For people who have experienced a traumatic event, post-traumatic stress disorder (PTSD) can be paralyzing for years or even decades. Its symptoms—including intrusive memories and dreams, avoidance of reminders, and numbed emotions, as well as symptoms of increased arousal—prevent patients from moving on with their lives. Because such symptoms often become chronic, the Program for Anxiety and Traumatic Stress Studies (PATSS) at NewYork-Presbyterian Hospital/Weill Cornell Medical Center is exploring a wide range of innovative approaches to PTSD treatment.

Since JoAnn Difede, PhD, and Jennifer Roberts, PhD, had built a reputation over the years for treating acute trauma, including work with hospitalized patients at the Hearst Burn Center at NewYork-Presbyterian Hospital/Weill Cornell Medical Center, they were called upon to provide services for people affected by the World Trade Center attacks. Four years later, the program has screened over 3,800 utility workers employed by Consolidated Edison, and has provided mental healthcare services to firefighters, emergency services personnel, disaster relief workers, and other survivors.

The fact that some patients were refractory to treatment with the standard imaginal exposure therapy prompted Dr. Difede to investigate alternatives to it. This therapeutic technique requires patients to recount the traumatic event verbally, repeating the experience with increasing detail until, through habituation and desensitization, the symptoms decrease. However, numbness makes many of these patients unwilling or unable to fully engage their emotions, greatly hindering their ability to recover through this approach.

To overcome this challenge, Dr. Difede and her colleagues began to develop a virtual reality (VR) environment that replicated the World Trade Center. Within 3 months, they began treating the first patient with this approach. The resulting case report, published in the December 2002 issue of *Cyberpsychology and Behavior*, showed a 90% reduction in the patient’s symptoms; an article describing the results of the full study is now under review.
Virtual reality technology offers numerous advantages for the treatment of anxiety disorders, said Dr. Difede. Studies on specific phobias, such as fear of flying, have demonstrated that it helps patients recover more quickly. For both phobias and PTSD, VR can be more cost-effective and feasible than treating patients in a real environment, and it allows the therapy environment to be manipulated very carefully. “You’re delivering a stimulus to evoke the person’s experience and let them go through it gradually,” she said.

VR also immerses patients in a sensory-rich world. “You can help someone process experiences that are in large part nonverbal in a nonverbal way. Presumably, we’re accessing parts of the brain that we might not be getting to as efficiently or as quickly in other forms of therapy,” Dr. Difede explained.

In addition, Dr. Difede has undertaken a study to assess whether VR therapy can be augmented by the pharmacologic agent D-cycloserine (DCS), a broad-spectrum antibiotic that has been used in clinical trials over the last decade as a cognitive enhancer. DCS acts as a partial agonist at the N-methyl-D-aspartate receptor, which plays a critical role in learning and memory. In a current research project, patients are given the medication before each VR session, with the idea of accelerating the learning processes involved in treatment.

In recognition of the trauma expertise at PATSS, Dr. Difede was contacted after the December 2004 tsunami by the nonprofit group Disaster Psychiatry Outreach to identify an expert who would be willing to travel to Sri Lanka to train mental health counselors in trauma treatment. This relationship enabled Dr. Roberts to visit Sri Lanka for 3 weeks in the spring of 2005, developing a curriculum and training 18 local counselors in the use of trauma-specific cognitive behavioral therapy (CBT) techniques. Early on, while teaching non–English speakers in 120° heat, she decided to drop her written syllabus and lecture format, choosing instead to develop a hands-on training model.

One lesson was taught through the metaphor of juggling. “For CBT, you take something that’s really complex and overwhelming, then break it down into small parts,” Dr. Roberts explained. “Everyone stood in a circle, each holding one ball. I was in the middle with 3 balls saying, ‘Can you juggle 3? No, first we learn with 1 ball.’” The message was to set simple, concrete, and obtainable goals with the patients, working slowly toward overall mastery of the experience.

She discovered that the counselors, who had gained extensive experience while treating PTSD during Sri Lanka’s decades-long civil war, faced many challenges. To meet with their patients, for example, they had to travel nearly 3 hours from the central city of Kilinochchi to the refugee camps on the coast. They also lacked the safety net of medication and hospitalization, which heightened concerns about suicide.

The trip deepened Dr. Roberts’ desire to develop a training model that could be applied in any setting. “When you’re dealing with the issues of language barriers and working with a lay population, how do you really connect with people? That population itself is probably also traumatized,” she said, explaining that part of the training process has to include elements of self care, including anxiety.

JoAnn Difede, PhD

The PATSS specialists continue to apply innovative approaches to the treatment of acute trauma, including work with veterans of the Iraqi war.

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The tick-borne Lyme disease, caused by the spirochete *Borrelia burgdorferi,* has been dubbed “The New Great Imitator” for its similarities to syphilis, another spirochetal disease. Both infections are infamous for having diverse multisystemic manifestations, including neuropsychiatric symptoms, which can make recognition difficult. Currently, researchers in the Department of Psychiatry at New York Presbyterian Hospital/Columbia University Medical Center are investigating how to address the neuropsychiatric effects of Lyme.

The neuropsychiatric symptoms of Lyme disease occur when the spirochete exits the bloodstream and attaches itself to various tissues. In the brain, for example, the spirochete can trigger meningitis or encephalitis, whereas in the peripheral nerves it can cause neuropathies. Patients may also experience cognitive problems and psychiatric symptoms: depression, anxiety states, manic or psychotic disorders, sleep difficulties, and irritability.

When Lyme disease is recognized early, antibiotic treatment can often prevent its neuropsychiatric effects. But when not detected until later, patients may have a more variable response to antibiotics. The infection may lie dormant for months or years after the initial tick bite and then lead to a neuropsychiatric disorder as the presenting symptom, closely resembling other disorders.

“Patients may present with new-onset paranoia, cognitive problems, marked mood swings, or chronic fatigue,” said Brian A. Fallon, MD, who noted that an atypical presentation, lack of a family history of psychiatric disorders, or nonresponsiveness to traditional therapies should prompt a clinician to consider underlying medical etiologies—one of which should be Lyme. In such cases, he recommends asking patients about prior multisystemic symptoms. “They may be able to elicit a history of unexplained arthritic symptoms, unusual rashes, or sharp, shooting or stabbing pains that occurred in the preceding 3 years.”

Dr. Fallon advises psychiatrists to follow up on these patients by ordering both the Lyme C6 ELISA, a new screening test, and the Lyme Western blot, which is more informative and highly specific. “But it’s important to remember the diagnostic lab tests for Lyme disease are flawed. Even though they can be helpful, they are not definitive,” he explained. In regions where the disease is endemic, many physicians use a patient’s antibiotic responsiveness to support their diagnostic impression.

With the hope of developing better diagnostic tools, Dr. Fallon and his colleagues are exploring imaging technologies. One current study examines whether SPECT imaging can be used to distinguish people with Lyme disease from those with depression. In a recently completed project using PET imaging, funded by the National Institute of Neurological Disorders and Stroke, the researchers confirmed that Lyme patients have marked abnormalities in metabolism and blood flow compared to age- and sex-matched controls.

To conduct the PET study, the researchers screened 3,700 Lyme patients, eventually choosing only 37 participants. “We used extraordinarily conservative criteria for diagnosis so that everybody who saw the study would in fact believe that the participants had Lyme disease. The fact that we could only accept 1% indicates that there’s a vast number of patients out there who have been treated for Lyme disease, have persistent symptoms, but yet still don’t meet the CDC criteria for diagnosis,” Dr. Fallon said.

The good news is that antibiotics alone can alleviate chronic symptoms for many patients. Persistent difficulties may result from a post-infection inflammatory response or from low-grade persistent infection. Adjuvant psychopharmacologic therapies or intermittent antibiotic retreatment can provide help with the mood disorders, neuropathic pain, headaches, and sensory hyperacuities; an exercise program can ease fatigue; and a qualified neuropsychologist can offer cognitive remediation.

By the end of this year, Columbia University Medical Center’s psychiatric department will have opened the nation’s first center for the treatment of chronic Lyme disease. With the help of the Lyme Disease Association and Time for Lyme, over $3 million in research funding will have been raised to pursue both basic and clinical research. “Our goal is to apply the latest advances in biotechnology to understand the methods by which the spirochete so successfully evades the immune system and antibiotic therapy as well as to devise better diagnostic and treatment protocols for patients afflicted with this complex disease,” said Dr. Fallon, who encourages psychiatrists to keep Lyme disease in their differential diagnosis of refractory psychiatric disorders. “The rewards for making a correct diagnosis of Lyme infection are great for both the patient and the psychiatrist.”
Researchers have recently begun to take a closer look at the emotional issues affecting women throughout their life cycle. An accumulating body of data and insight derived from clinical practice have led to the growth of a new field situated at the intersection of psychiatry and obstetrics and gynecology.

NewYork-Presbyterian Hospital has spearheaded two programs that address the specific mental health needs of women. In August 2002, Catherine Birndorf, MD, who trained at Payne Whitney Manhattan, NewYork-Presbyterian Hospital/Weill Cornell Medical Center, and later as a specialist in reproductive psychiatry, established the Women’s Program at Payne Whitney Manhattan, whose purpose is to address the full spectrum of women’s mental health problems. More recently, in July 2004, the Department of Obstetrics and Gynecology and the Department of Psychiatry at Columbia University Medical Center recruited Linda S. Mullen, MD, to develop The Center for Women’s Mental Health there. The majority of patients in both programs are women who are pregnant or planning a pregnancy and who suffer from depression or other psychiatric problems.

Dr. Mullen noted that women of childbearing years constitute the population most prone to depression. But, she said, “Women who are pregnant are least likely to think they need help.” Dr. Birndorf added, “There’s still this built-in shame” for a woman to be depressed when, according to cultural expectations, she should be feeling “blessed.” Furthermore, women may attribute their symptoms to the fact that they are simply tired and physically weak from their pregnancy and caring for their newborn.

An increasing number of studies have documented the effect of psychiatric medication on the fetus. At the same time, more and more research is demonstrating that depression during pregnancy or after can have a negative and lasting effect on the child. “What you’re weighing is the untreated maternal illness versus the risk of treatment, often medication, to the fetus,” Dr. Birndorf explained.

One patient with bipolar disorder wanted to wean herself completely from her medication during her pregnancy; Dr. Birndorf disagreed, concerned that the patient’s risk for relapsing was too high. “But she was willing to take that risk, and I was willing to work with her,” she said. Together, they created a flowchart for reducing the patient’s medication and agreed on measures they would take if her symptoms returned. Although the woman ultimately had to go back on lithium, said Dr. Birndorf, she felt that she had proved to herself that she had done everything possible to protect her unborn child from a risk.

In many cases, pregnant patients are referred to either of the programs by their primary physician. Other patients come for a consultation before becoming pregnant. In addition, both programs work with inpatients. The Center for Women’s Mental Health at NewYork-Presbyterian Hospital/Columbia University Medical Center has an inpatient consultation–liaison component; the Women’s Program at Payne Whitney Manhattan sees patients who are hospitalized for psychiatric illnesses.

Both programs conduct weekly teaching clinics that provide first-rate care to patients who would otherwise not have access to it. The Center for Women’s Mental Health recently instituted a sliding-scale service, and the Perinatal Clinic at NewYork-Presbyterian/Columbia provides services to Medicaid patients with high-risk pregnancies. The Women’s Program clinic is also open to patients in the community who rely on a variety of insurance plans, including Medicaid.

The programs’ teaching clinics are an integral part of training residents in the specialty. Because the field is still new, a major focus is to educate clinicians who may encounter patients facing such issues.

Of course, mental healthcare for women addresses many other areas that are unrelated to pregnancy. Other life-cycle changes, such as menstruation and menopause, often have psychological implications; gynecologic cancers raise specific emotional dimensions related to womanhood; and women experiencing family, relationship, and abuse problems can require psychiatric care. In addition to the teaching clinics, The Center for Women’s Mental Health hosts monthly presentations, and the Women’s Program has founded the Women’s Mental Health Consortium, a network of healthcare providers in the greater New York metropolitan area.

Both programs have growing research components. The emphasis of the research program at The Center for Women’s Mental Health is the relationship between infertility and depression. The Women’s Program oversees research on premenstrual syndrome, depression in the first trimester of pregnancy, and perimenopause.

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When the Women’s Program at Payne Whitney Westchester, New York-Presbyterian Hospital/Westchester Division, first opened in September 2002, clinicians there expected they would treat mostly mental health issues related to menopause or postpartum depression. Instead, the facility has become an acute care inpatient unit for severely ill women with such conditions as bipolar disorder, schizoaffective disorder, and schizophrenia.

Many of these women have been hospitalized frequently. The 12-day average stay for insured, managed care patients does not accurately reflect how seriously ill they are.

Kathleen McCarty, MD, Unit Chief of the Women’s Program, has sought approaches to reducing the risk of relapse and subsequent readmission. “Our typical patient has limited understanding of her illness or the early warning signs of relapse and communicates her problems poorly to an outpatient psychiatrist or family members,” Dr. McCarty said. “They seldom thought of asking a doctor or social worker for advice.” Ranging in age from 18 to 55, many are single mothers with both mental illness and substance abuse problems.

Dr. McCarty was trained in cognitive behavior therapy (CBT) at the Beck Institute in Philadelphia, where Aaron Beck, the developer of CBT, helped establish the therapeutic approach for depression, anxiety, panic disorder, bipolar disorder, and obsessive-compulsive disorder. CBT has also been used in patients with serious mental illness.

CBT is “an extremely humanistic type of therapy which helps you better understand the automatic thoughts that drive emotions and behavior. You see results; people make changes, and quickly,” said Dr. McCarty. Patients learn techniques for “less impulsive, more rational decision making: gathering data, examining the basis of your beliefs, recognizing dysfunctional thought patterns.”

In CBT, the therapist engages a patient collaboratively, “even while clinically she is still very psychotic,” said Dr. McCarty. If during the first inpatient week “you work to build a relationship, by the second week, you can get further than by just waiting for meds to take effect.”

In the United Kingdom, all schizophrenic patients are assigned to CBT, and recent books have explored its applications in patients with auditory hallucinations, paranoia, or delusions. Relatively few U.S. psychiatrists are trained in CBT; however, and Payne Whitney Westchester’s program is the first inpatient unit for women stressing CBT in the U.S., according to the Beck Institute.

In 2005, a consulting psychologist helped the Women’s Program phase in CBT. Every staff member has undergone basic CBT orientation; the head nurse and senior social worker are completing Beck Institute training and will be mentors, role models, and supervisors of other staff acquiring CBT skills.

Using evidence-based protocols for CBT in all patients with psychiatric diagnoses except dementia (because some ability to remember and reason is required), the Women’s Program is developing a strongly psychoeducational approach to problem solving. A user-friendly computer program enhances the information that patients receive during group or individual sessions. “Even people with minimal education can understand and incorporate CBT principles,” Dr. McCarty has found.

CBT can lead patients to weigh risks and benefits, communicate problems more effectively to healthcare providers, manage stress, relate better to others, and improve exercise and nutrition. “We help a patient identify her early symptoms and what to do when these occur so that she does not have to land in the hospital again,” Dr. McCarty said.

The Women’s Program is in the process of consolidating the CBT program to ensure consistency over time. A part-time clinical psychologist will develop outcomes research through comparisons with other, non-CBT units at Payne Whitney Westchester. All control patients will be women, with demographic features and diagnoses comparable to those of the patients on Dr. McCarty’s unit.

“We adapted outpatient CBT programs to develop our inpatient CBT program,” said Dr. McCarty. “Patients say they’ve never had anyone try to help them analyze their own illness pattern or symptoms that indicate a relapse. It’s a natural outgrowth to start measuring CBT’s effect on preventing recurrence.” Data will be gathered for at least 1 year.

“We’re creating a different care model—collaborative and respectful, teaching rather than telling patients what to do,” said Dr. McCarty. “The bias has always been that with acutely ill patients, little could be done therapeutically other than meds. They are important, but we know that’s not the complete solution—if it was, no one would need hospitalization.” With CBT, the Women’s Program is finding ways “to help the patient stay well, function better, become happier and more effective—and not return to the hospital.”

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www.nyppsychartry.org
Psychiatric Emergency Care Extends Beyond the Crisis and Back to Home

The multidisciplinary emergency room at Payne Whitney Manhattan of NewYork-Presbyterian Hospital/Weill Cornell Medical Center sees nearly 3,000 patients annually, with the admission rate of 35% to 40% reflecting the severity of illness. Balancing a patient’s sense of comfort and autonomy with the need to reduce the potential for behavioral escalation or violence can be a challenge, observed Director of Psychiatric Emergency Services Lisa Sombrotto, MD.

The staff strives to see things from the patient’s perspective, who might well object to admission. Often, such patients are “paranoid, intoxicated, here involuntarily, and troubled about loss of control or autonomy,” said Dr. Sombrotto. “Hearing and working through objections gives clues to why they’re here, and can become more of a clinical intervention. What can make someone feel better about staying, and relieve that sense of loss of control? We’re using the patient-centered care approach to better our practice.” Staff working in the psychiatric emergency room, including even the security personnel, have been trained in techniques to de-escalate patients.

Crisis management is another focal point. Some patients do not require admission but have no ready access to treatment, because of a lack of either insurance or inability to arrange an early appointment with a network provider. Some require rapid follow-up, making outpatient appointment delays problematic. Payne Whitney Manhattan’s Crisis Service affords a bridging step. Within 1 week after discharge, an emergency service patient can be referred for follow-up visits with ER staff at the outpatient department.

Patients are seen up to 3 times. The majority of crisis patients come once, at which point aftercare arrangements are made. “We may discharge a patient at 2 am, so where can we send them?” Dr. Sombrotto asked. “We’ll give a crisis appointment within the week, to make sure that patient has a place to go. With a manic, psychotic, or depressed patient, we’re less inclined to initiate treatment in the ER without knowing the follow-up. Now, we can start treatment and make more permanent plans.”

Through firm links to other services at Payne Whitney Manhattan, the majority of admitted patients are sent to on-site inpatient services. Other helpful options for those requiring intensive treatment without hospitalization are the Partial Hospital and Intensive Outpatient Treatment programs at Payne Whitney Manhattan’s campus.

The psychiatric service has strong relationships with other emergency services. For example, a patient sent to the medical ER may manifest a serious behavioral disturbance. “We’ll take that patient—to do what’s best for them—in an environment allowing the condition to be managed,” said Dr. Sombrotto. “Or we may identify a patient triaged to our ER as being better served by the medical or pediatric ER. We consult with each other readily, with ample trust on both sides.”

The psychiatric emergency services at Payne Whitney Manhattan have experienced consistent growth in both patient volume and range of patient services. The same holds true for the psychiatric ER at NewYork-Presbyterian Hospital/Columbia University Medical Center.

Since 2000, Carlos Almeida, MD, has been Director of Psychiatric Emergency Services at Columbia University Medical Center, one of the first New York State hospitals to have a Comprehensive Psychiatric Emergency Program (CPEP), licensed and regulated by the state’s Office of Mental Health.

“CPEPs are unusual because they have completely separate psychiatric emergency departments able to provide diagnosis, treatment, and stabilization of patients, without admission,” explained Dr. Almeida. A CPEP increases clinical staffing by adding substance abuse counselors, psychiatric social workers, and other specialists involved in providing care to patients.

The CPEP includes an extended observation unit (EOU) for such difficult emergency situations as those involving substance abusers who manifest psychiatric symptoms, such as psychosis and depression. The EOU provides beds for up to 6 patients at any one time, with a maximum stay of 72 hours.

The CPEP’s mobile crisis unit (MCU) follows patients post-discharge. MCU
Light Therapy Now Used For Non-Seasonal Depression

Studies showing the effectiveness of light therapy in treating seasonal affective disorder (SAD), estimated to affect 3% to 6% of Americans, have been accumulating for 2 decades. The more recent news, however, is that light therapy is also proving to be a powerful treatment for nonseasonal depression.

In the autumn of 2005, Michael Terman, PhD, and his colleagues translated this body of promising research into clinical practice with the opening of the Center for Light Treatment and Biological Rhythms at NewYork-Presbyterian Hospital/Columbia University Medical Center. The first of its kind in the United States, the Center provides full evaluation and treatment for outpatients and inpatients with a range of depressive illnesses and sleep disturbances.

Studies on light therapy began in the early 1980s, when researchers at the National Institute of Mental Health began examining the relationship between exposure to light and the hormone melatonin. Serendipitously, a patient at the NIMH was treated for severe winter depression coupled with spring and summer hypomania—that is, bipolar SAD. Hearing about the research on light therapy, the patient had a flash of insight: If his depression were linked to the sunless winter months, perhaps treatment with light would help. “This fellow, a scientist himself, made the leap, inspiring a cohesive international research effort,” Dr. Terman said.

Dr. Terman has remained at the forefront of this effort, conducting extensive studies to determine how the intensity of light and the length and timing of daily exposure to light affect the efficacy of this treatment, and testing it on patients with various types of depression. Although the clinical community remained skeptical about light therapy for many years, Dr. Terman said, a watershed moment came last year: A major meta-analysis of past studies published in the American Journal of Psychiatry demonstrated that light therapy is as effective as medication in relieving both seasonal and nonseasonal depression.

Light therapy works in part by adjusting a patient’s internal circadian clock. Each person’s body has its own physiologic definition of night, which begins when the pineal gland starts secreting melatonin in the evening. Early morning light therapy, administered just before a patient’s physiologic night ends, resets the clock as much as 30 minutes to 2 hours earlier. For bright light therapy, patients must rise early in the morning to sit in front of a light box. The Center is also experimenting with a modified approach, in which an automatic source of light turns on to simulate the light of early dawn, without requiring patients to awaken.

Patients seeking treatment at the Center continued on page 8
begin with an in-depth consultation to assess their biologic rhythms in relation to the depressive illness. A key component is the Morningness-Eveningness Questionnaire (MEQ), a 19-question survey of alertness and sleep patterns that Dr. Terman has shown correlates tightly with the timing of melatonin secretion in depressed patients. Patients are then given a light box to use at home as a self-administered treatment and instructed to submit detailed treatment logs to the Center via e-mail or fax as often as every day. This approach allows patients from outside the New York City area to benefit from the Center’s expertise, working in consultation with local primary providers.

Many patients have a long history of treatment with medication for depression that has been partially effective. Because light therapy is compatible with selective serotonin reuptake inhibitors and most other psychoactive drugs (one exception is light-sensitizing neuroleptics), patients can begin light therapy, and then, if rapid improvement is observed, taper their medications. Because results from light therapy may appear very quickly, physicians can look for signs of improvement—sometimes even remission—as early as a week after the therapy has been started. The degree of success in outpatients has now prompted Dr. Terman and his colleagues to begin integrating light therapy into psychiatric care for inpatients; it is administered at the McKeen Pavilion, located within the Milstein Hospital Building. “We’re seeing improvement even in drug- and ECT-refractory cases,” Dr. Terman said, referring to electroconvulsive therapy. “It’s no panacea, but there are enough successes to make it worthwhile.”

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