical care and research at Northwestern.



Education Programs

Training opportunities include a four-year adult psychiatry residency program; a psychology internship and postdoctoral program; a psychology graduate program; graduate training in basic and translational neuroscience; and medical student education. Student nurses from 13 different schools are trained annually through rotations in the hospital's inpatient psychiatry unit. Accredited subspecialty psychiatry fellowships are available in addiction psychiatry, geriatric psychiatry and psychosomatic psychiatry. Additionally, the only forensic psychiatry fellowship in Illinois is offered. A two-year fellowship in child and adolescent psychiatry also is available. Psychology interns and postdoctoral trainees are chosen from prestigious graduate programs throughout the United States.

- Unique, collaborative learning experiences are offered by teaching students from different mental health disciplines together.
- Students gain experience in psychiatric education and participate in projects related to clinical research, quality improvement and other process improvement technologies to impact patient care.
- Residents in their third and fourth years gain experience in mental health administration and leadership so that they will be prepared to join the future ranks of discipline leaders.



Top: The Consultation-Liaison Service provides residents, fellows and medical students with experience in diagnosing and treating psychiatric problems in patients admitted to medical and surgical hospital units here.

Bottom: A large clinical learning center is uniquely located on the inpatient unit. It provides a private area for all trainees to discuss patient cases as well as computers and meeting space for individual and group learning.

Northwestern Memorial Hospital is one of the country's premier academic medical center hospitals and a major referral center for the Midwest and beyond. Guided by our *Patients First* mission, we offer a comprehensive range of inpatient and outpatient services in a healing environment that is supported by world-class facilities. Recognized as a national leader in quality and patient safety, we continue to earn honors for our efforts that focus on quality improvement and accountability and we have achieved Magnet status, the gold standard for nursing excellence. We are ranked the No.1 hospital in the Chicago metropolitan area by *U.S. News & World Report* and a range of our medical specialties are consistently recognized in the magazine's "Best Hospitals" project, with 13 nationally ranked in 2011. As the primary teaching hospital for Northwestern University Feinberg School of Medicine, we provide a sought-after learning experience with physicians on the medical staff representing virtually every specialty and carrying faculty appointments at Feinberg. Consumers consistently rank Northwestern Memorial as their "most preferred" hospital and name us as their "Consumer Choice" for having the *best doctors, best nurses, best overall quality* and *best image and reputation*. With a longstanding commitment to improve the health of the community, we provide quality medical care beyond the hospital through partnerships with local health centers in medically underserved areas.

The defining mission of **Northwestern University Feinberg School of Medicine** is to educate the next generation of physicians. While education is the mission of the medical school, we are also deeply committed to research, patient care and community service. Our school stands out among the nation's research-intensive medical schools. We consistently receive high marks in *U.S. News & World Report* surveys and have risen into the top 25 among all medical schools for National Institutes of Health (NIH) funding. In 2010, NIH ranked 11 of Feinberg's departments in the top 20 of their research areas and five in the top 10. Faculty in the research program at Feinberg study and mentor in a range of areas including cancer biology, cell biology, chemical biology, drug discovery, developmental biology, evolutionary biology, genetics, genomics, medical biology, immunology, microbial pathogenesis, neurobiology, pharmacology, structural biology, biochemistry, epidemiology, behavioral sciences, preventive medicine, health outcomes, quality improvement and translational sciences. With our affiliates, we provide patient care to thousands of individuals every year and play an integral part in the communities we serve.



Northwestern Medicine[®] is the shared vision that joins Northwestern University Feinberg School of Medicine and Northwestern Memorial HealthCare to become one of the country's top medical schools and top hospitals during this decade. We are aligning our strengths and resources to encourage innovation and clinical discovery through our focus on exceptional patient care, breakthrough research and academic excellence.



Northwestern Memorial Hospital and Northwestern University Feinberg School of Medicine are located in the heart of Chicago on the downtown medical campus.

- To learn more about Northwestern Memorial Hospital, please visit **nmh.org**.
- To learn more about Northwestern University Feinberg School of Medicine, please visit **feinberg.northwestern.edu**.