

MINDSCAPES

MASS GENERAL DEPARTMENT OF PSYCHIATRY NEWSLETTER FOR FRIENDS AND SUPPORTERS | WINTER 2022

The Need is Acute

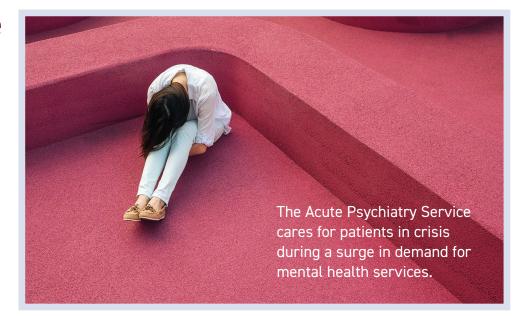
he Acute Psychiatry Service (APS) in the Mass General Emergency Department (ED) is one of the busiest in the northeast, providing emergency psychiatric care for more than 7,000 pediatric and adult patients every year.

Even before the COVID-19 pandemic, which has greatly exacerbated psychiatric emergencies, the sheer number of patients in distress seeking mental health care overcrowded the ED and compelled the hospital to create a dedicated space. Opened in April 2021, the expanded APS unit features 20 individual patient rooms with a quiet and becalming atmosphere that are designed to ensure privacy, safety and dignity and which are far removed from the incessant noise and garish lights of the bustling ED.

"The fact that our hospital made this level of commitment to provide an incredibly humane environment for people who are suffering from acute psychiatric disorders is really unprecedented across the state," says Joy B. Rosen, vice president for behavioral health at Mass General. "It has become a model for other hospitals in our system who are looking to reorganize their EDs."

Thoughtful and Safe Design

It took a multi-disciplinary hospital team to design the space, a meticulous and creative melding of form and function. The walls on the windowless unit on the ground floor of the Bulfinch building were purposefully decorated with colorfully



vivid nature scenes; the patient rooms and the bathrooms, including the showerheads, paper towel dispensers and toilet paper holders, were carefully constructed to minimize patient self-harm. On top of the door to each patient room, for example, an electronic ligature alarm sounds — loudly — if a patient tries to put something over it to try to hurt themselves.

A small common area resembles a comfortable living room where patients can socialize, play a game or enjoy a snack (in non-COVID times when there are no social distancing requirements). Located near one of the unit's secure nursing stations, the area is always under supervision.

Rooms were designed with different types of patients in mind, says Robert Seger, executive director of emergency medicine. For pediatric patients, six slightly larger rooms were created to accommodate a parent or guardian visitor. For geriatric patients, two rooms feature recliners for ease of mobility. Behavioral health beds are low to the ground, he notes, which makes it difficult for older patients to get in and out of them.

Combatting the Chaos

A separate psychiatric area in the ED also reduces the potential for patients to become agitated and potentially violent, either toward other patients or staff. This separate space also helps reduce stigma, Seger notes. In the main ED, "It is a very stressful situation, an anxiety-provoking environment. These patients end up being crowded together and it's very easy for escalation to occur," he explains. It is easy to identify and stigmatize psychiatric patients because most of the patients are required to change into safe clothing, such as brown scrubs, to minimize self-harm.

"The care and thoughtfulness that went into the planning and design — I've



A Message from the Chief

s a friend of the department, I know you are well aware of the alarming mental health crisis we are facing in this country after two years of the COVID-19 pandemic. I am tremendously grateful to my Psychiatry colleagues at Mass General who are working day in and day out to serve and treat patients with mental health needs.

Access to care is a growing problem. That people are suffering because there are not enough doctors and not enough beds weighs heavily on us. For this reason, I recently wrote a commentary published in the Boston Globe that called on legislators, insurance companies and regulators to respond boldly and swiftly to what I referred to as a "mental health pandemic within a pandemic."

Since March 2020, psychiatric emergencies have emerged as a tremendous challenge, not just for Mass General but also nationwide. Psychiatric patients sometimes wait for days — even weeks — in hospital Emergency Departments, as this issue's cover story illustrates. Results of a recent national study, led by Associate Chief for Research Roy Perlis, MD, indicate that rates of depression are roughly three times what was observed prior to the COVID-19 crisis, and that most adults with mental illness do not receive treatment.

To address this challenge, I recommend increasing the number of trained mental health clinicians to improve access to care; expanding the number of psychiatric beds to allow for greater ability to treat the acutely ill; improving insurance reimbursements for psychiatrists and psychologists to reduce the incentive for clinicians to accept only those who pay out of pocket; and allowing clinicians to provide virtual care across state lines to optimize mental health care.

The Boston Blobe

The country's mental health crisis: A pandemic within the pandemic

By Maurizio Fava Control of the second seco

these who pay out of pocket. = Allow clinicians to provide wirkual care across state lines to optimize mental health care. During this pandemic, psychiatric emergencies have emerged as a tremendous challenge, not as a tremendous challenge, not as a tremendous challenge, not of the state of the second part of the state of the second rel disorders has allowed the psychiatry department to provide over 230,000 outpatient visits per year. srow the number of traineepsychologists and psychiatrists is a significant expense to hospitals and academic health centers dospite Medicare's Direct Graduate Medical Education support of psychiatry residency programs. A significant proposition of the care of patients with mental illness is provided by these trainees, and yet, with the exception of some enlightened insurance companies, most insurers do not reimburse most insurers do not reimburse

I invite you to read the full op-ed; scan the QR code below with your smart phone camera.

New digital technologies, treatments and models of care will help solve the problem of access to care and Mass General Psychiatry is in the forefront of developing innovative approaches to meet the demand. One initiative is the new Center for Digital Mental Health, which we launched in January and is led by Chief of Psychology Dr. Sabine Wilhelm. As you will see in this issue, our faculty are working on groundbreaking treatments, such as ketamine and psychedelics. They hold great potential to help individuals with severe depression, while keeping them out of hospital inpatient units and, indeed, hospital emergency departments — and, above all, lessening their suffering and saving their lives.

MAURIZIO FAVA, MD Psychiatrist-in-Chief



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A Trusted Leader Takes the Reins

Hospital Veteran Dr. David F.M. Brown is the New President of Mass General

*A s the new president of this great hospital, I want to reiterate Mass General's resolute commitment to providing outstanding psychiatric services," says David F. M. Brown, MD, who assumed his role in September 2021.

Psychiatry is the second largest department in the hospital after Medicine and addresses the mental health needs of one out of every eight patients in Mass General's medical and surgical units. "It is a point of pride that the department is consistently named one of the best in the country by U.S. News and World Report," Brown says.

Dr. Brown is an MGH "lifer" who came to Mass General in 1989 as an intern and never left, joining the faculty in 1992 as a practicing Emergency Medicine physician and later serving as department head. As president, he succeeds Peter L. Slavin, MD, whom he considers a mentor and a friend. Dr. Brown says he shares Dr. Slavin's deep commitment to psychiatry services in a general hospital and to advancing patientfocused care and hospital-based research.

For Dr. Brown, "the patient is kept at the center of every discussion and as part of every decision." In his 33 years at the hospital, he notes, he has been "continuously impressed by the compassionate expertise of department (of psychiatry) clinicians and their dedication to alleviating patient suffering."

The prolonged COVID-19 pandemic has presented many challenges to the hospital community. "From the start, the psychiatry department quickly and adroitly addressed the unprecedented mental health needs of our patients and also our staff," he says.

During the first surge of the pandemic in the spring of 2020, Dr. Brown was serving as chair of Emergency Medicine and personally cared for COVID patients in the Mass General emergency department (ED). He moved out of his home for almost four months to protect his wife and family,



David F. M. Brown, MD, the new president of Mass Genera

As president, Dr. Brown succeeds Peter L. Slavin, MD, whom he considers a mentor and a friend. He shares Dr. Slavin's deep commitment to psychiatry services in a general hospital and to advancing patient-focused care and hospital-based research.

including his daughter who lives nearby and was pregnant at the time. He stayed in a Beacon Hill apartment near the hospital where he could check in daily with all three shifts of care providers in the ED.

"In emergency medicine, we signed up for this a long time ago — the expectation that we would be the first wave on the beach to serve our community, but the impact on our team's collective mental health has been cumulative and significant," he said.

That first wave of caregiving extends to patients in need of psychiatric emergency care. With the support of Dr. Slavin, Dr. Brown championed the expansion of the Acute Psychiatry Service (APS) in the ED (see this issue's cover story). "The previous APS was markedly undersized for the ED's volume of patients, creating challenges in their care delivery as well as challenges for the staff caring for other ED patients," he says.

The hospital committed \$22.5 million to the two-phase project and hired more than 90 clinicians and other personnel to fully staff the unit.

"We were very excited to open this new and enlarged unit to care for these patients.

This is a groundbreaking approach to psychiatry care."

Dr. David Brown will be the special guest speaker at the 11th Annual Visiting Day of the MGH Leadership Council for Psychiatry on June 6, 2022. The symposium is a signature educational event of the Leadership Council and features distinguished faculty of the Department of Psychiatry sharing the latest advances in clinical care and research.

The mission of the Leadership Council is to advance knowledge and treatment of mental illness, reduce its stigma and promote understanding and compassion for those who suffer. Council members serve as "ambassadors" for the department, galvanized by the great need for mental health care and research to find new and improved treatments.

To learn more, visit the Leadership Council's web page: giving.massgeneral.org/psychiatryleadership council.

Hope in a Vial

The IV Ketamine Clinic is helping people with severe depression reclaim their lives

I t's 5:00 pm. The clinic's first patients of the evening, an elderly man with a cane and a young woman with short hair, are upstairs, waiting, as Cristina Cusin, MD, retrieves the vials of ketamine from the pharmacy technician in the hospital basement. Dr. Cusin and her team will inject a vial slowly into the vein of each patient's arm to provide relief for their severe depression.

For some patients this vial "is literally the difference between functioning or almost dead," Dr. Cusin says, with her characteristic candor and passion for her work. "People don't realize what really severe depression is like. It is a beast," she notes. She likens it to a Stage 4 advanced disease diagnosis.

Dr. Cusin is director of the IV Ketamine Clinic at Mass General, which opened in 2018. Ketamine is a medication primarily used as anesthesia and, illegally, as a hallucinogen, but it is proving effective at reducing severe depression and suicidality. The current treatments for major depressive disorder, which is associated with a 20-fold increase in risk of suicide, can take weeks or months to work. Ketamine rapidly decreases depression in patients at high risk for suicide and suicide attempts, with fewer side effects.

"She never loses hope. Her heart is huge," is what her colleagues said when they nominated her for the Department of Psychiatry's first "Clinical Excellence Award" (she was one of three recipients in January). "The most treatment-resistant patients are her patients."

A Unique Model

The IV Ketamine Clinic is one of a handful in the country that is actually integrated in an academic center, says David Mischoulon, MD, director of the department's Depression Clinical and Research Program. "As such, the clinical care is strongly supported by findings obtained in clinical trials," he notes.

Ketamine therapy consists of a series of infusions that need to be administered and carefully monitored in a clinical setting. Dr. Cusin relies on current data to guide her treatment plans and individualize doses and regimens for her patients, "unlike some commercial clinics that use one-size-fits-all dosing schemes and are often operated by non-psychiatric practitioners who may be less knowledgeable about depression," Dr. Mischoulon notes.

The clinic has a three and half month wait list and remained open throughout the COVID-19 pandemic because it was considered essential to "prevent worsening and possible hospitalization of the high-risk patients we serve," says Dr. Cusin. It recently received authorization to treat teenagers, in the range of 15 to 18 years old. Dr. Cusin has seen patients whose depression started at age 8, who attempted suicide by age 12 and who have failed many treatments already by age 15.

While ketamine holds great promise for patients, it also presents a host of challenges, even at Mass General, where department leadership is strongly committed to the therapy.



Dr. Cristina Cusin, second from left, with several staff members of the IV Ketamine Clinic at Mass General.

The effects are relatively short-lived. Ketamine alleviates symptoms of depression and suicidality in almost 50% of patients, often within one day, and its effects lasts for two to four weeks. Most patients will relapse within weeks after stopping treatment and need ongoing maintenance.

More Research Needed

The American Foundation for Suicide Prevention recently awarded Dr. Cusin a \$1.3 million grant to study the real-world effectiveness of maintenance treatment with IV ketamine for six months in patients who are hospitalized for suicidality and depression.

However, ketamine as a psychiatric treatment is viewed as experimental by traditional funding sources, such as federal agencies, and also by insurance companies. The treatments, which currently cost \$530 per infusion visit, are typically not covered by insurance. After years of negotiations, in October 2020, Blue Cross Blue Shield of Massachusetts and AllWays Health Partners, signed contracts with Mass General to reimburse a fraction of the patient billing.

A Significant Need

Approximately 20 patients per night are treated at the clinic, which currently operates three evenings per week out of the Blood Transfusion Service on the ground floor of the Jackson Building. Patients have complicated mental and, often, physical health needs, including severe anxiety and PTSD and require support from specialists and an integrated care team. More space is needed, and more resources, including a case manager, a social worker and clinicians, especially therapists, who can follow the patients on an outpatient basis, Dr. Cusin says.

"People with severe depression often get re-hospitalized, or re-attempt suicide within a few months. We can't simply discharge them and hope for the best," she says. "If we can keep people out of the hospital and out of the morgue, that means that ketamine makes a difference."

The Need is Acute continued from p. 1

never seen anything like it," says APS Nurse Manager Margaret Ford, RN.

"The ED was all-in," says Rosen of the design team. "The new space was to alleviate overcrowding in the ED overall, but the focus was also on making sure that psychiatry patients received the care they need."

A Different Time

Two years into the pandemic, however, the impressive, state-of-the art unit does not have enough beds to meet the demand. "Right now, the mental health crisis is a pandemic within a pandemic. These are problems that are not going to be quickly solved," Rosen says.

"The environment of care in our new space is tremendously better. It is a great step up from the ED. But it is not a solution to the fact that people are boarding for days, sometimes weeks, particularly pediatric patients," says APS Director Suzanne Bird, MD.

The APS exceeds capacity every single day. Acutely ill patients, some of whom are agitated, prone to violence or homeless, can still spend days in the main ED, on a recliner or on a stretcher in a hallway. In the APS itself, some patients wait weeks for transfer to care or placement in an appropriate treatment facility. One sevenyear-old patient recently spent four weeks in the unit.

"It's heartbreaking," says Ford. The number of pediatric patients who seek care in the ED has increased during the pandemic, including children with behavioral dysregulation and autism spectrum disorders, she notes.

"Yesterday, we had 49 patients," Dr. Bird says during a recent tour of the space. "That means 29 patients are spread all around the rest of the ED." Even for patients in the new APS unit, with a television and a private, comfortable place to rest, "you are still stuck in a room for 24 hours a day," she says.

When the planning process began in 2018, metrics showed that a unit of 20 beds would be able to accommodate most of the



Left, nurse Manager Margaret Ford, RN, and Director Suzanne Bird, MD, in the Acute Psychiatry Service unit at Mass General. Right, patients meet with visitors and staff in a specially designed common area.

APS patients, or the 75th percentile, Seger notes. That is no longer the case.

The pandemic and its host of detrimental effects on mental health, including the toll of isolation, the loss of loved ones and livelihoods and the rise in substance use disorders, is one reason, but not the only one, for the dramatic increase in patients.

This winter, patients are staying longer in the ED because inpatient units in the hospital and throughout the region have fewer beds because of staffing shortages, including vacancies and COVID-positive cases among staff and patients. In January, Rosen noted that 200 beds were offline that day throughout the Mass General Brigham (MGB) system. With the nationwide shortage of outpatient services, as well as inpatient facilities, individuals seek psychiatric help in the ED because there is nowhere else to go.

"The problem is the wait," Dr. Bird says. "The ED is not a place to get better."

Rosen agrees. "Unfortunately, the APS is facing challenges. It is not set up to be an inpatient unit. It is not designed that way and not staffed that way."

Solutions on the Horizon

Fortunately, however, the hospital's commitment to the new space also

extended to increased staffing levels more nurses and more mental health professionals — so patients can receive not only evaluation and assessment but also treatment, allowing for the possibility that they can be discharged without transfer to another facility. In addition, philanthropy has helped, such as the recent gift from Gary and Melissa Tearney to support a new half-time child psychologist position in the APS. Funding is also needed for staff support, to address burnout and to promote professional development.

Solutions to the boarding crisis may be on the horizon, says Rosen, including fast-acting medications and treatments to decrease the need for the ED, and political leadership, at least on the state level in Massachusetts, that is committed to expanding mental health services. The larger-scale challenges to mental health care, she notes, range from insufficient insurance reimbursements to years of programmatic underfunding and workforce shortages.

"To be totally honest, the entire system needs to be overhauled," says Dr. Bird. "We need a complete restructuring of how mental health care is provided in this state and in the country."

Investigating the Aging Brain

Optimal mental health in older adults a research focus of Mass General's Olivia I. Okereke, MD, MS

F or older adults, the fear of cognitive impairment and dementia can cloud their future. Geriatric psychiatrist and epidemiologist Olivia I. Okereke, MD, MS, is working to reduce that uncertainty and promote optimal mental health in later life through research focused on novel and effective prevention strategies and potential interventions.

"Imagine that you could take a blood test at a local lab and that it would give you a profile of risk 10 to 15 years into the future," says Dr. Okereke, who is director of geriatric psychiatry at Massachusetts General Hospital and associate professor at Harvard Medical School. She is also a Terry and Jean de Gunzburg MGH Research Scholar 2021-2026.

Biomarkers Hold the Key

More than five million Americans are affected with Alzheimer's disease (AD, which has no cure; millions more suffer with mild cognitive disorders and are at risk for AD). The behavioral symptoms of cognitive disorders can often be the most impairing in daily life. Dr. Okereke's goal is to identify novel pathways and biomarkers underlying behavioral problems in AD.

Dr. Okereke is heavily invested in biomarker science, where characteristics of the body can be measured, using blood samples or neuroimaging, and leveraged to identify underlying factors impacting cognitive disorders in aging adults. Biomarkers hold the key to early intervention, and, indeed, prevention of AD and cognitive disorders. "It would be an exciting breakthrough to identify such markers in blood samples, as collecting blood involves low burden for patients and is widely accessible," she notes.

"Philanthropic support could fund critical pilot data that would greatly increase the chances of subsequent federal grant awards for doing this kind of work in larger samples," says Dr. Okereke. "With additional resources, we could multiply



"Imagine that you could take a blood test at a local lab and that it would give you a profile of risk 10 to 15 years into the future."

DR. OLIVIA OKEREKE,
Psychiatrist and Epidemiologist

by tenfold research into other types of behaviors. We have a lot of potential with these areas of investigations to do novel things," she adds.

The Role of Vitamins and Supplements

Dr. Okereke's work also addresses molecular and metabolic mechanisms of how vitamin and nutrient supplements affect mood and memory during aging. Specifically, she has been researching the impact of nutrient supplements in preventing depression in older adults. She is the lead investigator in the VITAL-DEP research study, or the Vitamin D and Omega-3 Trial Depression Endpoint Prevention, funded by the National Institutes of Health.

"People take a vitamin or supplement with the expectation that they will feel better. We are literally testing that hypothesis," she says.

So far, the VITAL-DEP study found that effects of vitamin D on depression were "neutral," with no harm or side effects, but no benefits either. More research is needed, Dr. Okereke explains, to understand how vitamin D works and for whom. Preliminary findings, for example, indicate that people of normal weight have more protection against depression risk than overweight individuals – perhaps due to how vitamin D is absorbed. But she and her collaborators did find strong benefits of the omega-3 supplement in that it seemed to reduce inflammation, which can have important long-term implications for brain health and aging.

One Good Thing Leads to Another

VITAL-DEP is a springboard for other funding, Dr. Okereke notes, and it leverages other work already being done in brain aging research. For instance, she is researching tools to predict biological age. And in published preliminary work, she has observed that physical health, regular exercise and social supports correlate to slower aging, while behaviors such as cigarette smoking and alcohol overconsumption correlate to faster brain aging, as does persistent anxiety.

The work — and the breakthroughs on the horizon — are possible because she is based at Mass General, Dr. Okereke states. "This work is highly collaborative, and it is not possible to do it unless you are working with a really broad network of collaborators."

Ekaterina Malievskaia, MD, and George Goldsmith: *Why We Give* to the Center for the Neuroscience of Psychedelics

The statistics are staggering: About 320 million people worldwide suffer from depression, and an estimated 100 million of them struggle with intractable or treatment-resistant depression (TRD). Ekaterina "Katya" Malievskaia, MD, and George Goldsmith are early supporters of the Center for the Neuroscience of Psychedelics at Massachusetts General Hospital. As co-founders of COMPASS Pathways, a London-based mental health care company developing a psychedelic therapy for people who struggle with TRD, their mission is to transform the patient experience with mental health care. They made their gift to Mass General to advance research into the role novel psychoactive compounds could play in helping us develop better treatments for serious mental illnesses.

Why did you decide to make a gift to Mass General and the Center for the Neuroscience of Psychedelics?

George: What's really important is that we help support the evolution of science in this area of innovation in mental health. Our view was to work with the leading institutions and Mass General is certainly among them. The combination of clinical expertise, scientific expertise and imaging capabilities is unique to Mass General.

"We absolutely need to start moving towards a precision approach in treating mental illness. This is what we aspire to support with our gift to MGH."

- EKATERINA MALIEVSKAIA, MD

Katya: Sharmin Ghaznavi, MD, PhD, the associate director of the Center, is a rising star who will undoubtedly make a difference in the field of mental health. She understands the complexities and interdependencies of the research, that it is a long path ahead, and will take a lot of time, effort and funding, to answer the basic questions and advance the science. She is highly motivated by patients' needs. As a clinician myself, I can see not only a scientist, but a clinician in her, and that gives me confidence.

What is the potential of psilocybin therapy for major depression that is resistant to treatment?

Katya: Treatment-resistant depression means that symptoms aren't helped by currently available treatments. With every failed treatment, the chances of patients getting better drop significantly. These patients suffer significant personal, professional and financial losses over the course of their illness, and we need



George Goldsmith and Ekaterina Malievskaia, MD, philanthropic supporters of the Center for the Neuroscience of Psychadelics

to be thoughtful about how we develop and deliver innovative treatments. We absolutely need to start moving towards a precision approach in treating mental illness. This is what we aspire to support with our gift to MGH.

George: We think a lot about the "three P's." Personalized. Predictive. Preventative. From our point of view, it is the future of care. It distinguishes between treatment and care, this idea of a partnership with a patient to improve their life experience. It is a caring relationship, rather than one where a "treatment" is prescribed and then the issue is fixed. If you don't have the right tools, it's very frustrating for psychiatrists. There is a hunger for something new. But we absolutely must have the evidence that new tools work, beyond the safety and efficacy.

What is your approach to philanthropy?

Katya: It's really important to understand what your goals are. Ours are to support change in the ecosystem, whether it's through our company, or philanthropically and personally. We ask ourselves: what can we do to address different parts of the ecosystem in order to move it forward? It's just not enough to fund good intentions. By donating millions of dollars, we take this money out of circulation forever, so there has to be a serious return in the form of social and scientific impact.

George: We are particularly focused on removing barriers. How do we accelerate the research capability of leading scientists by removing the fundraising challenges and giving them more time to advance the field? Investing in the right people, high-level talent who can really make a difference, is such a multiplier effect. Their ideas influence others. That has an impact on the ecosystem — biologists might inspire psychiatrists, neuroscientists. Even though our gift to Mass General is philanthropic, it is an investment in people that yields a return in knowledge and capacity.



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WAYS TO GIVE

For information about how to support the clinical care, research, teaching and community health activities of the Mass General Department of Psychiatry, please contact Senior Director of Development Alex Dippold at 617-726-7504 or *adippold@mgh.harvard.edu.*

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To learn how we seek to transform the mental health landscape with bold approaches, visit giving.massgeneral.org/psychiatry.

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