AUTISM: COMPLEX CONDITION, COMPREHENSIVE RESPONSE

New AARTS Program Offers Array of Services for Children and Young Adults

Complex and challenging, autism spectrum disorder (ASD) often poses great difficulties for patients, their families and their care providers alike. To improve the options for people with this disorder, including young adults, the Rush University Medical Center Department of Psychiatry established the Chicago area’s first comprehensive autism center in the fall of 2012. As its name implies, the new Autism Assessment, Research, Treatment and Services (AARTS) Program addresses an array of needs for people with ASD, remedying the lack of a single provider of integrated services in the Chicago area.

The center serves patients from preschool age through their 20s, providing thorough assessments of their capabilities, needs and physical and mental health, and offering a combination of advanced medical and psychological treatments. In addition, the center has begun a program of state-of-the-art research in promising new treatments for medical and psychological problems associated with ASD.

The need for such services is great and growing steadily. The recognized prevalence of children with ASD has increased from one in 1,000 in 1978 to one in 88 today, according to federal estimates.

Despite the large number of children along the autism spectrum, no single place in Chicago offers a full range of services for them, which until now has created financial and scheduling burdens on families as well.

OUT OF THE DARK

Rush Psychiatrists Offer Advanced Treatments for Depression

Georgia A. had experienced bouts of depression on and off for years, beginning with postpartum depression following the birth of her first child. Then in 2006, she fell into a severe depression brought on by the stress of caring for her aging parents and later worsened by their deaths within a year of each other.

“It got to the point where I wasn’t able to function,” Georgia recalls. “I couldn’t get out of bed. I didn’t want to face anything. All I could do was cry.” During this dark period, she found herself wanting to commit suicide.

Georgia sought help from a number of psychiatrists and was treated with a variety of medications, but none produced relief of her depression. Instead, her condition deteriorated to the point that in 2010, Georgia was hospitalized in the inpatient psychiatric unit at Rush University Medical Center. During her stay, she received a new combination of medications, electroconvulsive therapy (ECT) and group therapy. Fortunately, the combined treatments finally put her depression into remission.

“My doctors were absolutely wonderful,” Georgia says. “They saved my life.”

Now 72, she travels, goes out to dinner and the movies, and spends time with her grandchildren. “I’m able to do anything I used to do again,” she says.

The Department of Psychiatry at Rush University Medical Center provides advanced treatments for depression that have helped numerous patients who have severe depression, including many who have been treated unsuccessfully elsewhere. Clinicians in the department employ a wide range of treatments that include novel medication therapies, ECT and transcranial stimulation. When needed, the department also provides inpatient care in a safe, secure facility on the Rush campus.

“We pull out all the stops here and do whatever we can to get people better as long as the risk-benefit ratio falls in the patient’s favor,” says Michael Easton, MD, Georgia’s psychiatrist. Easton is the director of Rush’s adult psychiatric inpatient unit and clinical director of the department’s outpatient services at the Westgate Practice.

Depression affects 9.1 percent of adults in the U.S., with 4.1 percent suffering from severe depression, according to the Centers for Disease Control and Prevention. While some patients experience complete remission after standard medication treatments, most do not respond fully to these interventions or don’t benefit from them at all and continue to suffer the often disabling and sometimes fatal effects of their illness.

“Most of our patient have already received conservative standard of care treatment. We treat their illnesses aggressively in the hope of getting a higher percentage of patients into remission,” Easton says.

In some cases, achieving that remission is a matter of correctly diagnosing patients. Some of them have been treated for unipolar depression for years without improving, when in fact they suffer from bipolar depression, which requires a different type of treatment. Another large group of patients have not received sufficiently aggressive treatments to bring their illness under control.

In addition, Rush psychiatrists bring a determination and perseverance gained from decades of combined experience successfully treating patients who haven’t found relief elsewhere. “We’re willing to hang in there with patients and not give up, to keep plugging away until we get them better,” Easton says.

Louis Kraus, MD, meets with a patient in the AARTS Program and her mother.

“Despite the large number of children along the autism spectrum, no single place in Chicago offers a full range of services for them, which until now has created financial and scheduling burdens on families as well. continued on page 5
The changes women experience throughout their reproductive lives, especially during pregnancy and menopause, can lead to mental health issues that require a specialized response. To meet this need, in 2012, the Rush Department of Psychiatry opened its Center for Women’s Behavioral and Mental Health in collaboration with the Rush departments of Behavioral Sciences and Obstetrics and Gynecology. The center provides evaluation and treatment of mental health issues associated with female reproductive and sexual health.

The center’s director, Alison Reminick, MD, assistant professor of psychiatry, leads a team that includes three psychologists — Nicole Heath, PhD, assistant professor of behavioral sciences, and April Taylor-Clint, PhD, and Natalie Stevens, PhD, both post-doctoral research fellows. Reminick spoke with Progress Notes about the center and the help it provides for women.

Progress Notes: Why is there a need for a center like this?

Reminick: Women face many transitional hormonally, whether we’re talking about their menstrual period, or during pregnancy, or postpartum. There are huge hormonal fluctuations that occur that we believe are related to subsequent psychiatric conditions. Psychologically, women face different issues, especially when dealing with starting a family, raising children and, in some cases, domestic violence. We feel there’s a need for a specific psychiatric field that caters to the needs of women.

Progress Notes: For what sort of mental health problems does the center provide treatment?

Reminick: We see women for any difficult transition during the reproductive life cycle. We treat women for premenstrual dysphoric disorder, which includes severe depression and tension before menstruation. We’re working with women diagnosed with gynecological cancers, or who are post-hysterectomy, or suffering from menopausal mood changes.

We assist women with mental illness such as depression, anxiety or bipolar disorder who are planning pregnancies and are unsure whether or not they should stay on their medications. We also see pregnant women for problems with substance abuse, such as opiates, alcohol or tobacco.

I’m also working with a lot of pregnant women who have babies with diagnoses of congenital malformation, or who have experienced miscarriages, stillbirth or neonatal death. A therapist will see them in our clinic, and we have a therapy group for them. We also have a group for women with postpartum depression.

We do a lot of work with sexual health. We help women experiencing difficult side effects from their medications, whether it’s an issue of low libido or being unable to reach orgasm. We’re working with pelvic health providers like Sheila Dugan, MD, (co-medical director of the Rush Program for Abdominal and Pelvic Health) to partner with them in treating pelvic floor trauma.

Progress Notes: What sort of help does the center provide for pregnant women with mental illnesses?

Reminick: These women are being referred to us from psychiatrists outside Rush who don’t have the expertise to treat them while they’re pregnant. We’ll see them once a month for all psychiatric disorders during pregnancy, whether it’s an eating disorder, anxiety disorder, panic disorder, depression or substance abuse. Based on a careful analysis of their medications and the severity of their illness, we create individual plans that balance the risks of untreated illness versus medication exposure during pregnancy.

Progress Notes: What can you do for women with postpartum depression?

Reminick: Antidepressants are usually the first line of treatment, and they’re mostly safe during breastfeeding. We offer women cognitive therapy and a postpartum support group that meets weekly, because it’s a very isolating experience for a woman.

Progress Notes: The center’s obviously addressing a broad range of mental health issues. What do you want its overall impact to be?

Reminick: I hope to empower these women now that there’s a place for them to go and get the care they need. Most of all, I want to recognize and identify when these women need treatment. That’s been the goal, to work with obstetrics and gynecology and pediatrics to identify early these women who might be at risk.

For more information, please contact Maria Lavette, clinic coordinator, at (312) 942-7473.
**Another Chance**

**Rush Psychiatrists Bring Relief to Patients with Treatment-Resistant Depression**

In late September of last year, a woman sought treatment from Robert Shulman, MD, after three previous psychiatrists were unsuccessful in alleviating her depression. Unable to tolerate the side effects of any of the six different medications her doctors had used to treat her, the woman suffered from anxiety along with intractable depression and severely impaired function.

Shulman put her on an antidepressant medication at one-twentieth its normal dosage, administering it with a child’s medicine dropper. He also put her on a second medication to prevent the emergence of side effects. Then he gradually increased her antidepressant to one-fourth the normal amount.

This approach enabled the patient to remain on her medication, and by mid-November, her depression was in near complete remission.

Shulman, the Rush Department of Psychiatry’s associate chairperson for clinical services, specializes in caring for patients with treatment-resistant depression, who make up about 40 percent of all depression cases nationwide. By comparison, such patients make up more than 75 percent of his practice.

A critical part of his work comes down to providing a correct diagnosis. Some of the patients Shulman sees have bipolar disorder, but previously have been misdiagnosed with unipolar depression. He also carefully assesses patients’ symptoms and crafts a treatment regimen that takes into consideration patients’ prior response and adverse reactions to medications.

In addition, he and his Rush colleagues have the expertise to combine medications in novel ways. “Thinking outside the box may help us find the keys that unlock patients’ brain chemistry so the circuits are going to work,” Shulman says.

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**Study Finds Benefit to Combining Cognitive Therapy with Medication in Depression Treatment**

The Rush Department of Psychiatry’s commitment to offering the best possible care for psychiatric patients includes testing promising new treatments. Researchers in the Woman’s Board Depression Treatment and Research Center recently completed a study of the effectiveness of antidepressant medication in combination with cognitive therapy that showed improved results for certain patients compared to similar patients who were treated with medication alone.

The National Institute of Mental Health-funded study was conducted in collaboration with researchers at the University of Pennsylvania and Vanderbilt University. It is among the first studies to look specifically at long-term recovery from depression and prevention of new episodes.

The researchers examined 452 adult patients with chronic or recurrent depression who were at high risk for recurrence of depression after successful treatment. Half the patients were treated solely with medications. The other half received medications and cognitive therapy. The medication regimens were individually customized for the patients in both groups.

The study, which lasted nearly ten years, followed the patients for up to 42 months. Compared to the use of medications alone, the combined treatment produced higher rates of recovery in patients with recurrent and more severe depression. Recovery was defined as a complete remission of depression symptoms and return to a baseline level of functioning that lasted at least six months.

“The more severe the depression, the more likely the cognitive therapy in combination with medication would have a positive effect on recovery,” says John Zajecka, MD, clinical director of the depression treatment and research center. “Our findings underscore the importance of considering the combination of this kind of therapy with medication for more severely depressed individuals.”

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**POINT OF HOPE’S RETURN**

**Rush Inpatient Psychiatric Unit Brings Patients Out of Despair**

Patients come to Rush’s Mood Disorders Inpatient Psychiatric Unit when they’ve lost hope. Most of the time, they leave having found it again.

“A lot of what we do is offer hope,” says Thanh Thai, MD, assistant professor of psychiatry and one of the physicians responsible for patient care in the unit. “Patients feel that nothing is working, there’s no hope, so why not end it? Fortunately, there is always something that can be done.”

The unit specializes in treating severe depression, bipolar disorder and anxiety disorders in patients age 18 to 60 and older (other inpatients units at Rush provide care for pediatric and geriatric psychiatry patients). The symptoms of affected patients may include suicidal thoughts or psychotic symptoms, such as hearing voices.

Most patients admit themselves to the unit voluntarily, after being referred to Rush by their psychiatrist or other clinician, or through the Rush emergency room or another hospital where the patient has gone for help. “Or sometimes you’ll have a patient who’s at another psychiatric hospital that doesn’t offer the services that we do, like electroconvulsive therapy, and it’s determined they need that treatment,” Thai says.

A team of psychiatrists, nurses and therapists provides multifaceted treatment that includes individual and group therapy (including art and exercise therapy) medication therapy and, when needed, electroconvulsive therapy. Thai notes that providing care in an inpatient setting enables the team to monitor patients’ responses to treatment and fine-tune treatments quickly.

The group cognitive therapy sessions help patients manage the negative thoughts that are a typical symptom of depression. Patients are taught mindfulness skills that help them stay focused on the moment and the tasks immediately before them while living with the intense emotions associated with unipolar depression and bipolar disorder. In addition, patients receive education about their illness, including how and why their medications work, in order to increase compliance with their medication regimen.

“There can be a synergy with medication and talk therapy that improves a patient’s depression,” says Sheila Dowd, PhD, assistant professor of psychiatry and behavioral sciences.
Electroconvulsive therapy (ECT) is typically administered to patients suffering from severe depression after multiple attempts to treat their illness with medications have failed. Psychiatrists at Rush have administered ECT successfully to many patients over the years — which attests both to the large number of patients with severe, difficult-to-treat depression that they are asked to care for and the effectiveness of ECT for these patients.

Depression goes into remission — meaning the illness’ symptoms are reduced to a level where they’re no longer a problem — in 65 to 90 percent of patients treated with ECT, according to various studies. “No other treatments have the same efficacy in terms of remission rates,” says Michael Easton, MD, director of the Rush ECT service.

ECT suffers from the incorrect perception that it’s harmful and traumatic to patients. That stigma is due in part to films like “One Flew Over the Cuckoo’s Nest,” in which the patient’s head administer a mild electrical current that is passed to the brain, inducing a seizure that lasts between 25 and 60 seconds. The whole procedure takes 10 to 15 minutes. A typical course of treatment includes eight to 12 sessions administered over a three to four week period, followed by medication treatment. Some patients may require continued maintenance sessions, typically once a month, to keep them well. While it’s unknown exactly how ECT works, it’s clear the treatment causes a massive generation of chemicals in the brain. Easton believes these chemicals alter the brain’s signaling patterns and restores it to normal function.

Easton brings extensive experience to these treatments — he first began performing ECT while a resident in the late 1980s. He now leads a team at Rush that performs ECT three days a week, treating 10 patients on average each of these days.

The brain is both a chemical and an electrical organ, and treatments for depression can work either by affecting its chemistry or modulating it electrically. Since 2009, Rush has been offering transcranial magnetic stimulation (TMS), one of the newest and most promising electrically-based depression treatments.

Like electroconvulsive therapy (ECT), TMS is used to treat depressed patients who have not responded well to psychotherapy or medications. Unlike ECT, TMS does not induce a seizure to produce its therapeutic effect; it has virtually no systemic side effects; and doesn’t require anesthesia, allowing patients to remain conscious during the procedure.

During TMS, a coil is placed on the patient’s head to deliver highly focused magnetic pulses to areas of the brain associated with depression and mood. The pulses stimulate neurons on the surface of the brain, causing them to alter their activity, according to Phil Janicak, MD, professor of psychiatry, who oversees Rush’s TMS program.

Patients undergoing TMS typically receive a treatment five days a week for four to six weeks. The procedure lasts less than 40 minutes, and patients can go about their daily activities immediately afterward.

TMS evolved out of a technology used to assess normal brain activity, as well as functionality after damage due to such problems as stroke or tumors. The reason it works is still not fully understood. However, imaging demonstrates that TMS indirectly alters neurocircuits in deeper brain structures that regulate behaviors disrupted in depression, such as sleep, appetite and energy level.

Rush’s TMS team is highly experienced and performs hundreds of TMS treatments each year. Janicak and his colleagues have studied TMS for nearly 15 years, participating in a number of trials. These studies have yielded encouraging findings about the effectiveness, safety and tolerability of the procedure.

One of the studies examined more than 300 patients who received TMS after multiple medication treatments failed to improve their depression sufficiently. Of these patients, 60 percent experienced substantial improvement in their condition and 30 percent had a complete remission of their symptoms.

Another study found that about 70 percent of patients who achieved remission after a trial of TMS were able to maintain this level of benefit for a year, aided by medication and booster TMS treatments when needed.

Janicak and his colleagues recently examined the use of multiple coils to deliver TMS stimulations to deeper areas in the brain in the hope of producing a more rapid and robust improvement. They also are preparing to study TMS as a treatment for postpartum depression.

“While literally only scratching the surface with TMS,” Janicak says, “there are many possible disorders which might benefit from TMS as we learn more about its effects on the brain.”
as limiting the degree of coordination and communication among care providers. Given those circumstances, it was clearly time to create a comprehensive center like this,” says Louis Kraus, MD, chief of the Section of Child and Adolescent Psychiatry at Rush and head of the AARTS Program.

“It's one-stop shopping. Patients and their parents won't have to spend half their life driving around to different appointments, doctors and groups to try to address their needs,” adds Judy McCormack, a trustee of the Boler Family Foundation, a Chicago-area philanthropy that made a major gift to support the establishment of the center. “We also liked the fact that this program will help not only kids who are first being diagnosed, but also older kids and young adults who really need services.”

ASD is a disorder of the brain's development that results in social and communication difficulties and also can lead to repetitive behavior patterns, cognitive impairments and mental illness. Signs of ASD usually become apparent by the time a child is three years old. The cause is unknown, although genetic factors are suspected.

BUILDING ON STRENGTH

The AARTS Program builds on Rush’s established strengths in providing services to children with ASD. The Rush Day School, established in 1967, provides education and treatment for children with ASD and emotional disabilities, and Rush’s Autism Resource Center links families to reputable resources across the Chicago metropolitan area.

Kraus himself brings more than 20 years of work in the field to this program. Along with providing clinical care for children with autism at Rush, he is the medical director of a school for children with severe autism run by Easter Seals and a consultant to numerous school districts seeking guidance on accommodating students with ASD. He’s joined by new faculty members who have expanded Rush psychiatry’s capacities in the assessment and treatment of patients with ASD.

The AARTS Program offers thorough psychiatric and psychological assessments. Patients are evaluated for the presence of psychiatric illnesses that are common in children with ASD, such as mood, attention and anxiety disorders. Assessments include measures of the patient’s intellectual ability, a comprehensive parent interview and direct diagnostic assessment, and also may include observations of school performance. Additional measures are administered as appropriate. Altogether, they provide an exceptionally full picture of the patient’s medical, intellectual and social needs as well as the patient’s strengths and potential for improvement.

The program offers a similarly multifaceted array of treatment options to promote patients’ mental health and social development. The center offers the latest medication options for mental illnesses and for common ASD symptoms such as anxiety, social difficulties and insistence on sameness. In addition, individual therapy is available to adolescents and adults with ASD and their family members. The program also offers social skills and family therapy groups.

“With the AARTS Program, we’re able to tailor evaluations and treatment interventions far beyond what we’ve been able to do at Rush in the past,” Kraus says. “We hope that as a result, we’ll be able to greatly improve the quality of life for individuals with autism spectrum disorder and help their families better understand and accommodate their needs.”

For more information about the AARTS Program, please call (312) 563-2272. For clinic appointments, please call (312) 563-6637.

FAMILY'S EXPERIENCE INSPIRES SUPPORT OF AUTISM CENTER

Diagnosed with autism at age two, John Tracy began developing mood instability in adolescence that led to repeated hospitalizations. After a severe episode in 2011, John was admitted to Rush University Medical Center, where he spent five weeks.

Thanks to the care he received at Rush, John, now 20, has stabilized. He’s living at the Sonia Shankman Orthogenic School, a residential treatment facility in Chicago, while exploring educational and vocational possibilities in the surrounding community. “He’s back. He’s the sweetest kid you’ve ever met,” says John’s mother, Julie Tracy.

Out of gratitude for the care John received and the desire to make such treatments more widely available for the patients and families that need them, the Julie and Michael Tracy Family Foundation has made a significant gift in support of Rush’s Autism Assessment, Research, Treatment and Services (AARTS) Program.

“We are committed to supporting the program over the years,” says Julie, who co-founded and runs the foundation with Michael Tracy, her husband. “We can help set the stage so others can see how far we can go quickly. A donation at this level is an excellent investment in creating the multifaceted and robust solutions that we have to find.”

The Tracys also plan to build residences for people with autism near Rush and to enlist the AARTS Program in providing services for the residents. The first of these homes is scheduled to open this spring.

“We’re interested in solving a problem. In order to do it, we’ve got to have the muscle of an institution like Rush,” Julie says. In particular, the Tracys chose to support the AARTS Program because of its physicians’ expertise in medication management of autism spectrum disorder and the program’s commitment to furthering that capability with its clinical research program. “They’ll be developing that knowledge base with the research component. One can’t exist without the other,” Julie says.

The AARTS Program also has received major support from the Boler Family Foundation. “I hope this will gain some momentum and some like-minded people will step up to the plate,” says Judy McCormack, a trustee of the foundation and a member of the Boler family. “They will see results. Louis Kraus (head of the AARTS Program) has assembled a talented team of physicians, psychologists and researchers who are dedicated to providing comprehensive services to children and young adults with autism.”

Such donor support is critical for the AARTS Program to realize its potential and deliver comprehensive services to the large number of children and young adults in the Chicago area with autism spectrum disorder. “It’s enabling us to make a huge difference in the lives of the individuals we serve,” Kraus says.

“The Boler family’s generosity, support and belief in what we’ve been doing is tremendous. The Tracy family also has been amazingly supportive, both emotionally and financially. I’m enormously grateful to them for giving us the means to help people like John Tracy and the many other young people with autism who can benefit from what we’re doing.”
Adrienne Adams, MD, director of the child and adolescent psychiatry fellowship program, has been elected as a board member of the Illinois Council of Child and Adolescent Psychiatry, the regional chapter of the American Academy of Child and Adolescent Psychiatry.

Charles Hebert, MD, associate director of the consultation—liaison service, discussed the connection between stress and disease during an Oct. 21 appearance on "Chicago Tonight," a news and current events program broadcast on Chicago public television station WTTW – 11.

Phil Janicak, MD, professor of psychiatry, was selected as one of the "Top Doctors in Chicago" in the January 2014 edition of Chicago magazine.

Niranjan Karnik, MD, PhD, associate professor of psychiatry, has been appointed an associate editor for the peer-reviewed journal BMC Psychiatry. Karnik also received a 2013 Outstanding Mentor Award from the American Academy of Child and Adolescent Psychiatry.

Eileen Martin, PhD, professor of psychiatry, gave an invited presentation on the effects of HIV serostatus and comorbid drug dependence on neurocognition at the Workshop on Substance Abuse and HIV, which was held in October as part of the International Society of NeuroVirology’s annual meeting in Washington D.C.

T. Celeste Napier, PhD, professor of psychiatry and pharmacology and director of the Center for Compulsive Behavior and Addiction at Rush, testified before the U.S. House of Representatives Subcommittee on Research and Technology at a Sept. 18 hearing about using science to explore solutions to methamphetamine addiction.

Mark Pollack, MD, chairman of psychiatry, became president of the Anxiety and Depression Association of America and was selected as one of the "Top Doctors in Chicago" in the January 2014 edition of Chicago magazine.

Alison Reminick, MD, director of the Center for Women’s Behavioral and Mental Health at Rush, co-authored the article “Managing Depression During Pregnancy,” which was published in the journal Women’s Health in November.

Latha Soorya, PhD, assistant professor of psychiatry, has been appointed science committee chair for the Chicagoland chapter of Autism Speaks, a nationwide autism research, awareness and advocacy organization.

Peggy Thomas, MS, RN, clinical nurse specialist at Rush Day Hospital, received the 2013 Ellen Elpern Voice of the Advanced Practice Nurse (APN) Award from the Rush University College of Nursing.

The Woman’s Board Depression Treatment and Research Center, led by John Zajecka, MD, has been chosen as one of five sites of a National Institutes of Health-sponsored initiative that promotes development of speedier therapies for severe, treatment-resistant depression. As part of this initiative, the center will conduct a trial to see if a new drug is an effective supplement to established antidepressants in cases of treatment-resistant depression. In addition, the center has established a relationship with ElMindA Ltd., a neurological imaging company in Israel, to study a promising new, non-invasive technology for diagnosis and predicting treatment for various psychiatric disorders.