

2017-18

# IMPACT REPORT

## ADDRESSING SPECIAL POPULATIONS



**DEPRESSION CENTER**  
MICHIGAN MEDICINE

[depressioncenter.org](http://depressioncenter.org)





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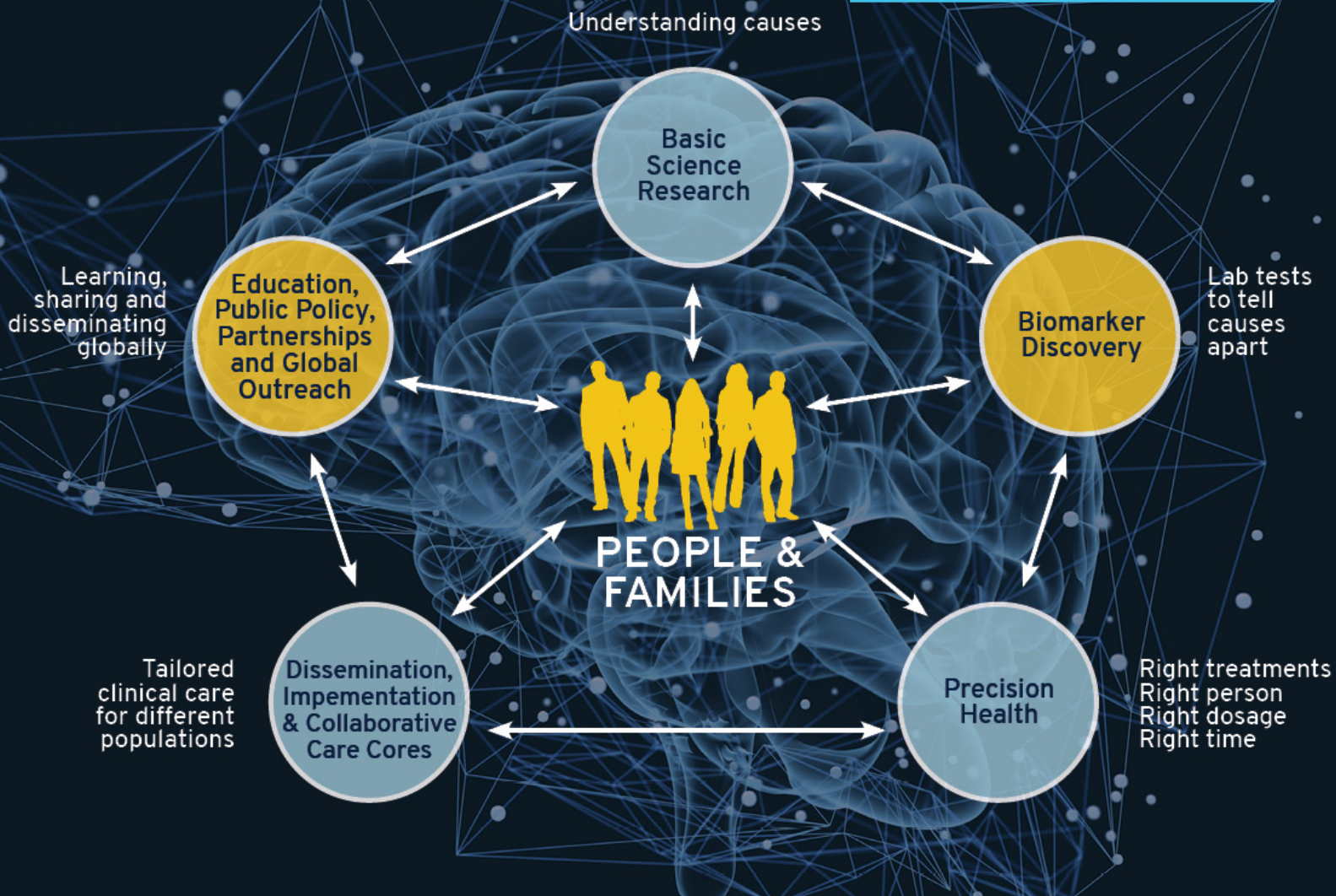


**T**hose of us devoted to conquering clinical depression, bipolar illnesses, and related disorders get frustrated every time we read that mood disorders remain the most disabling illnesses in the world (World Health Organization data). We also become more motivated. We know that we are making great advances in knowledge.

The U-M Depression Center was the first of its kind. It boldly endorsed openness and honesty about its mission which is to detect depression and bipolar disorders earlier, treat more effectively, prevent recurrences and progression, counteract stigma, and improve public policy.

In this edition of our annual Impact report, we walk you through some examples of how we are living out this mission. Some of our stories include Depression Center scientists and clinicians who are looking to develop ways to improve depression screening and treatments for youth; evaluating the relationship between sleep, depression, and stress in medical interns; the development of biomarkers to determine who will and won't respond to ketamine; and how to improve suicide prevention in schools throughout Michigan and the nation. Prechter bipolar team members are using pluripotent stem cell studies to understand how electrical currents might improve change brain function for severely depressed individuals. This is just a sample of what our amazing cohort of researchers are doing.

**“The burdens of brain-behavior illnesses remain distressing. Growing surges in knowledge and better treatments remain promising and hopeful.”**



This report also reflects on the successes of our long-time programs such as Peer-to-Peer, the Michigan Child Collaborative Care program, and Campus Mind Works. We share summaries on some of our newer programs like Mood Lifters, Zero to Thrive, and After Her Service which is tailored to women veterans. Turn the pages to learn about our special guest at this year's annual Depression on College Campuses conference, and catch up on our fruitful partnership with the National Network of Depression Centers (**NNDC.org**).

Many of these programs are fueled by the generous contributions of our donors, dollars which then are converted into longer-term grants.

The burdens of brain-behavior illnesses remain distressing. Nevertheless, growing surges in knowledge and better treatments remain promising and hopeful. Thank you for being a partner in promoting the latter. Please give us your feedback. **M**

**John Greden, M.D.**  
 Founder and Executive Director  
 University of Michigan Comprehensive Depression Center



# RESEARCH IN ACTION

Depression Center research draws from expertise of investigators from across the University of Michigan, one of the nation's premier research institutions.

Depression Center researchers are committed to learning more about the causes of depression, bipolar disorder, stress, fears, and related conditions; preventing and treating those diseases with tailored, personalized treatments; and helping people stay well.



# FRANCES AND KENNETH EISENBERG RESEARCH AWARDS

The following three awards were made possible through a generous gift to the U-M Depression Center in October 2016 from Frances and Kenneth Eisenberg.

## EISENBERG TRANSLATIONAL RESEARCH AWARD

**J**acek Debiec, M.D., Ph.D., assistant professor of psychiatry and U-M Depression Center member, was awarded with the inaugural Eisenberg Translational Research award. Dr. Debiec will study “Interference with Memory Reconsolidation Processes to Decrease Depressive Ruminations and Suicidality in Severely Depressed Youth Receiving Electroconvulsive Therapy.”

Electroconvulsive therapy (ECT) is a recommended treatment for severe and pharmacotherapy-resistant mood disorders. One of the major adverse effects of ECT, which significantly limits its use, is an associated memory impairment. However, recent research in neuroscience suggests that memory-impairing effects of ECT may, at least in part, depend on the cognitive and emotional state of the patient prior to the ECT procedure.



“In this project, we propose to investigate the effects of a pre-ECT recall of depression-related and neutral cognitive and emotional states on the clinical outcome,” said Dr. Debiec. “Through combining a well-established psychiatric treatment method (ECT) with the cutting-edge neuroscience, this project has the potential to change the way we understand and treat severe, treatment-resistant mood disorders.”

“This study aims to uncover the causes of memory impairment during ECT treatment and to optimize ECT treatment for severe depressive symptoms,” said John Greden, M.D., executive director of the U-M Depression Center. “The more we know about this technology, the more effective it will be for our patients and their families. I am excited to see what Dr. Debiec is able to accomplish with this funding from our incredible donors.”

Dr. Debiec’s co-investigators on this project include Depression Center members Dr. Neera Ghaziuddin and Dr. Cheryl King. This \$75,000 award supports the early launch stages of transformational research projects designed to develop personalized, precise treatments. The goal of the Eisenberg Translational Research award is to generate preliminary knowledge gains to transform diagnostic and treatment processes for depressions and/or bipolar illnesses.

**EISENBERG COLLABORATIVE INNOVATIONS AWARDS**

**B**eatriz Manzor Mitrzyk, PharmD, BCPS, BCACP, a postdoctoral research fellow with the U-M College of Pharmacy, was announced as a winner of a U-M Depression Center Eisenberg Collaborative Innovations award. The purpose of the Eisenberg Collaborative Innovations awards are to support the implementation and dissemination of new advances that improve clinical outcomes for depressions and/or bipolar illnesses. The title of Dr. Mitrzyk's study is "Mixed Methods Evaluation of Treatment-Seeking Behaviors, Cultural Tailoring, and Spanish-Language Educational Materials for Hispanics with Depression."



Mitrzyk aims to look at why Hispanics with depression do not always receive the treatment they need. Disparities in antidepressant medication use in U.S. Hispanics require resolution to reduce the morbidity and mortality associated with depression so that Hispanics may contribute fully to society. Results from this project will provide culturally-relevant messages that will improve the effectiveness of messaging and educational materials geared towards Hispanics.

Dr. Mitrzyk's study will gather information from a national data set and Hispanics from Ann Arbor and Detroit, MI to understand how to best communicate information about depression and its treatment. Knowing how to encourage the treatment of depression in Hispanics could improve how many Hispanics seek care and how many take medications for depression the way they were prescribed.

Ultimately, her study will create a process for evaluating and developing culturally appropriate educational materials that can be applied to multiple races/ethnicities and help additional patients in outpatient care settings. After testing, the messages, tools, and educational materials will be more rigorously tested before being disseminated and implemented. Once implemented, these resources should help to improve care for Hispanics, better their health outcomes, and reduce health disparities.

**B**lake Lancaster, Ph.D., earned a Frances and Kenneth Eisenberg Collaborative Innovations Fund award. Dr. Lancaster, an assistant professor of pediatrics and communicable diseases at U-M, will study, "The Screening to Address Depression (SAD) Task Force: Improving Depression Screening and Treatment Practices in Pediatric Primary Care."



The National Institute of Mental Health estimates one in five adolescents will suffer from a mental illness before age 18, and depression is one of the most commonly identified mental health problems among the pediatric population. Due to a lack of access to mental health services, only 25 percent of adolescents who need clinical services ever receive treatment for mental health issues such as depression. Significant burden is placed on primary care pediatricians (PCPs), as it is estimated that 80 percent of adolescents with mental health issues will seek treatment in the primary care setting.

Pediatricians consistently report that they are not comfortable treating mental health issues such as depression because they do not have the flexibility or the requisite training to deliver evidence-based treatments during the course of a typical primary care visit.

The goal of Dr. Lancaster's project is to provide universal screening for depression in primary care and to ensure pediatricians are trained to deliver a brief component of Cognitive Behavior Therapy (CBT), the most widely recognized evidence-based treatment for depression. By training pediatricians to deliver brief Behavior Activation Therapy (BAT), the team hopes to increase access to evidence-based treatment for adolescents with depression by providing pediatricians with a treatment that can be feasibly delivered within a regular primary care visit. BAT is a brief intervention that can be delivered flexibly and is particularly well suited for children and adolescents in the primary care setting.

"Most children and adolescents with depression never receive any assessment or treatment services," said Dr. Lancaster. "This generous funding from the Eisenberg family allows us to address the unmet mental health needs of our patients in the place most children receive their mental healthcare – the primary care clinic. The project represents yet another example of the innovation possible when Michigan Medicine pairs with donors like the Eisenberg's, truly putting us on the cutting-edge of collaborative behavioral healthcare."

"The earlier we can treat depression and its related illnesses, the better," said John Greden, M.D., executive director of the U-M Depression Center. "By providing primary care practitioners and pediatricians with the skills needed to screen for depression, we are better serving our at-risk youth. The more people who have the skills to identify depression and its symptoms, the more adolescents we will help and the more lives we will save. We are looking forward to helping Dr. Lancaster implement this program."



# DEPRESSION CENTER SCHOLAR AWARDS

**T**hrough generous donor support, the Depression Center proudly fosters the work of promising early-career investigators through various scholar award programs. In supporting a new generation of investigators and promising pursuits of innovations, the Depression Center strives to reach breakthroughs in research and treatment that can improve the quality of life for those living with depression or even help prevent the disease from surfacing in the first place.

These “scholar awards” are given throughout the year and are awarded to early career professionals who have the goal of advancing knowledge in the understanding of mechanisms and treatments of depressions, bipolar illnesses, or mood disorders.

The studies mentioned below help drive the translation of discoveries into clinical applications and best practices to improve the care of those struggling with depression and other related illnesses.

## TODD OUIDA CLINICAL SCHOLARS AWARD

Established in 2002, Todd Ouida Clinical Scholar Awards are designed to further the work of outstanding young researchers working in childhood anxiety and depression.

In 2017, **Emily Bilek, Ph.D.** was the winner of the Todd Ouida Clinical Scholar Award for her study titled “Piloting a ‘Self-Distancing’ Augmentation to Exposure Therapy with Clinically Anxious Youth.”



## STRATEGIC TRANSLATIONAL RESEARCH AWARDS (STAR)

Established in 2015, STAR awards are available to Depression Center members who are students, residents, fellows, or post-doctoral candidates. STAR funding is designed for exploring or testing research ideas. 2017 STAR award winners were:

- **Ryan Cardinale**, a Ph.D. candidate in clinical psychology who will study, “Next generation treatments: a large scale investigation into the analgesic and antidepressant properties of ketamine;”
- **Ka Ip**, also a Ph.D. candidate in clinical psychology who will study, “Understanding the Development of Behavioral and Neurophysiological Markers of Early Risk for Internalizing Disorders: A Longitudinal Follow-up Study” and;
- **David Kalmbach, Ph.D.**, a research fellow with the U-M Department of Psychiatry who will look at “Depression and Sleep Problems as Risk Factors for Cardiometabolic Dysregulation during Chronic Stress: A Prospective Cohort Study of Medical Interns.”

## RACHEL UPJOHN CLINICAL SCHOLAR

The goal of this award, established in 1998, is to train a new generation of clinical investigators focusing their research on depression, bipolar disorder, and related illnesses.

The 2018 winner of the Rachel Upjohn Clinical Scholars award was **Adriene Beltz, Ph.D.**, an assistant professor of psychology who is examining the “person-specific structure of emotion and daily links to depressive symptomatology” in a pair of studies aimed at informing precision health and personalized treatments.”



## The Depression Center by the Numbers

**323**

Members

**17**

Affiliated U-M colleges, centers, institutes representing 27 departments

**70**

Unique grants in fiscal year 2017-18 related to depression, bipolar, anxiety, related illnesses or neuroscience

**\$66.6M**

Total grant money earned by UMDC members

## PFEIFFER NAMED NEW SUSAN CRUMPACKER BROWN RESEARCH PROFESSOR IN DEPRESSION

**D**eeply rooted in her inherited love for the University of Michigan, Susan Crumpacker Brown was raised a devout supporter of the school and its programs. Over the years, Crumpacker Brown has been supportive of programs across the U-M campus and has especially made an impact in the U-M Depression Center. After losing two close friends to suicide in 2006 and 2011, Crumpacker Brown teamed up with Depression Center leaders to support research and new treatment options for depression. In 2016, the Susan Crumpacker Brown Research Professorship in Depression was funded at U-M in hopes of helping communities around the state. The now-retired Marcia Valenstein was the inaugural Susan Crumpacker Brown Professor in Depression.

Today, **Paul Pfeiffer, M.D.** is the new holder of the Susan Crumpacker Brown Research Professorship in Depression within the Department of Psychiatry. After earning an undergraduate degree in computer science from Dartmouth College in 1997, Dr. Pfeiffer earned his medical degree from U-M in 2004, stayed on for his residency in psychiatry, and then completed a research fellowship where he earned a master's degree in health and healthcare research in 2009. In 2010, he was appointed as an assistant professor in the department and was promoted to associate professor in 2016.



● *Paul Pfeiffer, M.D. and Susan Crumpacker Brown*

Dr. Pfeiffer is currently the principal investigator for five federally funded studies, his nationally-presented research focuses on improving the quality of depression care, particularly using peer-based and technology-based interventions. In addition, Dr. Pfeiffer is the co-director of the Program for Mental Health Services, Innovation, and Outcomes in the Department of Psychiatry. He is a leader within the department's initiatives and works closely with the Kalamazoo Collaborative Care Project (KCCP), which personally hits home for Crumpacker Brown, who focused much

of her efforts in this area.

The KCCP was established in 2013 through a partnership with Western Michigan University. The project's first clinic, which opened its doors in June 2018, features a collaborative care model of identification and treatment – an innovative way of improving access to quality mental health care provided by primary care clinicians. Patients are proactively screened and contacted on a regular basis so that they do not fall through the cracks.

Dr. Pfeiffer is also the medical director for the VA Ann Arbor Healthcare System's integrated care clinic, where he provides psychiatric care to veterans. Dr. Pfeiffer works to integrate effective behavioral health care into primary care settings at Michigan Medicine in regional and statewide networks. **M**

## The Intern Health Study

In June 2017, Srijan Sen, M.D., Ph.D. was installed as the inaugural Frances and Kenneth Eisenberg Professor in Depression and Neurosciences at the U-M Medical School. The professorship was created to support the research of a recognized leader in depression and other mood disorders and to better understand the neurophysiological, psychological, cultural, and genetic factors that contribute to these conditions and to improve treatments for patients who suffer from them. Dr. Sen's research seeks to better understand these conditions.

Dr. Sen is the Principal Investigator for The Intern Health Study, which focuses on how stress "gets under the skin" and leads to depression and other common psychiatric disorders in medical interns. The Intern Health Study is a longitudinal cohort study that assesses stress and mood in medical interns, enrolling over 3,000 participants from 80+ institutions in the U.S. and China each year. To date, 16,000 interns have been enrolled in the study, which is being funded by the U-M Depression Center, the National Institute of Mental Health, the American Foundation for Suicide Prevention, and the Taubman Medical Institute.

It is well known that the first year of professional physician training presents a unique situation in which there is an onset of a uniform, substantial stressor that can be predicted (the stress of internship). The study has revealed that one in four first-year residents meets the diagnostic criteria for clinical depression—four to five times the rate of the general population. Medical interns are not only paid very little for professionals, but can work extended hours and suffer from lack of sleep and night shifts.

While life stress is among the most important factors in the development of psychiatric disorders such as depression and anxiety, individuals vary considerably in their response to stress. The Sen Lab is working to find the interactions between biological factors and stress such as telomere length changes in genes that seemingly are linked with stressors.

Dr. Sen has used the intern model to not only inform improvements in medical education but also to identify psychological and biological factors that predict the risk of developing depression under stress in general. His work has also helped to connect physician mental health and medical errors. **M**

# EISENBERG MICHIGAN MENTAL HEALTH INTEGRATION PARTNERSHIP (MIP) SCHOLARSHIP AWARDS

**M**IP Scholars Awards support U-M faculty implementing and evaluating mental health services that promote integrated care and seek to improve access to evidence-based practices for lower income and Medicaid eligible populations with behavioral health care needs in the state of Michigan. There were two 2018 winners. Each scholar received an additional \$50,000 in Medicaid Match Funding from the state of Michigan for their projects.

## KARA ZIVIN, PH.D.: IDENTIFYING UNMET TREATMENT NEEDS FOR PERINATAL DEPRESSION IN MICHIGAN MEDICAID

**Kara Zivin, Ph.D.**, associate professor with the U-M Department of Psychiatry and faculty associate at the U-M Institute for Social Research, was a 2018 recipient of the Eisenberg Michigan Mental Health Integration Partnership (MIP) Scholars Award. The \$50,000 award was provided by the U-M Comprehensive Depression Center Eisenberg Fund.



Dr. Zivin's project, "Identifying Unmet Treatment Needs for Perinatal Depression in Michigan Medicaid" started in fall 2018. The project aims to identify the extent to which women, who are Medicaid beneficiaries, self-identify with symptoms of depression during pregnancy and after delivery are diagnosed with depression and receive any treatment for depression, whether medications and/or psychotherapy. The project seeks to understand objectives and goals, as well as barriers and facilitators of implementing perinatal depression screening and subsequent treatment in Michigan.

## REBECCA SRIPADA, PH.D.: INNOVATIVE PTSD TREATMENT IN FEDERALLY QUALIFIED HEALTH CENTERS

**Rebecca Sripada, Ph.D.**, assistant professor with the University of Michigan Department of Psychiatry and research scientist at the VA Center for Clinical Management Research, was another recipient of the 2018 recipient of the Michigan Mental Health Integration Partnership (MIP) Scholars Award.



Dr. Sripada's project, "Implementing Treatment in FQHCs for Michigan Medicaid Enrollees" also started in fall 2018 at Federally Qualified Health Centers (FQHC's) throughout Michigan. The project focuses on expanding access to trauma-informed treatment among Medicaid beneficiaries with post-traumatic stress disorder (PTSD) by evaluating the delivery and sustainability of a brief trauma-focused treatment, Prolonged Exposure for Primary Care (PE-PC), via telehealth.

## New system prioritizes efficiency, reduces wait times

Similar to skipping the line at Cedar Point, the Fast Pass is a pilot program within the Michigan Medicine Ambulatory Psychiatry clinic that gives patients the opportunity to move up their appointment time when other patients cancel. Active portal patients are automatically notified when an earlier appointment is available through their MyUofMHealth.org account, enabling them to choose to either accept or decline the offer to change their appointment.

Originally piloted in August 2016, the Fast Pass program has already been implemented in the Ambulatory Psychiatry adult clinic at the Rachel Upjohn Building and in other clinics across Michigan Medicine. As of January 2017, there have been a total of 2,459 Fast Pass offers delivered, 816 being unique offers, with 180 accepted, 176 declined, and 933 expired. **On average, there has shown to be a 21-day improvement.**

The goals of Fast Pass are to increase schedule utilization, patient satisfaction, and help staff work through the appointment waitlist faster. In order to maximize efficiency further, the hope is for more departments across the health system to implement Fast Pass, prepare clinics to use the system, and to encourage more patients to sign up for MyUofMHealth.org. **M**





# THE HEINZ C. PRECHTER BIPOLAR RESEARCH PROGRAM: SELECTED THEMES & FUTURE AIMS

## LONGITUDINAL STUDY OF BIPOLAR DISORDER

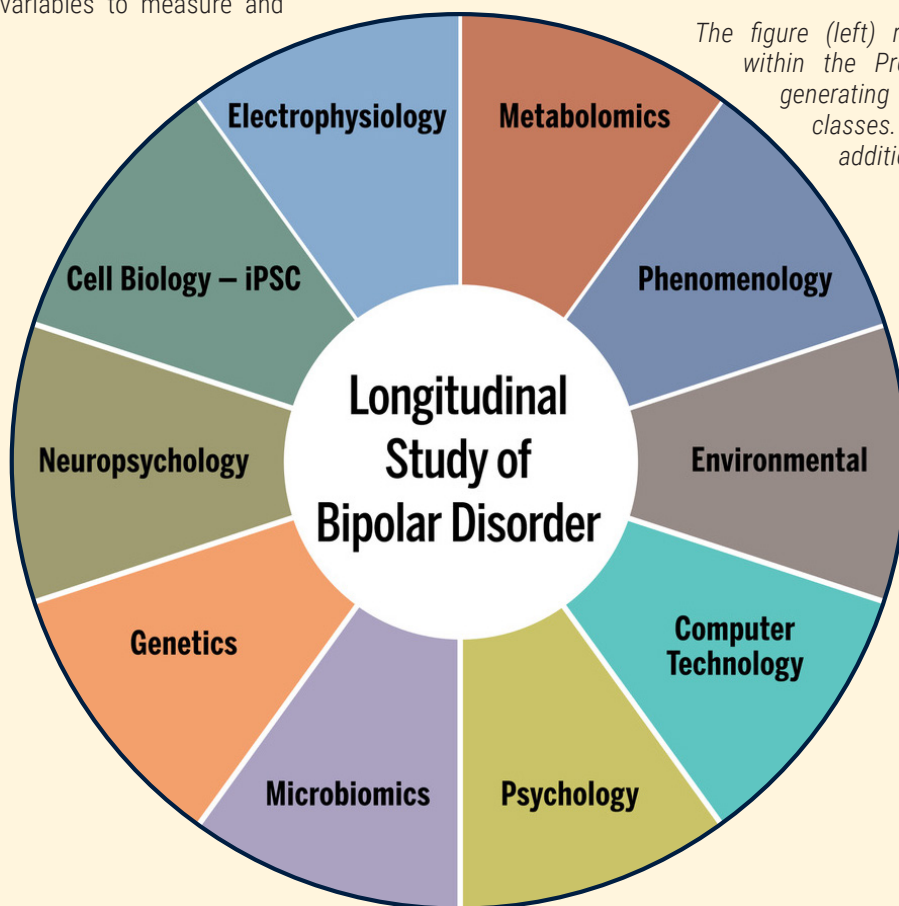
**N**early six million Americans have bipolar disorders, once known as manic depression. Longitudinal courses tend to be prolonged, suffering is great, and treatments remain locked into approaches introduced two to three decades ago. They improve circumstances for some but many remain unresponsive. Personalized, precise treatments are sorely needed to attain and maintain wellness. Those have been core aims for the Prechter Bipolar Research Program.

“Even though bipolar disorder tends to run in families, the Longitudinal Study of Bipolar Disorder and other studies have revealed no one gene that ‘carries the day’ to explain it,” says Prechter Program Director Dr. Melvin McInnis.

The Prechter team has been using the largest, long-term study in the nation to help develop a new framework for pursuing precision health interventions. As Dr. McInnis explains, “this new framework may provide a new approach to understand this disorder, and other complex diseases, by developing models that can guide a management strategy for clinicians and patients, and give researchers consistent variables to measure and assess.”

The team has assessed features that fall into seven classes of measurable characteristics. As reported in a 2018 paper in the International Journal of Epidemiology, the seven classes of phenotypes are:

- **Disease** – Changes in how certain chemicals function in the brain and affect bipolar disorder.
- **Neurocognitive** – Changes in thinking, reasoning, and emotion processing.
- **Temperament and personality** – People with bipolar disorder are frequently more reactive and “temperamental” compared to the average person.
- **Motivated behaviors** – People with bipolar disorder frequently experience substance use disorders and other behavioral patterns.
- **Life story** – Trauma and abuse in childhood, unfortunate life experiences and other challenges contribute to bipolar disorder in complex ways.
- **Sleep and circadian patterns** – Patterns of sleep and circadian rhythms are often different among bipolar patients, causing disruptions in daily patterns and routines.
- **Outcomes and course of illness** – Measures of how someone’s symptoms change over time and respond to treatment.



*The figure (left) represents the disciplines within the Prechter Program that are generating data to the individual classes. Several of these warrant additional comment.*

# PRECHTER PROGRAM RESEARCH STUDIES

## THE iPSC STUDY – INDUCIBLE PLURIPOTENT STEM CELL RESEARCH IN BIPOLAR DISORDER

**U**nder the direction of K. Sue O’Shea, Ph.D., professor of psychiatry, the Prechter team is establishing induced pluripotent stem (iPS) cell lines from individuals with bipolar disorder and control individuals. Since living brain cells from individuals with bipolar disorder are not available for study, **the goal of this study is to compare the characteristics of neurons from individuals with bipolar disorder with those from undiagnosed controls to understand the molecular mechanisms involved in bipolar disorder.**

Researchers in the O’Shea team isolate skin cells (fibroblasts) from a skin biopsy sample and using the Nobel Prize strategies developed in Japan, they “induce,” the cells to make them behave and function like stem cells derived from an early embryo. Once cell lines are established, they are coaxed to form neurons similar to those in the brain. These cells are grown in culture dishes to study how the cells may be affected by factors such as different medications, which could influence the functioning of the neuronal cells.

### Effects of ECT on bipolar and control brain cells

Electroconvulsive therapy (ECT) is a medical intervention most commonly used in patients with severe major depression who have not responded to other treatments or who are at risk for suicide. **ECT involves a brief electrical stimulation of the brain while the patient is under anesthesia.** ECT produces substantial improvement in approximately 80 percent of patients.

Nevertheless, we do not presently know how ECT works. One hypothesis is that the treatment helps brain cells remove toxic proteins from the brain cells that change the function of cells by damaging them.

**In this research, researchers are exposing stem cell-derived brain cells from control individuals and bipolar disorder patients to a series of electroshocks.** They then determine what proteins are released by the cells. They will then test if their release can be stimulated with medicines, rather than ECT.

The iPSC lab has already established that astrocytes (a type of support cell in the nervous system) from control patients produce more exosomes (the sacs that transport toxic material out of the cell). They’ve also seen that the quantity and type of materials—proteins and RNA (Ribonucleic acid)—which are removed by exosomes are different in astrocytes from people with bipolar disorder.



● Prechter Program director Melvin McInnis, M.D. (left), and Sue O’Shea, M.D. (right) have led transformative research studies into bipolar depression.

## THE PRIORI STUDY

**T**he PRIORI project (Predicting Individual Outcomes for Rapid Intervention), a collaboration between the Prechter Program and the College of Engineering, is working to teach computers to discern subtle changes in speech patterns that predict changes in mood. Speech is collected through the PRIORI app, which runs in the background of a smart phone. **The goal is to provide an early warning system for individuals with bipolar disorder to allow for early intervention that may reduce serious outcomes.**

This year, the Prechter Program opened a satellite lab dedicated to work on the PRIORI project. Research technicians listen to hours of short speech snippets and rate them on key characteristics. These ratings are fed into computers, guiding machine learning.

A paper resulting from this work has been accepted for publication at the Interspeech Conference ([interspeech2018.org](https://www.interspeech2018.org)). Titled *The PRIORI Emotion Dataset: Linking Mood to Emotion Detected In-the-Wild*, this paper outlines the critical steps in developing a pipeline that uses emotion to improve mood state prediction and provides evidence and a working model for the use of emotion as a meta-feature for mood state monitoring.

# NEW MEDICATION FOR TREATMENT-RESISTANT DEPRESSION BEING STUDIED AT MICHIGAN

**K**etamine is a medication that has been used for several decades and has multiple uses. It has been used as an anesthetic, for pain management, and as a recreational party drug. Recent research has shown that ketamine given intravenously (via IV) shows promise for fixing treatment-refractory depression (TRD), namely helping people with depression for whom traditional medications haven't worked. Over 16 million Americans live with depression, and about one-third don't benefit from existing medication. As a result, the University of Michigan Depression Center has made TRD research a priority and is exploring ketamine.

Former Depression Center National Advisory Board member Jeanne Robertson recognized the potential for ketamine so she gave a major gift to the Depression Center to create a multi-site study of "biomarkers of response" to ketamine, with the goal of finding a blood test to predict who would benefit from ketamine. The study is now running, under the leadership of Sagar Parikh, M.D. professor of psychiatry and John Greden, M.D., executive director of the Depression Center.

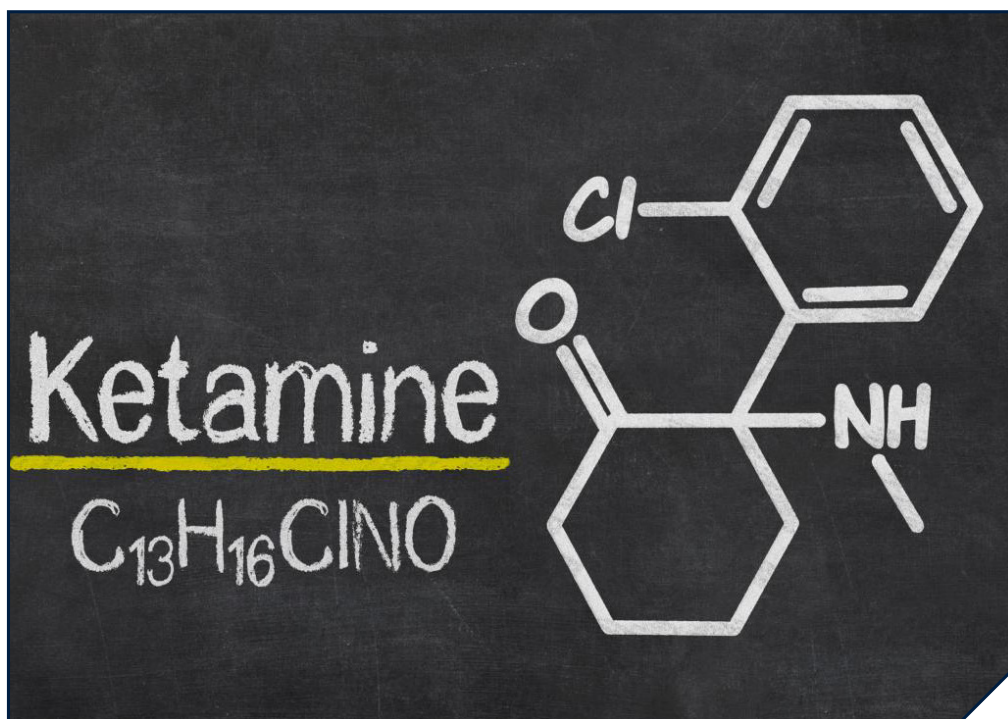
The goal is to have 100 people enrolled in the study by 2020. Once recruitment is complete, the Center will study a wide variety of blood tests looking at genes, proteins, inflammatory makers, and other biomarkers to see which tests show who will benefit from ketamine, and also provide some more idea of just how ketamine works. This clinical trial is being done in collaboration with five other National Network of Depression Center sites in the U.S.

The benefit of IV ketamine is that it works within hours versus other anti-depressants which usually take weeks to work. But so much is not known about it, such as how many IV infusions are needed, and for how long. Right now, it is often given by three to six infusions over several weeks. Key questions include whether people will need periodic infusions after the initial six, or whether regular medications or other treatments can extend the response to ketamine. Immediate side effects of IV ketamine infusion are well known, and can include a temporary increase in blood pressure and heart rate; dry mouth; anxiety; confusion; and hallucinations, all of which can be managed. But almost no research has been done to look at the long term effects of IV ketamine use—another focus for the U-M research.

**"[Ketamine] holds promise and can potentially help people who are struggling with suicidal ideation and have nowhere else to turn."**  
*— Sagar Parikh, M.D., FRCPC*

"Ketamine is not a miracle drug—some people respond and others do not, we still need to figure out who is effected positively," said Dr. Parikh who is also a professor of health management and policy with the U-M School of Public Health. "But it holds promise and can potentially help people who are struggling with suicidal ideation and have nowhere else to turn."

"Our end goal is to develop a transformational ketamine clinic in Michigan Medicine by 2020," said John Greden, M.D. "We are encouraged by the steadily increasing research we have seen on the topic, and invested in contributing to important unanswered questions. This study has the potential to help millions of Americans struggling with TRD." **M**





# HELPING DOCTORS MAKE BETTER DECISIONS: NEW GENETIC TEST MAY HELP PHYSICIANS CHOOSE THE MOST EFFECTIVE ANTIDEPRESSANT MEDICATIONS FOR PATIENTS

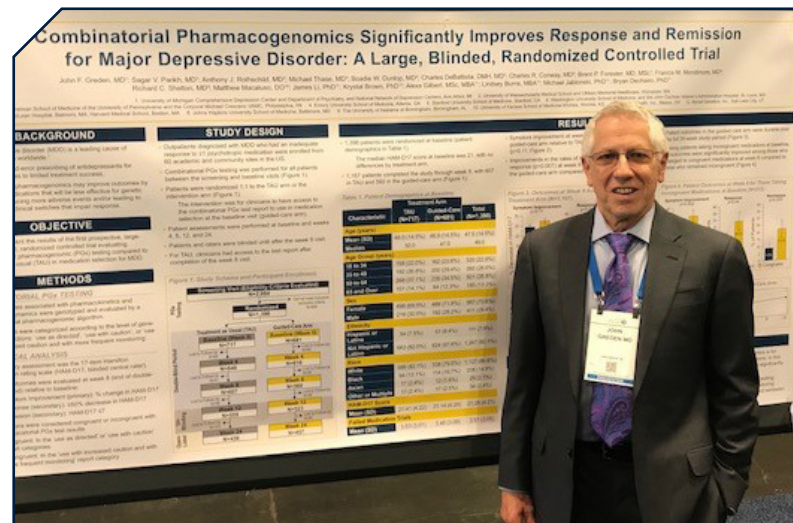
**R**esearch led by Depression Center executive director and colleagues evaluates whether pharmacogenetic testing can improve outcomes for patients with major depressive disorder.

Can one simple cheek swab determine which antidepressant is correct or incorrect for you? John Greden, M.D., executive director of the U-M Depression Center and associate director Sagar Parikh, M.D., are leading a national team seeking to answer these questions.

In May 2018, Dr. Greden presented findings on this research during a major medical meeting in New York City. Greden's poster was titled, "Combinatorial pharmacogenomics significantly improves response and remission for major depressive disorder: A blinded, randomized control trial." Findings showed that patients who previously had failed to respond to established antidepressant medications were 30 percent more likely to respond to treatment and 50 percent more likely to achieve remission when their medication selection was guided by a commercially available Pharmacogenomic test.

Pharmacogenomics refers to the branch of pharmacology concerned with the effect of genetic factors on metabolism and distribution of medications and on gene-drug interactions. By looking at patient's individual genetic makeup, the hypothesis is that physicians may be able to more accurately and effectively treat their patients. The science is moving forward in small steps, but it is moving forward.

The 24-week study included 1,167 patients with moderate-to-very severe depression who had failed to get relief from at least one antidepressant medication, and actually had an average of more than 3 medications they had tried. Patients were divided into two treatment arms: the test arm (n=560) in which clinicians used the genetic test results to guide treatment decisions, and a treatment-as-usual arm (n=607) in which psychiatrists and primary care physicians prescribed medication as they normally would without the benefit of genetic testing. The Hamilton Depression scale (HAM-D17) was used to measure the key endpoints of remission (achieving a HAM-D17 score <7), response (50 percent decrease in HAM-D17 from baseline) and symptom improvement (percent change in HAM-D17 from baseline) at week 8. The durability of patients' mental health outcomes was assessed at week 24.



● In May 2018, Dr. John Greden presented a poster about combinatorial pharmacogenomics at a major medical meeting in New York City.

"This is the first-ever prospective, large-scale, blinded, randomized controlled trial evaluating combinatorial pharmacogenomics testing in patients with prior treatment-resistant major depressive disorder," Greden said. "GeneSight-guided care was compared to physicians' optimized treatment plans or 'Treatment as Usual (TAU).' Doctors generally do a good job in selecting medications, but the large-sample, randomized, blinded results from this national study indicated that patients fared significantly better with the pharmacogenomics approach than with usual care, despite this being a difficult-to-treat patient population. The improvements continued to increase as the study was extended to 24 weeks."

The major benefit for now is to help guide doctors in knowing which medications are not likely to be helpful because they are 'incongruent' for reasons of pharmacokinetics and/or pharmacodynamics.

"This method is not foolproof yet, but it shows promising results," Greden added. "Hopefully, more physicians will be able to incorporate this test in their practices, and have the results in hand before patients are prescribed medications."

Results have been submitted and are being reviewed for publication. **M**

# EDUCATION & OUTREACH

The U-M Depression Center serves as a source of reliable and comprehensive patient, family, public and professional education about depression, bipolar disorders and related illnesses. Effective education helps people break through the barriers of stigma and misinformation.

We reach out to special populations, providing resources, education, tools and various services to individuals and communities touched by the broad spectrum of depression, bipolar disorder and related illnesses.





# STUDENT PROGRAMS

## PEER-TO-PEER (P2P) DEPRESSION AWARENESS INITIATIVE

**I**n collaboration with schools throughout Washtenaw County, the Depression Center provides information and support to student teams, empowering them to effectively reach peers within their schools through unique mental health awareness and stigma reduction campaigns. Interest in the program continues to grow as P2P enters its second decade.

With the support of private donors and the Ethel & James Flinn Foundation, the number of participating schools increased from five Ann Arbor high schools in 2009, to 10 high schools throughout Washtenaw County and two high schools in Oakland County during the 2017-2018 academic year. For 2017-18, P2P marked its inaugural year in middle schools with nine partners. This initiative is tier-1 of a 3-tiered prevention to intervention model of school-based outreach, which also includes TRAILS and suicide prevention trainings for Washtenaw County counselors, teachers, and administrators.

An article about the effectiveness of the P2P initiative was published in Psychiatric Services. Following campaign rollouts in the fall, students who attended participating schools were:

- More knowledgeable about depression;
- More confident in their ability to identify and refer peers who may be struggling with depression or anxiety;
- More willing to seek help for themselves if they were experiencing symptoms of depression, and;
- Reported lower stigma in their school environment related to students with mental health problems.

Since the program began in 2009, over 850 students have participated directly on P2P teams, over 175 P2P student-run events have taken place, and tens of thousands of students have been reached through the awareness campaigns.

Additionally, the Depression Center publicly shared a free P2P resource website and manual in March to help educators implement and model similar programs in their schools. To date, the website and manual have been used by over 250 professionals.

### PARTICIPATING MIDDLE SCHOOLS (9)

- Clague Middle School
- Forsythe Middle School
- Lincoln Middle School
- Mill Creek Middle School
- Scarlett Middle School
- Slauson Middle School
- Tappan Middle School
- Washtenaw International Middle Academy
- Ypsilanti Community Middle School

### PARTICIPATING HIGH SCHOOLS (12)

- Community High School
- Holly High School
- Huron High School
- Lincoln High School
- Milan High School
- Pioneer High School
- Pontiac High School
- Saline High School
- Saline Alternative High School
- Skyline High School
- Washtenaw International High School
- Ypsilanti Community High School

**“The best thing about being in the program was being able to learn from other great leaders and peers. They’ve taught me so much about being aware about health and I know it’ll be useful in the future.”**

— P2P Student Participant





## CLASSROOM MENTAL HEALTH

To expand outreach in 2015, the U-M Depression Center launched [classroommentalhealth.org](http://classroommentalhealth.org), a website designed to support educators of grades 8-12 in communicating with their students about mental health concerns. The website was developed in collaboration with multiple organizations including the State of Wyoming Department of Education, Prevention Management Organization of Wyoming, Teton County School District, Gull Lake Community Schools (Gull Lake, MI), and Ann Arbor Public Schools. Special efforts were made to tailor the messages to each school and community. Between July 1, 2017 and June 30, 2018 there were **over 33,000 visits** to the website.

The Classroom Mental Health website provides school staff with a variety of tools and resources which can be easily accessed and utilized within the context of a teacher's regular classroom routine. The website can also serve as an additional resource for existing school-based mental health and suicide prevention programs by:

- Providing brief, environmental and action-based strategies that can help to create a classroom atmosphere beneficial to student mental health;
- Supporting communication and collaboration between school staff and the parents/families of students who are struggling with mental health concerns and;
- Helping to facilitate the referral process for students in distress through a customized database of local support resources.

## 2018 DEPRESSION ON COLLEGE CAMPUSES CONFERENCE

*Redesigning Structures, Spaces, and Processes to Promote Wellness*

The 16th annual Depression on College Campuses Conference, held in March 2018, brought together a multi-disciplinary group of 500 registrants from across the country, with representation from 19 states (plus Canada) and over 80 different colleges, universities, and organizations.

Workshops and presentations explored how environmental strategies can be used as part of a comprehensive approach to create a campus culture and learning environment that supports mental health. This conference is the "grandparent" of all such conferences and has become an established national tradition.

**Save-the-Date:**  
 Join us for the 17th annual Depression on College Campuses Conference on March 13-14, 2019 in Ann Arbor. The 2019 conference is titled "One Size Does Not Fit All: Aligning Levels of Care to Student Mental Health Needs."  
 Learn more: [depressioncenter.org/docc](http://depressioncenter.org/docc)



• (L-R), John Greden, M.D., 2018 DOCC Student Mental Health Advocate Award winners: UCLA's Megan Larson, Michigan's Samuel Orley, and U-M CAPS Director Todd Sevig, Ph.D.

## CAMPUS MIND WORKS

The Depression Center created the Campus Mind Works program in 2009 to support student mental health at U-M. [CampusMindWorks.org](http://CampusMindWorks.org) was designed to provide customized mental health support for U-M students through an easy-to-search comprehensive database of community resources, educational modules, and a variety of self-care tools to be used in conjunction with treatment, or independently. The launch of the website, also in 2009, was accompanied by intensive outreach efforts that targeted U-M faculty, staff, students and their families. The goal is to raise awareness about depression and related illnesses, and to promote help seeking behaviors. Between July 1, 2017 and June 30, 2018 there were 179,209 visits to the website. With feedback from students and staff, the newly updated website launched in September 2018.

### Campus Mind Works Wellness Groups

The Campus Mind Works outreach initiative offers free educational support groups on U-M's Ann Arbor campus to undergraduate and graduate students who are managing a mental health condition. The support groups are organized through a partnership between the U-M Depression Center, College of Engineering, and the Newnan LS&A Academic Advising Center. Groups convene twice a month during the school year. This past year saw a 109 percent increase in attendance.



ATHLETES CONNECTED

Many student-athletes experience mental health problems such as depression and anxiety, but for a variety of reasons, they often are reluctant to seek help. The Athletes Connected program, developed with initial funding from an NCAA Innovations in Research Grant, is a unique collaboration between the U-M Depression Center, School of Public Health, and Athletic Department. Athletes Connected uses a comprehensive approach that involves student engagement, targeted interventions and scientific research to increase awareness of mental health issues, reduce the stigma of help-seeking, and promote positive coping skills among student-athletes. Core components of the program are education & awareness through team presentations and digital content through videos, the website ([athletesconnected.umich.edu](http://athletesconnected.umich.edu)), and social media, as well as biweekly restorative yoga sessions and wellness groups.

2017-2018 updates:

- Creation and dissemination of a three-part video series on injury and mental health
- "Coping with Career-Ending Injury," featuring Arielle Sanders, rowing
- "How Recurring Injury Affects Mental Health," featuring Erin Finn, track & field
- "Coping with Season-Ending Injury," featuring Adam Coon, wrestling
- Eleven wellness groups, 35 attendees
- Groundwork has been laid to begin a pilot of restorative yoga sessions

Many of the athletes aided by these programs choose to continue participation by volunteering to aid others, a growing illustration of "peers helping peers."



U-M wrestler Adam Coon featured in an Athletes Connected film in 2017.

COMMUNITY PROGRAMS

BRIGHT NIGHTS COMMUNITY FORUMS



The Bright Nights Community Forum series attracts hundreds of people each year for educational presentations and discussions on a variety of topics related to depression. The forums, typically held at local libraries, feature a panel of topical experts from the Depression Center and the community, followed by question & answer sessions with audience members. Bright Nights began as a partnership between the Depression Center and the Ann Arbor District Library, and has since grown to include presentations in neighboring communities of Plymouth, Saline, and Ypsilanti, Michigan.

Panel presentations in 2017-18 included:

- Understanding Electroconvulsive Therapy;
- An Opioid Crisis in Washtenaw County: What Can We Do?
- Adolescent Depression, Resiliency, and Coping Skills, and;
- Understanding Bipolar Disorder.

DEPRESSION CENTER TOOLKIT

DEPRESSION CENTER TOOLKIT 

The Depression Center launched the newly revised Depression Center Toolkit for patients, families, and caregivers in July 2018.

The Toolkit is an online resource that provides information, support, and resources to manage one's mental health and promote recovery from depression and other mental health conditions. It also offers help to family members and caregivers of those who suffer from mood disorders, and all people who wish to understand mental illness. From 2015 to 2018, the Toolkit garnered over 1 million unique visitors from more than 200 countries across the globe, making it a leading international resource for mood disorders.

The Toolkit is publicly available for free:

[depressioncenter.org/toolkit](http://depressioncenter.org/toolkit).



# A BROADER IMPACT

Different people have different needs. The U-M Depression Center seeks to treat the patients coming through our doors through personalized and precise treatment methods. We are tailoring our approach to unique audiences: veterans, students and teachers, young children, parents and others.





# ZERO TO THRIVE

## Promoting Relational Health in the Early Years

**D**epression and other mental illnesses impact more than one in 10 parents in pregnancy and postpartum. Furthermore, the first thousand days of life are critically important, and strong early relationships are the foundation for developmental success. Adversity experienced during pregnancy, infancy, and early childhood can interfere with children's ability to reach their fullest potential.

Led by Kate Rosenblum, Ph.D., and Maria Muzik, M.D., of the U-M Depression Center, together with Alison Miller, Ph.D., at the U-M School of Public Health, Zero to Thrive is an innovative multidisciplinary initiative aiming to mitigate the impact of adversity faced in early childhood through promotion of science, increased public awareness, and development and delivery of programs and services targeted at innovative solutions.

### FLAGSHIP PROGRAMS

Zero to Thrive faculty develop and implement community-based programs that make a meaningful impact in the lives of children and families. To illustrate, Mom Power and Fraternity of Fathers are two Zero to Thrive flagship programs for families with young children that deliver an evidence-based curriculum designed to promote parent mental health, positive parenting, and strengthen resilience among families facing adversity. Our research has confirmed that these interventions not only improve parent and child mental health, but that participation in these programs also leads to changes in the "parent brain" as demonstrated through brain imagining research -- revealing that the impact of these interventions is deep, and can strengthen outcomes at multiple levels.

### A few of the important Zero to Thrive activities currently underway:

**Clinical services:** Our specialty clinics for perinatal, infant and early childhood clinics serve hundreds of women, children and families each year. These are truly 'destination clinics'—children and families come from across the state to benefit from the expertise of our faculty and staff. We are partnering with pediatrics and OB/GYN practices, screening parents and children for mental/behavioral and relational health, and providing services in primary care and in communities to increase access and engagement. We have launched these programs at several clinics across the state of Michigan and have found that these efforts significantly improve our ability to identify and engage families in high-quality, innovative and evidence-based services.

**Educational activities:** In addition to training our 'in house' medical and allied health provider students and trainees, our Zero to Thrive faculty and staff have been engaged in outreach to community-based providers not only across Michigan but nationally, increasing the capacity of providers to deliver state-of-the-art treatment to children and families where they live. For example, we have created multiple "Learning Collaboratives" (each composed of 15-20 community-based providers) to train clinicians in gold-standard treatments for women, children and families who have experienced traumatic events.

**Research activities:** Our faculty are engaged in program evaluation to ensure that what we do works and is maximally effective. In addition, our faculty have federal and private foundation grants to support specific basic and translational research projects that are all relevant to better understanding the needs and experiences of vulnerable families with young children.

**Policy activities:** Zero to Thrive aims to translate research for practice and for policy. For example, our faculty engage in research dedicated to understanding the implications of healthcare policy for perinatal mental health, and we sponsor presentations and panel discussions translating relevant Zero to Thrive research in regards to current events and issues facing families with young children.

*Continued on page 20*

# THE MICHIGAN CHILD COLLABORATIVE CARE PROGRAM (MC3)

**A**n estimated one of five children in the U.S. has a diagnosable mental health illness, but the majority remain undiagnosed, and only 20-25 percent receive any treatment. A key reason is that most counties in Michigan as well as in other rural areas in the U.S. don't have access to a child psychiatrist or others trained in these brain-behavior illnesses. Similarly, there is a severe shortage of perinatal psychiatrists, leaving primary care providers to handle high-risk women with complex behavioral health disorders with little support. The Michigan Child Collaborative Care Program (MC3) was developed to address this treatment gap.

The MC3 program, led by Sheila Marcus, M.D., section chief of the Department of Psychiatry's Child and Adolescent program and one of the original faculty leaders of the U-M Depression Center, offers crucial services to primary care providers as well as patients and families. These vital services include:

- Same-day phone consultation from U-M child and perinatal psychiatrists to primary care providers for diagnostic clarification and evidence-based pharmacologic and behavioral health treatment recommendations.
- Telepsychiatry (telehealth) consultations for the more complex children and families and high-risk pregnant and postpartum women so that these patients can be assessed through videoconference by a U-M psychiatrist without having to travel to Ann Arbor.
- Behavioral health consultants (advanced degree mental health clinicians) who triage consultations; facilitate referrals across systems of care (schools, protective services, foster care, juvenile justice); and monitor outcomes over time.
- Psycho-education and brief interventions for patients and families provided by behavioral health consultants who are embedded in select primary care practices.
- Group case consultation from U-M psychiatrists by telephone and videoconference so that primary care practices and nurse practitioners can discuss multiple patients.
- Web-based educational programs for primary care providers.

**“I’m so glad you’re there. Many of us feel we treat perinatal mood disorders by default and do not feel we were prepared for it. Having this resource is very reassuring.”**  
 — MC3 Primary Care Physician

MC3 is now in 59 out of 83 counties in Michigan and continues to expand. A total of 1,915 primary care providers are enrolled in the program. As of August 2018, 7,820 patients and families have been served. Ninety-seven percent of patients served by MC3 are not currently being seen by a psychiatrist, and the vast majority do not have access to a psychiatrist in their county. A major void in health care delivery is now being remedied.

## MC3 CONNECT

This year, a new initiative, MC3 Connect, was successfully implemented. MC3 Connect is a model of care for adolescents aged 11 and older presenting with symptoms of depression and/or anxiety. These patients get a baseline assessment, set goals for themselves, receive education and ongoing monitoring of their symptoms by behavioral health consultants. Patients who participated showed a significant decrease in depression and anxiety symptoms.

Through MC3, the U-M Depression Center and Department of Psychiatry have been successful in leveraging scarce psychiatry resources on behalf of Michigan's most vulnerable children. It is also one of the few programs in the country providing these services to high-risk peri- and postpartum women. MC3 is a collaboration with the Michigan Department of Health and Human Services. It was launched initially in 2012 with a grant from the Ravitz Foundation. **M**

## ZERO TO THRIVE *Continued from page 19*

**Future promise:** Our faculty have been invited to present the activities of Zero to Thrive nationally and internationally—and on campus, faculty and staff are excited about the opportunity to connect across disciplines and better address the needs of children and families here in Michigan.

## OUR VISION

Our Zero to Thrive team envisions a ground-breaking, multi-layered, two-generation initiative that will harness the academic strengths of the University of Michigan to both transform the lives of the youngest, most vulnerable children and their families, and impact the long-term health and resilience of our most at-risk communities. Across disciplines, faculty at U-M have incubated innovative and evidence-based practices. The science behind our work is strong—and makes the necessary next step clear: take these tested programs and implement them widely in order to make a dramatic impact in the lives of infants and families. **M**



# MOOD LIFTERS: TRAINING FOR THE BRAIN

An innovative initiative to help people improve their mental wellness in non-clinical settings

**A** few years back, Patricia Deldin, Ph.D., professor of psychology and associate director of the U-M Depression Center went to a Weight Watchers meeting with a friend. Initially skeptical, she saw how effective the program was and was hooked. She instantly wanted to apply similar strategies to improve mental health care, knowing that such an approach could greatly improve accessibility, cost and effectiveness problems.

"I immediately noticed that Weight Watchers had many psychological benefits; it was such a positive and supportive environment," Deldin said. "Later I saw the organizers changing the structure of the program and realized they were responding to ongoing data. As soon as I realized that their method was scientifically backed, I was locked in."

Deldin received initial funding from the U-M Depression Center to get her idea off the ground.

The team began piloting the program that Deldin coined as 'Mood Lifters' in 2016. Participants attend weekly group meetings and discuss various aspects of mental wellness from sleep; exercise; personal relationships; mood; to social activities. These are the core of the educational component. After meetings, participants are given the assignment of using the 'tools' they have learned from meetings and advised to put them to use in their everyday routines. They are asked to track progress through a points system.

Accountability is a key. At each Mood Lifters meeting, participants check in with one of two program leads. They complete a questionnaire, discuss their joy and depression levels, and talk about what went well and what didn't during the prior week. They also compile a points tracker—the higher the number, the better—and discuss how to improve results. One participant who has been involved with Mood Lifters since 2016 said that the points tracker is extremely motivational.

"You actually use stickers to track your points," he said. "At first it seems silly, but once you watch your points grow it becomes incentivizing."

"I come from an athletic background, and Mood Lifters feels like training," he added. "Everyone is comfortable going to the gym, or trying different diets. But nobody is talking about their mood and how they are working to improve it. This program is like brain training – training for your mind. Just like with physical exercise sometimes you do strength; cardio; or stretching. With Mood

**"I come from an athletic background, and Mood Lifters feels like training... This program is like brain training – training for your mind."**

— *Mood Lifters Participant*

Lifters we switch topics to cover sleep; mood; or diet. I think of it as a coaching program for well-rounded mental health." Something else unique about the program is that while program materials are developed by professionals, the sessions themselves are led by non-clinicians in a non-clinical setting. "There is comfort to be found in the 'he or she is one of us' environment."

"Another benefit with Mood Lifters is that it helps to address the nationwide issue of physician shortages by promoting health for more people without having to see a psychiatrist or psychologist one on one," Deldin said.

So far, 66 people have completed the program with more underway. The data show that the program is effective in reducing depression and anxiety and increasing happiness, activity levels and improving sleep. Participants have ranged in gender and age all the way from people in their twenties to their eighties. Currently, meetings are held within the Department of Psychology on the U-M campus but eventually the team will look at other locations in the area.

It is important to note that Mood Lifters is not currently equipped to serve those with severe mental illness such as those who are highly suicidal or who have been diagnosed with schizophrenia, but Deldin hopes to get there someday.

The future for Mood Lifters includes building a company, setting up basic infrastructure, and piloting other ideas such as having online groups. The goal with hosting online groups is to provide access to those living in rural areas.

"In Mood Lifters we cover a variety of topics, and you leave equipped with tools and life skills that you can use on a daily basis," one participant noted. "I use techniques I learned in the program to remind myself of things throughout the day and I have learned to recognize when I might be falling into a psychological trap. With Mood Lifters, I know how to challenge myself to combat it." **M**

For more information, please contact [info@mood-lifters.com](mailto:info@mood-lifters.com).



# U-M TRAILS EXPERIENCES RAPID GROWTH IN RESPONSE TO MENTAL HEALTH CRISIS IN SCHOOLS



**A**nxiety, depression, post-traumatic stress disorder, suicidal thoughts, and related mental health symptoms impact a frightening number of adolescents. To reach and aid those affected, the U-M Depression Center and Department of Psychiatry use bold and innovative strategies.

The U-M TRAILS program (Transforming Research into Action to Improve the Lives of Students) provides training and support to school mental health professionals, equipping them with the tools and resources to utilize evidence-based behavioral health care strategies with their students impacted by symptoms of anxiety and depression. Participating school staff attend a daylong training and then receive a semester of in-person coaching at their school from a trained TRAILS coach.

With philanthropic support and parallel grants, TRAILS has surged, proving to be a remarkably successful prototype for the power of training and expert coaching for Michigan and beyond.

Delivery of in-person coaching statewide is an approach that requires extensive program infrastructure. Since 2017, the TRAILS team has traveled more than 1,000 miles to train 350 community mental health providers in cognitive behavioral therapy (CBT) and mindfulness, two practices shown to decrease symptoms of anxiety and depression. Of those providers, more than 100 were selected to become official TRAILS coaches, additionally trained in the TRAILS coaching protocol.

## LOCAL WORK ILLUSTRATES POTENTIAL IMPACT

In January, 2018, TRAILS kicked off a two-year initiative to bring effective mental health services to all middle and high school students in Washtenaw County, thanks to generous support from the Ethel and James Flinn Foundation, the U-M Depression Center, and the Centers for Medicare and Medicaid Services through the Michigan Department of Health and Human Services.

In the first of four cohorts, TRAILS trained 68 Washtenaw County school mental health staff on CBT and mindfulness. Ten participating schools went on to receive in-person coaching from TRAILS during delivery of weekly skill-building groups with students. Nearly 100 students participated in the 10-session groups and program evaluation showed that students found the skills groups to be beneficial and learned to apply CBT and mindfulness coping skills to improve their mental wellness. More significantly, participating students experienced reductions in

symptoms of depression and anxiety. By 2020, TRAILS will have trained more than 150 Washtenaw County school mental health professionals which would translate to over 600 students receiving free, evidence-based mental health services each year.

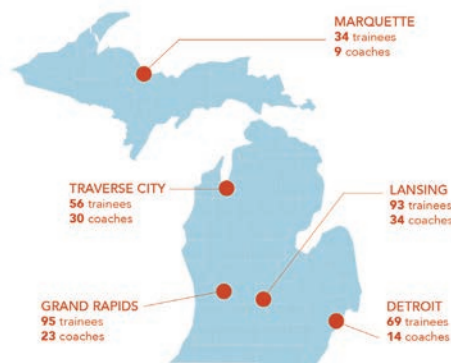
This Washtenaw County initiative is part of a comprehensive, three-tiered effort that merges TRAILS with two other programs managed by the U-M Depression Center: Peer-to-Peer, SafeTALK training, and ASIST. Together with TRAILS, these programs provide training and support to enable schools to effectively serve all students, including those at risk of developing more significant symptoms of a mental illness.

A recent 5-year grant from the U.S. Department of Education will take the work being done by TRAILS in Washtenaw County to the next level with enhanced development of mental health services delivered in the four largest buildings in the Ypsilanti and Lincoln school districts. For this initiative, TRAILS will work alongside the Washtenaw Intermediate School District, the Regional Alliance for Healthy Schools, and Project Healthy Schools to strengthen and expand current health services delivered at Ypsilanti Community Middle School, Ypsilanti Community High School, Lincoln Middle School and Lincoln High School, with a particular emphasis on student emotional and behavioral health.

TRAILS is communicating with a growing number of schools interested in bringing the program to their communities. In partnership with TRAILS and with funding from the National Institutes of Mental Health (R01 MH11420301), Dr. Amy Kilbourne is leading a large-scale clinical trial to optimize the TRAILS program and its core features. The study will bring TRAILS to 100 schools throughout Michigan and engage more than 2,000 high school students.

Program Director Dr. Elizabeth Koschmann states, “We hope that this study will confirm and expand initial findings that demonstrate the value of the TRAILS model, and guide us in creating the most effective way to deliver the program on a larger scale.”

TRAILS Statewide Trainings



A look at the potential impact



TRAILS is currently being offered to all middle and high schools in Washtenaw County. With just two skills groups per year at each school, 640 students will have the opportunity to learn strategies to help with symptoms of anxiety and depression. With 640 students receiving mental health services each year in just one county, the TRAILS team is motivated to expand the program statewide to have a positive impact on the mental wellness of students throughout Michigan.

TRAILS TO COLLABORATE WITH DETROIT SCHOOLS

On a more local level, TRAILS has begun the first year of a collaboration with Detroit Public Schools Community District (DPSCD) to determine how student behavioral health programs, including TRAILS training in CBT and mindfulness, could enhance the health and wellness of students while promoting improved academic and social outcomes districtwide.

The Washtenaw County initiative and the DPSCD collaboration are supported by a network of behavioral healthcare funders, championed by the Michigan Health Endowment Fund and the

Ethel and James Flinn Foundation. TRAILS is further supported by the Prosper Road Foundation, the Mackey Family, and the U-M Department of Psychiatry.

“We’re incredibly grateful to our supporters who have allowed us to focus our efforts on making effective mental health services accessible in schools,” Koschmann said. “We’ve been moved and motivated by the positive feedback we’ve received from our work in Washtenaw County and look forward to partnering with collaborators in DPSCD and additional communities throughout the state.”

To learn more about the program, visit [TRAILStoWellness.org](http://TRAILStoWellness.org).

**“I loved coming together and forcing myself to relax, observe selfcare and develop a sense of empathy while being able to better understand that my struggles are shared with others.”**

— Washtenaw County student participant in TRAILS

Workplace Mental Health Initiatives

At the request of various business leaders, the Depression Center has launched a program to address depression and related brain-behavior disorders in the workplace. This effort began a number of years ago when the Depression Center partnered with the U-M Ross School of Business to involve MBA student teams in designing an innovative program. Two Ross “MAP” (Multidisciplinary Action Programs) student teams helped Depression Center leaders design new strategies to investigate better ways to improve mental health in business environments.

Why the focus on workplaces? As summarized in the upcoming text edited by the leaders of the Depression Center:

“Chisholm and colleagues estimate that across the 36 largest countries in the world, more than 12 billion days of lost productivity are attributable to depression and anxiety disorders every year totaling \$925 billion. This is equivalent to 50 million years of work. The subsequent global economic impact is estimated between \$2.5-8.5 trillion in lost output, a figure that is expected to double by

the year 2030 unless effective programs are instituted” (Chisholm, Sweeny et al. 2016)...The economic burden of depression in the United States, limited to estimates, has been suggested to be \$210 billion (Greenberg, Fournier et al. 2015).”

American corporations have major influence on culture. Mental health organizations need to partner with these corporations so that we can better fund, educate, counteract stigma, treat, and prevent these illnesses.

The Depression Center’s initiatives emphasize collaborative partnerships with business/corporate leaders to develop focal, tailored programs, specialized for each workplace. Strategies include programs to overcome stigma; guidance about where to turn for clinical help when necessary; how to structure policies, benefits, and environmental supports and make them appealing to employees; and how to create and sustain appropriate community partnerships to counteract these issues.” Drs. Michelle Riba and Sagar Parikh are the Depression Center workplace co-directors.

The comprehensive new textbook entitled “Mental Health in the Workplace – Strategies and Tools to Optimize Outcomes,” edited by Drs. Riba, Parikh and Greden, will be published in early 2019.



# M-SPAN: CELEBRATING 10 YEARS OF EXCELLENCE

**M**ilitary Support Programs and Networks (M-SPAN) was originally founded in 2008 when the University of Michigan was chosen as one of the first three academic medical centers in the country to be part of the Welcome Back Veterans (WBV) initiative. Participating in WBV meant that U-M was committing to addressing gaps in services for the military and veteran population.

Many veteran programs offer traditional, one-on-one clinical treatment. M-SPAN's approach is unique. M-SPAN teams aim to address larger issues that impact the veteran space, such as stigma, isolation, and access to resources. Programs are tailored to address the needs of sub-populations, including the Guard and Reserve Component; student veterans returning to college on the Post-9/11 GI Bill; military families with young children; military and veteran spouses/partners; and female veterans. M-SPAN is now home to five flagship programs: Buddy-to-Buddy; Peer Advisors for Veteran Education; After Her Service; HomeFront Strong; and Strong Military Families.

## PROGRAMS FOR SERVICE MEMBERS AND VETERANS

**Buddy-to-Buddy** leverages the power of peer support to overcome the stigma of "showing weakness" around asking for help that is so ingrained in military culture. Community veterans are trained to provide outreach, support, and linkage to resources to service members and veterans in Michigan so that they can intervene early, before identified concerns or stressors escalate into crises. Buddy-to-Buddy's 120 trained volunteer veterans are experts in local, state and federal resources, and are available throughout the state to handle veteran concerns. Since the program's founding in 2009, volunteers have logged over 20,000 hours assisting more than 5,000 service members and veterans with a wide variety of concerns, including mental health and substance abuse; finances;

benefits and claims; legal; employment; and housing. Buddy-to-Buddy is a partnership with the Michigan Army National Guard, but Michigan veterans from all branches of the military and service eras are eligible for assistance.

Buddy-to-Buddy has received funding from Welcome Back Veterans (the Robert R. McCormick Foundation and Major League Baseball Charities), the Judy and Fred Wilpon Family Foundation, Cinnaire, the Milbank Foundation, Avfuel Corporation, the Ethel and James Flinn Foundation, the Michigan Department of Health and Human Services, and many individuals who contributed toward supporting the program over the years.

**Peer Advisors for Veteran Education (PAVE)** is an outreach and peer support program developed for student veterans returning to college on the Post-9/11 GI Bill. PAVE connects student veterans with trained Peer Advisors at their schools who can provide support and link them with resources to help navigate challenges they may be facing and facilitate a smooth transition to college. The program includes a web-based platform featuring online training modules for student veteran Peer Advisors; best practice outreach, support, and linkage to resource strategies; a mobile app for Peer Advisors to track their work and quickly identify resources; and a management console that allows schools to track data and identify trends and gaps in services.

Initially piloted at three schools, PAVE's first expansion was to 10 new campuses, and now has a presence on 37 campuses across the country, including large state schools, private institutions, and community colleges. Over 11,000 student veterans have been impacted by the program since its inception in 2012, and PAVE staff has trained over 900 Peer Advisors and nearly 100 Veteran Services Coordinators and school administrators. A rigorous

● *The Buddy-to-Buddy program held its volunteer recognition event in April at the Yankee Air Museum in Belleville.*







evaluation to measure satisfaction and outcome metrics is part of the program. The PAVE team has written a paper and a book chapter about the program (published in August 2017 and December 2017, respectively). The program has received funding through grants from the Bristol-Myers Squibb Foundation, and continues to seek financial partners in order to expand the program.

**After Her Service** is one of the few programs that specifically serve female veterans. The M-SPAN team conducted a needs assessment in 2016 to define the concerns and gaps in services for this population. Female veterans identified several areas they would like to see addressed, including recognition of the special challenges they face; help with successfully reintegrating to civilian life; assistance finding meaningful employment; and tools for developing positive ways of coping and managing stress. After Her Service, a resiliency skills and professional development program for Post-9/11 female veterans, was designed to address these identified concerns.

The program begins with a skill-building retreat focused on increasing resiliency. Following the retreat, participants engage in six months of one-on-one coaching to set and meet professional and career goals. The first two program retreats were held in New Orleans in December 2017 and March 2018. Preliminary feedback from participants indicates high satisfaction with the retreat and coaching. A rigorous evaluation will track participants over time on mental health, resiliency and success metrics. After Her Service received initial funding from the Bristol-Myers Squibb Foundation.

## PROGRAMS FOR MILITARY FAMILIES

**Home Front Strong (HFS)** is an 8-week resiliency program designed to support Post-9/11 military and veteran spouses and partners as they navigate life challenges and stressors. HomeFront Strong offers a tailored curriculum to enhance resilience, boost coping, and improve the psychological health of participants. With current funding from the Department of Defense, HFS has been offered statewide through in-person groups and via a web-based program to 185 military/veteran families. The program also includes a robust multi-method, multi-wave evaluation to assess longitudinal impact of the intervention on key mental health and adjustment indicators.

### ● *After Her Service held its first program retreat in New Orleans in December 2017.*

An important goal of HFS is to train community providers in how to implement the program so that communities of excellence are created where providers can effectively work with military and veteran families over time. Training on the HFS model has been provided to nearly 200 mental health clinicians at various community agencies throughout the state, including Easterseals Michigan; the VFW National Home for Children; Community Mental Health Authority of Clinton, Eaton, Ingham Counties; private practitioners in the area; and through Star Behavioral Health Providers. Future endeavors include training additional community providers in the model, dissemination of HFS to new community sites, and program participation for an additional 300 military/veteran families. Moreover, a grant from the Elizabeth Dole Foundation will support the development of a tele-group model to bring this program nationally to spouses who serve as caregivers to Post-9/11 veterans.

**Strong Military Families (SMF)** is a parenting intervention for military families with young children. It was designed for military service members, their spouses or partners, and their children from birth through eight years old. Strong Military Families provides a parent and child program experience designed to support and enhance the resilience of military families by creating opportunities for families to come together to learn, support one another, and grow in navigating the unique challenges they face.

To date, the program has served over 250 parents and young children in Southeast Michigan, Virginia, and Wisconsin, via either a 10-week multifamily group or an intensive weekend retreat version of the program. Results of a rigorous evaluation indicated that parents who participated in the SMF multi-family group program reported feeling more confident regarding their parenting, and reported that they had improved their own personal mental health and resilience. They also demonstrated more positive engagement with their children after the intervention period. Similar gains were found in the intensive weekend program. Team members of the SMF program have presented at national and regional conferences, and published four manuscripts in peer reviewed journals. Funders include Welcome Back Veterans, the National Institutes of Health, and Wins for Warriors. **M**

# LEADING DISCOVERY WITH THE NNDC

**T**he University of Michigan Depression Center (UMDC) was the originator and catalyst for the original 16 founding members of the National Network of Depression Centers (NNDC), a nonprofit research consortium dedicated to improving screening methods and treatments for depressions, bipolar illnesses, and related mood disorders through large-scale, long-term, collaborative research projects. Dr. John Greden was founding chair of the Network, and the home office is located in Ann Arbor, with University of Michigan alum Patricia Rinvelt, MBA serving as executive director.

The NNDC started in 2008 and has grown to include more than 26 members across the country which includes several international affiliates. As the NNDC's membership and programs continue to expand, it provides a growing national platform for all member sites, with the UMDC playing an integral role. The NNDC Annual Conference, which rotates around member centers each year, was held in Ann Arbor in 2017 and featured many U-M faculty members. NNDC leaders have also consulted with congressional leaders on pending healthcare issues and are continuing to build relationships with legislators that position the Network and its members as the leaders in mood disorders research and treatment.



## THE MOOD OUTCOMES PROGRAM: MEASUREMENT-BASED CARE MEETS NATIONAL RESEARCH DATABASE

One of the network's major goals is to establish a large, growing, long-term registry to promote the development of personalized, measurement-based treatments for mood disorders. This registry –the Mood Outcomes Program–now approaching 10,000 registrants and continues growing towards the target of 25,000. The Mood Outcomes Program has attracted the attention of a number of national and international healthcare organizations and led to the formation of partnerships with the American Psychiatric Association and OneMind, an international brain health organization funding open science research to improve lives.

The NNDC has also engaged with Epic Systems, one of the nation's largest electronic medical record software companies, to build the mood outcomes measures directly into the Epic system. This will allow for more rapid, widespread uptake of the Mood Outcomes Program across NNDC sites and their related healthcare systems, most of which use Epic. This Epic implementation is being piloted by Dr. Paresh Patel at U-M and Dr. Peter Zandi at Johns Hopkins University.



● *NNDC Board Chair Dr. Ray DePaulo (left) with NNDC Founding Chair Dr. John Greden during their presidential symposium at the 2018 American Psychiatric Association meeting titled "Learning Health Care Systems: Clinical Registries and Networks in Psychiatry"*

## EDUCATION SPOTLIGHT: NNDC VISITING PROFESSOR PROGRAM

The NNDC's Visiting Professor Program was renewed for a second year in 2017, with four member centers hosting prominent experts who conducted grand rounds, led mentorship sessions, and participated in local community events that raised awareness of treatments for depressions and mood disorders. Based on post-program evaluations, the attendee's comments showed that the program had a positive impact in several areas including: advancing translational research; disseminating treatment advancements; and reducing stigma to ensure a future of high-quality care for those struggling with mood disorders. Funding was renewed a third time for 2018 to expand the program from four sessions to six.



● *Dr. Sagar Parikh, who also serves as a Board Member and Medical Director for the NNDC, developed the Visiting Professor Program*



# WORK of CENTERS

## CENTERS OF EXCELLENCE

- Brigham & Women's Hospital—Harvard Medical School, Partners HealthCare
- Weill Cornell Medical College
- Duke University
- Emory University
- Johns Hopkins University
- Mayo Clinic
- McLean Hospital—Harvard Medical School, Partners HealthCare
- Ohio State University—Wexner Medical Center
- Medical University of South Carolina
- Stanford University
- University of California San Francisco
- University of Cincinnati & Lindner Center of HOPE
- University of Colorado Denver
- University of Florida <sup>1</sup>
- University of Illinois at Chicago
- University of Iowa
- University of Louisville
- University of Massachusetts Medical School
- University of Michigan
- University of Pennsylvania
- University of Texas Austin, Dell Medical School <sup>1</sup>
- University of Texas Health Science Center at Houston, McGovern Medical School

## ASSOCIATE MEMBERS

- Florida State University
- Michigan State University College of Human Medicine & Pine Rest Christian Mental Health Services
- Penn State Milton S. Hershey Medical Center
- University of Toledo <sup>1</sup>

## INTERNATIONAL AFFILIATES

- Canadian Depression Research & Intervention Network
- The Institute of Psychiatric Phenomics and Genomics at the Ludwig-Maximilian University of Munich
- National Network of Depression Centers India <sup>1</sup>

<sup>1</sup> New in 2017-18

# THE VICTORS FOR MICHIGAN CAMPAIGN

In Fall 2013, the University of Michigan embarked on a comprehensive five-year campaign to raise over \$4 billion for student support, engaged learning and big ideas. When the Victors for Michigan Campaign launched, it was the largest fundraising effort in the history of public higher education.

In April 2017, just two-thirds of the way through the five-year campaign, Michigan donors surpassed the \$4 billion Victors for Michigan campaign mark.

"Michigan donors keep exceeding expectations," said Jerry May, vice president for development, at the time. "Every time we set an ambitious goal, our donors soar beyond it."

On November 2, 2018 the university officially celebrated the close of the Victors for Michigan Campaign. As of October 2018, the university overall has raised \$5 billion. Go Blue!

To learn more about ways to support our program, please contact Nancy Davis, Director of Development, 734-763-4858 or [nandavis@umich.edu](mailto:nandavis@umich.edu).



• (L-R) Lisa Fabian, Associate Director of Development, Heinz C. Prechter Bipolar Research Program; Nancy Davis, Director of Development, Depression Center; Courtney Metzger, Assistant Director of Development, Department of Psychiatry

## MEDICINE NEEDS VICTORS, DEPRESSION NEEDS VICTORS

Michigan Medicine's portion of the overall campaign goal was \$1 billion or 25 percent of the university's goal. Of this \$1 billion goal to create the future of healthcare, our mental health team set an ambitious goal to raise \$50M for the Depression Center and Department of Psychiatry. This effort was designed to provide a huge infusion of funding into depression research, education and treatment for depression, bipolar, and related conditions. We are pleased to report that as of early September, we have raised \$83 million in new gifts, pledges and bequests – 162 percent of our goal!

This donor support, through the Victors for Michigan Campaign, will bring some of the most promising work at the Depression Center to fruition. This gives us even greater fuel to fund forward-looking approaches. The Depression Center's work is designed to innovate, to spread and to provide hope and help to people across the country and around the world. The impact of today's investment on tomorrow's depression research and care will be profound and lasting. To our many generous donors, we can't thank you enough for your support.

## TOTAL AMOUNT RAISED

**\$83M**

### FOR THE DEPRESSION CENTER

**\$51M**

### FOR PRECHTER BIPOLAR PROGRAM

**\$16.4M**

### FOR OTHER PSYCHIATRY PROGRAMS

**\$15.6M**



# DEPRESSION CENTER LEADERSHIP TEAM

## FOUNDER AND EXECUTIVE DIRECTOR

**John Greden, M.D.**

Rachel Upjohn Professor of Psychiatry and Clinical Neurosciences  
 Research Professor, Molecular & Behavioral Neuroscience Institute  
 Founder and Chair, National Network of Depression Centers

## STANDING MEMBER

**Gregory Dalack, M.D.**

Professor of Psychiatry  
 Chair of Psychiatry

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**Sagar V. Parikh, M.D., FRCPC**

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**Michelle Riba, M.D., M.S.**

Professor, Department of Psychiatry  
 Associate Chair for Integrated Medical and Psychiatric Services, Department of Psychiatry  
 Zonal Representative (Area 2, USA), World Psychiatric Association  
 Past President, American Psychiatric Association

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**Nancy Davis**

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**IN MEMORIAM****Jeanne Robertson**

*The Depression Center thanks Jeanne Robertson for her contributions to the National Advisory Board from 2013 to 2018.*

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