SPRING/SUMMER 2025

UNIVERSITY OF LOUISVILLE DEPRESSION CENTER NEWSLETTER

DEPRESSION CENTER ANNUAL BENEFIT DINNER AND PRESENTATION

Strings of Hope: Music and Mental Health with Ben Sollee

Friday, June 6, 2025 | 6:00 - 8:30 PM ET

Kentucky Science Center, Riverview Room - 727 West Main Street

Join the UofL Department of Psychiatry & Behavioral Sciences on Friday, June 6, 2025 for an evening of music and reflection featuring cellist, composer and 2020 School of Music Alumni Awards honoree Ben Sollee '06, performing songs from his latest album, "Long Hall." Inspired by his personal healing journey with long COVID, Sollee's performance explores the therapeutic power of music and its role in public health. Through storytelling and song, he'll highlight the connection between the arts, mental wellness and the importance of human connection.

Over the last two decades, Kentuckian Ben Sollee has distinguished himself as a multi-faceted creative, blurring the lines between music, tech, and activism. A graduate of the University of Louisville School of Music, he holds a BFA in cello performance. Since his debut record in 2008, Mr. Sollee has released 6 studio records and 8 EPs garnering praise from the New York Times and NPR.

Scan the QR code to register now.

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UNIVERSITY OF LOUISVILLE DEPRESSION CENTER

75+ Years and Counting

By: Robert Caudill, M.D.

The Psychiatry Residency Program at the University of Louisville is finishing its 75th year of accreditation by the Accreditation Council for Graduate Medical Education (ACGME). The program marked this milestone by seeking and receiving approval to increase from 36 to 48 residents. As a result, the first-year class of residents starting in July will increase from 9 to 12. The acquisition of the KentuckyOne group, which included Peace (formerly Our Lady of Peace) Hospital, several years ago is one of several factors that enabled this expansion. In July, the department looks forward to establishing the first academic inpatient service at the hospital, which will join our existing inpatient training experiences at University and Norton Hospitals. This expansion in resident numbers will require the recruitment of additional faculty, which is already underway. This also establishes the residency as one of the largest in the region.

Residents are also excited about the addition of a new TMS unit for the department and Depression Center. They look forward to the direct learning this will provide and

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the expansion of interventional modalities to their ever-increasing options for patient care. Our trainees participate in a national competition among psychiatry residencies known as "Mind Games," sponsored by the American Psychiatric Association. It is described as a fun way for residents to test their knowledge on patient care, medical knowledge, and psychiatric history while earning bragging rights for their program. The top three qualifying teams advance to compete in person at the APA's Annual Meeting in Los Angeles in May.

Through the generosity of members of the Kentucky Psychiatric Medical Association (KPMA) and their philanthropic foundation, the Training Office has been able to acquire technology allowing for upgrades in some of the educational teaching spaces within the department. A 100-inch flat-screen monitor has been added to our large conference room, and upgrades in the video teleconferencing hardware, specifically designed for meeting spaces, were furnished by the department. This allows for much-needed flexibility in terms of being able to hold meetings and classes where attendees can be present either in person or virtually.

The department and residency host a summer picnic in late June to welcome the new residents to the program. Alumni of the program, as well as practicing psychiatrists in the community, are invited to attend and strengthen connections with members of the residency and faculty. The new academic year officially begins on July 1, and we are all looking forward to our 76th year of accredited residency training here at the University of Louisville.

The Importance of Biomedical Research

By: Rif S. El-Mallakh, M.D.

Recent disruptions of Federally funded research are troubling. Payments on current grants as well as new funding have been canceled or threatened. Additionally, indirect funding, which pays for necessary infrastructure, is scheduled to be reduced substantially. It appears that some research efforts may have been targeted on ideological bases.

Research is important for several reasons. First, there is the obvious power knowledge. Understanding what, why, how, and where things happen allows one to respond appropriately. Biomedical research is essential for all of us to continue to improve treatments for disease and reduce human suffering and disability. Neuroscience research is especially important since brain diseases (including psychiatric conditions) are among the most severe and most disruptive conditions we deal with. Second, there is the economic power of research. Research results in both direct and indirect economic benefits, and these benefits are realized by nearly everyone.

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The American funding system is perhaps the most thoughtful in existence. NIH only funds about 8% of all submitted proposals. All proposals are examined by a group of peer scientists, that are usually leaders in their fields. These scientists examine the proposed project in the setting of the current set of knowledge and scientific need. They write their critique, and it is available for all to review. The study is then further discussed by the entire committee and the rating is provided by the entire committee (usually around 20 – 25 scientists). Of note, the NIH has now added patients and family members to the committee, so the view from the patient is now part of the review process. Nearly always, the rating determines funding. This system is admired around the world.

It takes tremendous time and effort to build an effective and potent research system, and rebuilding it would be most difficult. Hopefully, the American public will support our research efforts.

The Depression Center at the University of Louisville has been a leader in psychiatric research. We are currently in the process of wrapping up a study that is examining genes that might predispose individuals to severe depression.Dr Jesse Wright, the past director of the Depression Center, has recently completed a set of studies that demonstrated that computer assisted cognitive behavioral therapy (CBT) is a cost-effective alternative to the current model of completely therapist-based CBT.[1,2] These studies were funded by the Federal government and will ultimately reduce the cost of care and contribute to improved patient outcomes. We will continue to be dedicated to the advancement of psychiatric research.

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Does It Matter What I Say?
Part 1: The Semantics of Patient Care

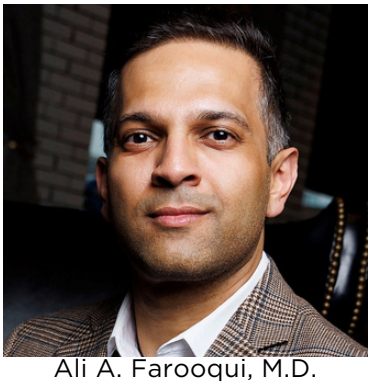
By: Ali A. Farooqui, M.D.

In medicine, words can be as essential as prescriptions. Our clinical encounters can shape how patients see themselves, their illnesses, and the care they receive. Clinicians obsess over taxonomy and semantics when it comes to accurately describing symptoms and naming a diagnosis; the difference between energy and motivation, pressured versus rapid speech, the varying names associated with diagnosis like autism spectrum disorder, and the delineation between moderate, mild, and severe forms of a psychiatric disorder – all codified within the diagnostic manual. This focus on vocabulary goes beyond psychiatry (growth versus tumor, etc.). Semantics cannot overshadow science or the gravity of what we do and our role in medicine. The pressure to make mental health care more accessible and less stigmatizing should not compromise our role as physicians that provide not just "help" to our patients, but more importantly treatment and care.

The public perception of mental illness combined with an effort to soften the language of medicine has resulted in the culture of patients seeking "help" for their psychiatric concerns, rather than treatment. However, we treat psychiatric disorders and risk devaluing psychiatry, and the patient's distress by using the terminology of "help".

Help implies that a person needs only assistance. There may be a connotation of being inadequate, not good enough to manage the symptoms independently. We know that for most psychiatric patients, treatment – either pharmacological or psychotherapeutical – is necessary; but does the patient know that? After all, patients don't seek help for other medical conditions such as seizures, migraines, cancer, atherosclerosis; they seek treatment.

Academic scholarship favors the term "help" as it relates to the delivery of psychiatric care. Literature suggests the word is perceived as more relational, less stigmatizing, and empowering; and patients feel more comfortable and more empowered when care is termed as help. However, 80% of the studies are authored by non-physicians that approach mental illness with a social



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rather than a diagnostic and biological lens.

Mental illnesses are not social constructs. They are medical illness – neurobiological conditions with behavioral and emotional manifestations that require trained clinical expertise for diagnosis followed by targeted and structured interventions. Our patients are not just struggling—they are sick, and to reduce our role to "helping" is to obscure the medical seriousness of what we do. While we do provide support to the suffering, the crux of our role as physicians is to diagnose and treat. Referring to what we do as "help" might make us sound more approachable in the short term, but it risks undermining the legitimacy of our field and what we do.

Unfortunately, the psychiatric profession is still being challenged by many in the political and public spheres.

Our diagnostic tools remain imperfect and incomplete, but the field is progressing, and our understanding of the brain is increasing. In this environment, our language must carry weight and not undermine our medical knowledge and authority. Rapport cannot come at the cost of precision. Patients deserve compassion, but they also deserve expertise, decisiveness, and a physician that can attend to their ailments.

Anyone can help. Medical professionals can treat. Using the terminology of "treatment" is owning our medical identity and defending the scientific and diagnostic mindset that patients deserve. They do not need euphemisms. They need treatment from a physician who has taken responsibility of the course of illness, the risk of complications, and the burden of care.

Transcranial Magnetic Stimulation (TMS) with Adolescents

By: G. Randolph Schrodt, Jr. M.D., D.L.F.A.P.A.

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The latest data from the National Health and Nutrition Examination Survey (NHANES) showed a significant uptick in rates of depression among both US adolescents and adults. Overall rates of depression were the highest in adolescents aged 12-19 (19%), with 27% of teenage girls endorsing moderate (or higher) levels of depressive symptoms on self-report measures. Data from the Center for Disease Control's (CDC) latest Youth Risk Behavior Survey showed that more than half of high school girls (53%) said they felt persistently sad or hopeless, nearly twice the rate of teenage boys (28%). Compared to data collected a decade ago, the rates of depression are significantly increased. Factors including the impact of the covid pandemic on normal school and social development, and the influence of social media have been implicated in this increase in rates of depression. However, lower socioeconomic class has the highest correlation with rates of depression, and a family history of depressive disorders is a recognized risk factor.

Not surprisingly, depression is associated with increased risks of suicide and self-harm behaviors among teens. After unintentional injuries such as car accidents, suicide is the second leading cause of deaths in adolescents. In addition, depression is associated with impairments of family, social, and academic functioning. Depressed teens have an increased incidence of early pregnancy, physical illness, substance abuse, and other psychiatric disorders. Moreover, depressive disorder in adolescence is associated with an increased risk of chronic recurrence and poor functioning into adulthood.

As with adults, most depressed adolescents do not receive any treatment. Treatment of depression in adolescents is also impacted by limited FDA-approved treatment options.

At present, only fluoxetine (Prozac) and escitalopram (Lexapro) are approved antidepressant options, although other antidepressants are commonly prescribed. In 2004, the FDA added a black box warning regarding the increased emergence of suicidal thoughts in adolescents and young adults during the first month of treatment with oral antidepressants. Although the rate of increase of suicidal thoughts with antidepressants compared to placebo was small (4% versus 2%), and notably not associated with an increase in suicidal behavior, the warning led to a decrease of prescriptions for antidepressants in adolescents.

Even with treatment, 40% of depressed adolescents fail to benefit from antidepressants and evidence-based psychotherapies such as cognitive-behavioral therapy. There may be a number of reasons that antidepressant medications are less effective in adolescents, including variations in brain development and maturation compared to adults. Also, it is estimated that at least 20% of depressed adolescents will subsequently be diagnosed with bipolar disorder, and in some cases antidepressants can worsen their condition.

Antidepressant therapy can also be associated with systemic side effects including weight gain and sexual dysfunction, leading to compliance issues with adolescents (as well as adults). Similar to strategies with adults with treatment resistant depressive disorders, an atypical neuroleptic is often added to the teenager's current antidepressant therapy. However, this strategy is "off label" with adolescents (not FDA approved), and may be associated with significant side effects including the development of metabolic syndrome.

Transcranial magnetic stimulation (TMS) is a non-invasive treatment for depression and other psychiatric conditions that was first cleared by the FDA in 2008 for adults. TMS uses targeted magnetic fields to stimulate specific areas of the brain that are implicated in depressive disorders. With repeated treatments, TMS appears to modulate dysfunctional brain circuits associated with disturbed mood, vegetative symptoms, cognitive function, and behavior. Up to 70% of patients with treatment-resistant depression who receive TMS have an improvement in their condition. In addition to antidepressant efficacy, TMS has very few adverse effects, the most common being scalp pain or discomfort at the stimulation site.

Patients are fully awake during the treatment, and able to immediately return to normal activities.

In March 2024, the FDA cleared TMS as a first-line treatment for adolescents with depression. The approval was based in part on the data from the largest, multi-center, double-blind, randomized, sham-controlled trial of 10Hz stimulation of the left dorsolateral prefrontal cortex with medication-free adolescents with treatment-resistant depression. This study established the feasibility and safety profile of TMS with teenagers; specifically no increase in suicidal thoughts was observed, and the treatment was not associated with any negative cognitive or systemic side effects. In this study with teenagers who had failed to show improvement with 1 to 4 prior antidepressants trials, 41.7% showed antidepressant response to TMS, with 29.9% achieving full remission. Although TMS treatment produced a clinically meaningful change in depressive symptom severity, this did not differ from sham treatment in this study. Although it did not reach statistical significance, adolescents with 2 or more prior antidepressant failures were much more likely to respond to TMS than sham treatment.

Placebo response rates in adolescent antidepressant trials are often surprisingly high, sometimes over 50%, which makes it harder to to detect treatment effects. This appears to be in part due to fact that adolescent depression often has an episodic pattern, and many teens improve over time regardless of treatment, especially with support and structure. It is likely that the enhanced attention, support, structure, and monitoring received during participation in clinical trials compared to regular care can lead to real improvements. The placebo response rate has also been noted in adults to be higher in studies of medical devices such as TMS.

One strategy to reduce the placebo response rate is the use of a "sham lead-in" approach. In this study, adolescents who failed to show clinical improvement in the 6-week, double-blinded Phase I part of the study were invited to have 6-weeks of "real TMS." The improvement rate in this "sham to active" subgroup was similar to that observed in adolescents who received active TMS in Phase I, with a mean decrease of HAMD24 severity scores of 12.7; in clinical studies, a decrease of HAMD24 scores >4 is considered clinically significant. Another interesting finding from the study involved the "active to active" subgroup. Since blinding was maintained throughout the study, subjects who failed to improve with the first 6 weeks of TMS treatment typically assumed they were in the sham group. However, there was a subgroup of depressed adolescents that actually received active TMS, but failed to show clinical improvement after 6 weeks, the typical "dose" of TMS in adults. In this group, the mean decrease of HAMD24 severity scores decreased from baseline by 14.6, suggesting some depressed adolescents may benefit from an extended course of treatment.

Adolescents who showed antidepressant response in either Phase I or Phase II were subsequently invited to enroll in a follow-up, medication-free, 6-month Phase III to study the durability of the TMS antidepressant benefits, and to evaluate the feasibility and efficacy of TMS reintroduction if depressive symptoms recurred. During the 6-month follow up, 42% of the teens had TMS reintroduction due to return of depressive symptoms, and 82% of those had a return to baseline scores with additional treatments. Subjects with full antidepressant response at the outset of Phase III had a lower risk of recurrence compared to those with partial response.

The FDA subsequently evaluated outcome data collected in the "real world" clinical setting through the Neuronetics TMS TrakStar platform. Among the 1,169 adolescents in the data analysis, 78% achieved clinically meaningful improvement in both their depression and anxiety, with a response rate of 59.4% and remission rate of 36.4%. As with adults, a marked dose-response effect was observed, with antidepressant effectiveness improving with longer treatment courses.

In conclusion, TMS is a feasible, safe, tolerable and effective treatment with depressed adolescents. Evidence suggests that TMS may have a better tolerability and adverse effect profile compared to psychotropic medications. An individualized, flexible dosing approach may be preferable, i.e., treatment to full response with reintroduction as needed. Future studies may identify clinical features or biomarkers to predict response or guide the selection of stimulation protocols with depressed teens.