

# Psychiatric Times

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## EYE ON HURRICANE MARIA AND PUERTO RICO

# PTSD and Suicide After Natural Disasters

» César A. Alfonso, MD

Everyone in Puerto Rico (PR) was affected by Hurricane Maria, which made landfall on September 20, 2017 as the largest scale natural disaster in the US during our lifetime. Many months later, Puerto Ricans continue to face unreasonable obstacles that prevent recovery. This article summarizes literature on post-disaster mental health and describes the public health crisis in PR. Special attention is given to highlight higher suicide rates and PTSD that develop in post-disaster areas.

### Psychosocial context and obstacles to recovery

A country with a high-income economy, PR experienced financial decline a decade before Hurricane Maria. A recession and high unemployment rates led to a depopulation process. From 2006 to 2016 the population decreased from 3.9 to 3.4 million.<sup>1</sup> Migratory flow during the economic crisis resulted in compromised provision of essential services and a large exodus of medical professionals. Homicide and suicide rates nearly doubled and binge drinking increased. Approximately 50% of adults in PR are binge drinkers compared with the US national average of 17%.<sup>2</sup>

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## Online Communities for Drug Withdrawal: What Can We Learn?

» Josef Witt-Doerring, MBBS, Daryl Shorter, MD, and Thomas Kosten, MD

In this age of chat rooms and social media, an ever-growing number of psychiatric patients use the internet to find

their treatment community online. Interactive forums, Youtube.com, and personal blogs are now connecting psychiatric patients in ways that were never before available. One treatment focus for these online communities is complicated withdrawal from psychiatric medications. This article

discusses this phenomenon in relation to the well-established forums of benzodiazepine and antidepressant withdrawal.

Online forums, such as [www.benzobuddies.org](http://www.benzobuddies.org) and [www.survivingantidepressants.org](http://www.survivingantidepressants.org), provide a platform for patients to support each other as they move through their withdrawal symptoms. These interactive sites feature different strategies for managing a wide range of withdrawal-related symptoms. Other sections provide inspiration for users through sharing stories about a successfully completed withdrawal experience. The traffic moving through these sites is mostly from within the US and is substantial: [www.benzobuddies.org](http://www.benzobuddies.org) receives on average 250,000

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Currently, 45% of the island residents live in poverty. Hurricane Maria caused an estimated \$100 billion in damages.<sup>3</sup> Four months post-impact 32% of the population had no electricity and 14% had no potable water.<sup>4</sup> The official death toll has been questioned, and physicians acknowledge an increase in unreported deaths of vulnerable persons because of inadequate access to medical care.

### CASE VIGNETTE

**Mr. S is an elderly man from PR who now lives in the continental US. He has sarcoidosis, diabetic retinopathy, and blindness. He is being treated for PTSD after early childhood trauma and adult retraumatization from domestic violence. Mr. S reports to his psychiatrist that his brother had died in PR 3 weeks after the hurricane. He had been in ad-**

**equate health but was oxygen dependent, after the hurricane he lost access to medical equipment and died of suffocation. Mr. S, in acute grief, was conflicted about attending the funeral. As a brittle diabetic, he feared that his health would be compromised if he went to PR. With no electricity or potable water, refrigeration for his insulin would be impossible. Encouraged by his family and physicians, he decided not to attend funeral services and instead held a memorial mass in memory of his deceased brother.**

A conversation with Natalio Izquierdo, Past President of the PR Medical Association, confirms that unreported deaths due to delayed access to care have surpassed media estimates. Izquierdo, an ophthalmologist, coordinated with medical centers in the US for emergency transfers using Air Force planes to import essential supplies and transport patients needing urgent interventions. Puerto Rican physicians have made

heroic efforts on behalf of their patients, but many hospitals, ambulatory care centers, dialysis centers, chemotherapy infusion centers, radiation oncology suites, operating rooms, and doctors' offices remain inaccessible or unable to maintain adequate levels of care.

An excerpt from a journal entry of a resident of PR illustrates the situation in PR post-hurricane [Anonymous, shared with author 2017].

*My immediate reaction to the hurricane was to check in with relatives to ensure they were safe. This took several days as communications were down and roads were blocked with fallen trees and debris. We began to learn the severity of damages through scattered news reports. I stayed disconnected from my mother, who lived merely 30 miles away, for several days. She lives alone and I feared for her wellbeing. Eventually we made contact and I was relieved to*

*find out she was uninjured, but I felt guilty that I could not help others who experienced loss. Anxiety grew. I had poor concentration, erratic sleep, distressing dreams and was startled when hearing sirens or gunshots at night. Agitation and anxiety would alternate with apathy, withdrawal, and numbness. Some symptoms improved but I struggle to stay motivated and productive. Debris still line the streets, some towering as high as homes. Homes have shattered or boarded up windows and parts of the roof missing, and traffic lights at intersections are down or dangling on wires. One of the hardest realizations was that recovery from this hurricane would not take months, but years. This was a rude awakening to the vulnerability of the very institutions that are expected to be able to respond in situations such as these. Hope waxes and wanes.*

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hits a month and [www.survivingantidepressants.org](http://www.survivingantidepressants.org) receives approximately 150,000 hits each month.<sup>1,2</sup> It is interesting to note that the patient narratives from these websites are generating early clinical data that researchers are using to learn more about unexpectedly difficult withdrawal symptoms and syndromes.<sup>3</sup>

Beyond these forums there is a vivid and expansive community of thousands on Youtube.com, where participants have shared their personal withdrawal experiences. Some participants have created daily videos to chronicle the process: a generic search for the terms "antidepressant withdrawal" or "benzo withdrawal" will bring up 7000 and 14,000 personal video blogs, respectively.

While it might initially seem that these communities and video blogs are simply artifacts of the internet culture, a closer look at the stories told on these forums suggests a different message. The message is that physicians have been unprepared for these withdrawal disorders and are unable to treat or even guide patients through complicated withdrawal from these substances.

### How did this happen?

Medication withdrawal is difficult to assess in the relatively brief 6- to

12-week randomized controlled trials that lead to FDA approvals and marketing. The costs, clinical challenges, and desire to do no more than is need-

ed to show relative safety and efficacy have limited these studies' duration. Such short durations do not typically allow time for participants to develop

any level of significant physiological dependence or to produce a difficult or even detectable withdrawal syndrome. These trials, which usually focus on determining efficacy, often have adequate methodology or statistical power to identify and characterize only very common and relatively severe withdrawal syndromes.

Because of these challenges in acquiring the necessary data for educating physicians about any potential withdrawal syndromes, medications come onto the market with many unknowns about their longer-term effects and discontinuation syndromes. Many unidentified problems beyond withdrawal syndromes can take years to become fully appreciated—often requiring an accumulation of published case reports or other observational studies before they become widely known to the medical community.

For instance, although the first benzodiazepine was released onto the market in the US in 1960, it was not until 1988 that health authorities finally acknowledged the true extent and impact of the dependence and addictive potential of these agents.<sup>4</sup> The clear surprise to physicians was the severity and duration of withdrawal symptoms found with normal therapeutic doses.<sup>5</sup>

A similar situation was described for antidepressant discontinuation

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Economic losses following natural disasters compound physical destruction and health outcomes. A study following typhoons in the Philippines found that household income drops and infant mortality rises the year after a typhoon hits, and economic deaths by far exceed exposure deaths, by a factor of 15.<sup>7</sup>

New Orleans lost 44% of its population a year after Katrina, and unemployment rose to 33%.<sup>1</sup> Will PR be faced with a similar exodus and economic downturn? Experts estimate that by 2019, PR will lose an additional one-half million residents. Physicians and other health professionals are relocating to the continental US in large numbers. William Julio, from the Puerto Rican Psychiatric Society, reports that the number of psychiatrists in the island decreased from 500 to 300 over the last decade.

### Suicide following natural disasters

Although suicide rates vary depending on the location and population studied, we see that suicidal behavior increases following natural disasters. In PR there was an average of 19 suicides per month in the 8 months be-

**Table 1. Total calls to the Primera Ayuda Psicosocial/ Psychosocial First Aid Suicide Hotline before and after Hurricane Maria<sup>9</sup>**

	Persons with suicidal ideation	Persons with suicide attempts
8-month period pre-hurricane	2176	637
2-month period post-hurricane	2996	973

**Table 2. Correlates of PTSD after natural disasters<sup>13</sup>**

• Affective states: guilt, anger, dysphoria, hopelessness, helplessness
• Neuroticism
• Obsessive traits
• External locus of control
• History of prior traumas
• History of prior psychiatric disorders
• Comorbid psychiatric disorders
• Low social support
• Poor interpersonal relationships
• Media exposure
• Degree of exposure to a disaster: low socioeconomic status, having lost a home, unemployment, vulnerable age groups (children, elderly)

fore Maria in 2017, and 25 suicides per month in the immediate 3 months post Maria (**Table 1**).<sup>5</sup>

Kessler and colleagues<sup>6</sup> noted sig-

nificant increases in the prevalence of suicidal ideation and suicide plans 6 months post-hurricane Katrina compared with 2 years later. They con-

cluded that follow-up outcomes persist and even intensify because psychosocial stressors associated with the natural disaster continue or intensify as time progresses.

From a psychodynamic standpoint one could formulate that dissociation, reaction formation, and heroic efforts that occur soon after a disaster serve as protective factors against suicide, but these defenses only offer temporary relief as the grim reality of destruction and loss evolve into complex affective states of disillusionment, hopelessness, and helplessness. These complex states of mind correlate with high suicide risk and may explain the protracted post-disaster increase in suicide deaths.

### PTSD after natural disasters

The literature on PTSD after natural disasters is extensive. Neria and colleagues<sup>7</sup> undertook a comprehensive review of the relationship between man-made compared with natural disasters and PTSD in survivors between 1980 and 2007. Findings from the survey indicate PTSD prevalence among direct victims of disasters of 30% to 40% compared with a prevalence of 5% to 19% in the general population. PTSD determinants include sociodemographic and back-

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when it was initially presented to physicians as a minor preventable syndrome and simple to treat.<sup>6</sup> It would take many more years before the complexity and severity of antidepressant withdrawal began to take shape and the information published in medical journals.<sup>7</sup>

The pharmacodynamics and pharmacokinetics of the medication and an individual's genetics all play significant roles in the timing, duration, and severity of withdrawal. These multiple factors lead to the observed heterogeneity in withdrawal syndromes. This challenge has spurred publication of increasingly refined diagnostic guidelines to help clinicians recognize these syndromes. It is uncertain how many clinicians are aware of the variety of presentations of withdrawal syndromes and the range of medications that can produce these syndromes. If clinicians are unaware of the complexity of

such syndromes, they may misdiagnose these withdrawal syndromes as manifestations of the underlying original mental illness, a new physical condition, or perhaps an adverse effect of a different medication.

Recognition that a patient has incurred an iatrogenic complication is essential in the recovery process. A correct diagnosis will inform the decision of how to manage the withdrawal. Clinicians can engage patients in a discussion about the variety of existing treatment options. They can choose to wait out the withdrawal syndrome, if it is tolerable, reinstate treatment, or try a slower medically supervised withdrawal treatment regimen. They might also opt to use other pharmacotherapies for symptomatic treatment.

The ability to tolerate the dysphoric moods and physical symptoms associated with psychotropic medication withdrawal is undoubtedly linked to a patient's baseline psychological resilience and the strength of his or her support system. Therapies targeted at bolstering psy-

chological resilience such as cognitive behavioral therapy (CBT) can be useful in helping patients cope with withdrawal. For instance, CBT might be useful in challenging patients' beliefs that discontinuation symptoms are a sign that they are incapable of coping without the medication. CBT could transform this self-belief to the more accurate understanding that these symptoms are common and often time limited.

A systematic review by Fava<sup>8</sup> highlights 3 main complexities in managing antidepressant withdrawal. First, no clear sociodemographic and clinical characteristics appear to be associated with increased vulnerability to severe withdrawal; second, although gradual tapering of antidepressants is a reasonable clinical strategy, it often will not prevent the onset of severe withdrawal symptoms; and third, antidepressant withdrawal appears to be associated with a variety of other iatrogenic complications such as the onset of hypomania/mania and other persistent mood instabilities.

Similarly, Lader and Kyriacou<sup>5</sup>

discuss the difficulty of managing benzodiazepine withdrawal. Three of these difficulties are illustrative:

1 The onset of severe withdrawal symptoms sometimes does not respond to re-initiation of medication.

2 Persistent withdrawal reactions can last years.

3 Unavoidable severe withdrawal symptoms may occur despite slow withdrawal over several months or years.

When the risks of treatments are not identified in the clinical trials that bring them onto market, these risks are not cautioned against in widely circulated medication guidelines. As a result, the prescribing physician will overestimate potential benefits and neglect patients' vulnerabilities to the adverse effects of treatment. Expert commentaries in psychiatric journals are available to help clinicians correctly weigh the risks and benefits of

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## PTSD and Suicide

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ground factors, event exposure characteristics, social support factors, and personality traits.

A study of Florida residents exposed to Hurricane Andrew in 1992 found that the prevalence of PTSD increased to 26% and 29% at 6 and 30 months after the disaster.<sup>8</sup> A specific finding of this study was that while intrusion and arousal symptoms declined over time, avoidance symptoms increased. Variables found to be predisposing factors in this study included specific populations at risk (eg, minorities, elderly, children, direct victims, first responders), persons who bear the brunt of the social and economic consequences, and the magnitude of exposure to the event. Particularly, degree of physical injury, immediate risk of life, severity of property destruction, distance from epicenter, people who experienced loss of family members, and people who suffered property loss or were forced to relocate were at higher risk for PTSD. Additional risk factors for

PTSD after hurricanes and other natural disasters are listed in **Table 2**.

Blackouts and power outages post-disaster negatively affect mental health. Studies after Hurricane Sandy, which caused outages lasting up to 2 weeks, found a dose-response relationship between the quantile of maximum blackout percentage and the risk of mental health problems.<sup>9</sup> Mood disorders, anxiety disorders, substance use disorders, and utilization of psychiatric resources in the New York area increased for months to a year after Hurricane Sandy.

Sub-threshold PTSD, common in post-disaster states, results in significant morbidity. In Louisiana, previously considered a permutation of generalized anxiety disorder (GAD) colloquially became known as “Katrina brain.” Many Katrina survivors with GAD described additional symptoms of irritability, diffuse anger, guilt, and health worries.

After the September 11 terrorist attacks, researchers at the New York State Psychiatric Institute studied the morbidity of sub-threshold PTSD among disaster survivors and

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using benzodiazepines and antidepressants in the management of depression and anxiety disorders.<sup>8,9</sup>

Although many people do not have substantial difficulties withdrawing from these medications, it is clear that withdrawal syndromes are not rare. Reports of withdrawal syndromes are becoming increasingly common on patient websites, and the widespread use of these types of medications poses a substantial public health concern.

The ubiquity of social media in the past 10 years and informal online communities have led adolescents to utilize these as the most likely forums in which to seek mental health advice.<sup>10</sup> As young patients continue to turn to these sources for mental health guidance, mental health professionals need to familiarize themselves with and interface with these online communities.

An important ethical issue to consider is who should conduct research into drug-related problems that emerge following licensing? Bur-

dening pharmaceutical companies to conduct such research before granting them license to sell would certainly slow down the development of many new and helpful medications. Yet, who is responsible for conducting the urgent and resource-heavy research needed to help guide clinicians in managing the variety of unexpected iatrogenic complications of these medications?

Given the current state of our understanding of complex withdrawal syndromes, increased awareness of these syndromes among providers is of utmost importance. These syndromes need further research, or more patients will continue to turn away from the medical establishment to look for support from other patients on the internet. □

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## LETTER TO THE EDITOR

# The Prevalence of Schizophrenia in the US

» David Pickar, MD

**Dr. Pickar** is Adjunct Professor of Psychiatry, Johns Hopkins University School of Medicine, Baltimore, MD. He is also Former Chief, Experimental Therapeutics Branch, Intramural Research Program, NIMH, and Former Director, NIH Clinical Center 4-East Research Ward for Schizophrenia.

The prevalence of schizophrenia in the US is 0.3%. Really? I thank the Treatment Advocacy Center and Dr. Fuller Torrey and Elizabeth Sinclair for bringing attention to the NIMH's website, which states just that.

A schizophrenia prevalence of 1% of the US population is a foundation fact that has wide implications.<sup>1</sup> Torrey and Sinclair discuss this odd error with characteristic pith and accuracy in the March issue of *Psychiatric Times*.<sup>2</sup> The "disappearance" of 2 million patients with schizophrenia is certainly an effective way to bring home the implications of the NIMH error.

The response of NIMH Director Dr. Joshua A. Gordon<sup>3</sup> to Torrey and Sinclair's piece does little to persuade that the NIMH is on point. Pardon this 21st century cynicism, but was there an interest in reporting a lower prevalence figure for the most serious of mental illnesses? Might a lower prevalence suggest that it is less a problem? That we have somehow been successful in reducing its occurrence?

The NIMH error is particularly noteworthy in light of recent Congressional efforts to bring attention to persons who suffer with serious mental illness. The Helping Families in Mental Health Crisis Act approved by the House in 2016 and later incorporated into the 21st Century Cures Act in 2017 highlighted the need for renewed, effective attention to this population by Federal agencies. Does NIMH research meet this challenge?

NIMH Intramural Research beds for schizophrenia at St. Elizabeth's Hospital in Washington, DC and those at the NIH Clinical Center in

Bethesda together numbered in the range of 35 to 45 in the 1970s through 1990s. Research into schizophrenia at the NIH Clinical Center today (there are no longer beds at St. Elizabeth's Hospital) limps along with few inpatients and lacks supporting energy from "above." Inpatient research beds represent a national resource for families of patients with schizophrenia. No one has used research beds better than The NCI in its Intramural Research Program.

The NIMH website highlights 2 clinical studies, CATIE and RAISE. CATIE, completed in the 1990s, brought home the fact the new generation of antipsychotic drugs is no more effective than older drugs, leaving clozapine, first used in the 1970s and FDA approved in 1989 for patients with treatment resistance as the only antipsychotic drug with enhanced efficacy. RAISE further demonstrates the limitation of current treatment. Unfortunately, the NIMH has never followed up its own leads to improve the treatment of schizophrenia. Dr. Gordon correctly mentions the importance of neurocognitive deficits of schizophrenia, an area pioneered by Intramural NIMH Clinical Scientists. Despite considerable academic and industry efforts, drug development for these deficits has been entirely unsuccessful. A fresh look is in order.

Perhaps just an oversight, the NIMH error about schizophrenia prevalence prompts a closer examination into NIMH's attention to schizophrenia. I support the suggestion by Torrey and Sinclair for a new study of the prevalence of schizophrenia. It is also time for an independent review of the NIMH's research efforts into our most serious mental illness. □

*Dr. Pickar reports no conflicts of interest concerning the subject matter of this article.*

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# What Psychiatrists Need to Know About the Determination of Dispositional Capacity

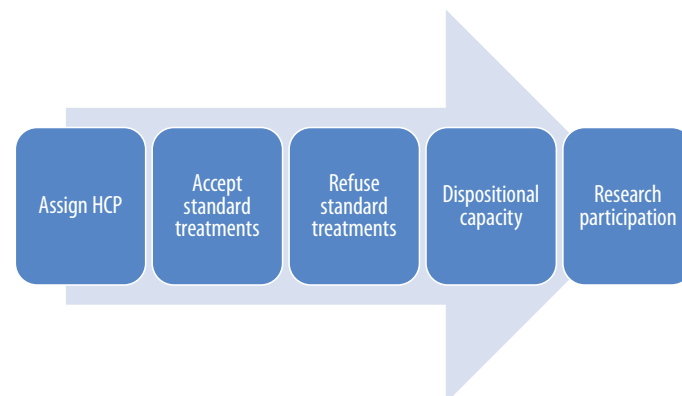
» Naalla Schreiber, MD, James A. Bourgeois, OD, MD, John C. Landry, Mariana Schmajuk, MD, Jennifer M. Erickson, DO, Rebecca Weintraub Brendel, MD, JD, and Mary Ann Cohen, MD

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Psychiatrists are often consulted to determine whether a patient has the capacity to make medical decisions during an inpatient medical hospitalization. Some of the most challenging decisional capacity consultations are requests to determine if a patient has the capacity to participate in discharge planning. For a patient to demonstrate capacity to participate in discharge planning, the patient should have the capacity for self-care, the ability to cope with illness, and be capable of accessing medical care and treatment once he or she has left the hospital. Frequently such psychiatric consultations are requested when a patient is refusing what the medical team defines as a safe discharge.

In this article, we present some of the complexities of what we propose to call “dispositional capacity,” or the capacity to participate in discharge planning. Inherent in a dispositional capacity determination is an assessment of whether the patient will be able to survive safely and independently in the community following a hospital stay and whether he or she can refuse placement in a chronic care or rehabilitation facility. Basically, the primary medical team is asking the psychiatrist to answer the question: “Can this patient go home?”

Dispositional capacity is a subset of decisional capacity determinations that is distinct from the capacity to give informed consent for or to refuse medical procedures. Although all determinations of decisional capacity are complex and require consideration of the medical, ethical, legal, and psychosocial dimensions of care, most decisional capacity



determinations pertain to a single decision as a threshold inquiry of whether the patient can give or withhold informed consent.

While the ability of a patient to participate in his or her own discharge plan is inclusive of elements of a procedure-specific decisional capacity assessment, discharge planning requires other unique dimensions for the clinician to consider. Dispositional capacity determination, in contrast to most other decisional capacity determinations, requires some assessment of a patient’s current functional capacity, prediction of a patient’s future behavior, and ability to self-manage after hospitalization. After discharge from the hospital, the patient must have the ability to make decisions conducive to recovery. Dispositional capacity is therefore a unique subset of decisional capacity that requires an element of prediction.

## Review of decisional capacity

Decisional capacity assessments that clinicians perform every day help protect vulnerable individuals from neglect and exploitation, preserve autonomy and self-determination, and help other clinicians and administrators communicate with each other to address complex bioethical and biomedical questions and dilemmas. Decisional capacity has been extensively described elsewhere. These standard capacity evaluations provide a forum for the multidisciplinary hospital team to engage in thoughtful deliberation about how we care for patients in a manner that upholds the highest ethical values of our profession. Myths and facts about decisional capacity are summarized in **Table 1**.

Capacity questions and their assessments lie on a gradient depending on what is being asked of the patient and the potential risks of their decision. Medical decision-making falls on a spectrum: some choices require more complex thought processes and thus a more sophisticated demon-

**Table 1** Decisional capacity: myths and facts<sup>1</sup>

Myths	Facts
A patient is incapable of making decisions until proven otherwise	A patient is assumed to have decision-making capacity unless history or examination suggest otherwise
A patient with cognitive impairment cannot have decision-making capacity	Patients must be assessed on a case-by-case basis; many patients with mild and moderate cognitive impairment have the capacity to make some or all their decisions
A patient with a history or evidence of serious mental illness, such as schizophrenia, does not have the capacity to make decisions	The majority of patients with serious mental illness can make their own decisions except when psychopathology directly interferes with the decision-making process
Decision-making capacity is an “all or none” phenomena; a patient either has capacity, or he does not	Decision-making capacity is task-specific; a patient may have capacity to handle finances but may not have capacity to participate in discharge planning
Lack of decision-making capacity is a permanent condition; once a patient is determined to lack capacity to make decisions, the patient will never regain capacity	Capacity, except in rare cases, is variable and fluctuating and can improve with time and constructive interventions
Patients who refuse an intervention or demand to leave against medical advice lack capacity	Each decision is patient and context-specific and warrants an individualized evaluation of capacity

stration of the domains of capacity, including understanding, reasoning, appreciation, and communication of a choice (**Figure**).

Decisional capacity determinations have medical, psychiatric, functional, and socioeconomic components, all of which are involved in the complexity of the patient’s decision-making process. While neurocognitive disorders are the primary drivers of impaired decisional capacity, other psychiatric disorders may also have an adverse impact on decision making. The psychiatrist needs to make a biopsychosocial assessment that includes all elements that may adversely affect decisional capacity. (See **Table 2** for examples of how psychiatric disorders can impair decisional capacity).

**Understanding dispositional capacity as a distinct concept**

On the spectrum of decisional capacity, dispositional capacity appears to be a particularly special circumstance. In the case of decisional capacity, a patient is required to demonstrate adequate cognition as evidenced by an understanding and appreciation of the facts and circumstances and an ability to rationally manipulate information, be capable of intact reality testing relative to the medically relevant information, and sufficient emotional stability to make a consistent choice over time.

**Table 2 Examples of psychopathology that interferes with decisions**

- A patient with severe depression refuses to consent to a cardiac catheterization for unstable angina because she believes she is unworthy of living and hears God telling her it is time to die
- A patient with advanced dementia repeatedly receives information about his medical problems and medications but cannot remember that medications have been prescribed, their indications, or that he needs to take them
- A patient with chronic paranoid schizophrenia presents to the emergency department with pneumonia but refuses to consider hospitalization because he believes all the doctors and nurses are working for the CIA and they want to admit him to the hospital where he will be tortured for information
- A patient with refractory anorexia nervosa is rapidly deteriorating; she is severely hypotensive and hypokalemic but refuses fluid resuscitation and electrolytes because she fears the medical staff have hidden calories that will make her gain weight
- A patient with avoidant personality disorder who has a fungating breast lesion refuses to allow her physician to examine her breast because she is in denial and insists that there is nothing wrong with her

Dispositional capacity, on the other hand, is more complicated in that it requires the patient to make multiple present and future decisions that are conducive to good health, and it requires that patients demonstrate adequate functional abilities in the physical and occupational performance areas to survive in the community. Thus, dispositional capacity hinges on many more factors than a focal, discrete choice to accept or reject a medical intervention or diagnostic procedure while in the hospital.

Seen in this light, dispositional capacity to refuse a safe discharge requires a higher bar of understanding

and self-awareness by the patient. A patient may have the decisional capacity to give informed consent for an extremity amputation, but may not have dispositional capacity or the capacity to care for himself or herself at home after recovering from the surgery. Conversely, a patient may lack decisional capacity to refuse a risky CNS tumor resection but nonetheless have dispositional capacity to return home with family supports. Each type of decision requires a full psychiatric assessment, and “one size does not fit all.”

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## Dispositional Capacity

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### Special elements of dispositional capacity

Dispositional capacity determination requires a multidimensional biopsychosocial approach to the patient. This approach, while important in all capacity determinations, is even more critically salient in determination of dispositional capacity, and includes an appreciation of the biological, psychological, and social obstacles that must be overcome to maintain health, safety, and access to care in the community. A dispositional capacity assessment requires an evaluation of:

- Understanding of the medical illness
- Obstacles to understanding (eg, language, socio-cultural barriers, neurocognitive disorders, substance use disorders, other psychiatric disorders)
- Ability to perform activities of daily living (ADLs) and instrumental activities of daily living (iADLs) or to accept assistance with these needs
- Social factors (family dynamics, housing, economics, and broader social supports)
- Access to and navigation through the health care system

To begin, a clinician must first assess a patient's understanding of his or her ongoing medical problems and what specific interventions are needed upon discharge (eg, physical or occupational therapy, follow-up medical appointments). Subsequently, the clinician must assess cognitive difficulties that are interfering with the patient's understanding of the illness and medical care needs.

### CASE VIGNETTE #1

Mr. A is an 85-year-old with a past medical history of hypertension, diabetes, and coronary artery disease who presents after a fall in his apartment. It was hours before his daughter found him on the bathroom floor. Upon admis-

sion to the hospital, Mr. A was dehydrated with associated rhabdomyolysis, acute kidney injury, and hypernatremia; he was treated with IV hydration. He sustained a hip fracture but refused the recommended hip replacement. The consulting psychiatrist diagnosed delirium, possibly superimposed on a major neurocognitive disorder (dementia), and prescribed PRN haloperidol for agitation. His daughter provided informed consent for the surgery.

After surgery, the orthopedic team recommended discharge to a subacute rehabilitation facility (SAR) to assist with his post-operative recovery. Mr. A was ada-

mant that he be discharged home. The psychiatrist was called in to assess dispositional capacity. Mr. A believed he would be fine at home because he's a "strong man" and "I can take care of myself." He seemed unaware of any risks to returning home and couldn't explain how he would prepare his food or attend to his grooming. He scored poorly on the Montreal Cognitive Assessment with a score of 16. An occupational therapy evaluation demonstrated a failing score on the KELS. The psychiatrist found that Mr. A lacked dispositional capacity; after much encouragement from his daughter, Mr. A agreed to a temporary

### THE ACADEMY OF CONSULTATION-LIAISON PSYCHIATRY

supported the development of the Bioethics Special Interest Group (SIG) for consultation-liaison psychiatrists to address ethical challenges and dilemmas in the care of patients and to promote the teaching of bioethics. The group now has over 234 members and can be accessed at <http://www.apm.org/sigs/bioethics/>. Members work together to provide education for psychiatrists, psychiatric residents, and medical students, and to guide policy development. Courses, workshops, and symposia are available at annual meetings and online at <http://www.apm.org>.

### SAR stay to regain his mobility.

Functional assessments to clarify a patient's limitations with daily activities, including iADLs and ADLs, can further elucidate areas of concern. Collaboration with a team of experts is most relevant in dispositional capacity determinations. Specifically, an occupational therapist can provide a Kohlman Evaluation of Living Skills (KELS) or other similar assessment of self-management abilities that can be selected based on patient-specific characteristics. KELS or similar instruments can provide comprehensive evidence of cognitive skills involved in self-management. Input

from physical, occupational, and speech and language therapists can assist the psychiatrist in better understanding the patient's current level of functioning.

Social workers can arrange access to community programs such as home health aides, visiting nurses, physical and occupational therapy, companions for persons who are visually impaired, transportation to medical appointments, prepared food delivery for meals, and panic buttons, all of which can make home a safer place for elderly patients with cognitive impairment. A patient who is unable to adequately perform iADLs and ADLs may still be safely discharged if a family mem-

ber, friend, or a home health aide is available to assist with shopping, cleaning, food preparation, and transportation to medical appointments. Social workers can also help identify untapped resources such as family, friends, or members of the patient's religious faith to help the patient after discharge.

### Sliding scale of dispositional capacity

There are many types of medical decisions, and each of these may require greater or lesser levels of understanding, cognition, and emotional function. For example, there are simple versus complex surgical and other procedures for which a patient might need to consent. To appoint a surrogate decision-maker, the necessary decisional capacity level is an understanding of the role of the surrogate and an ability to consistently name that person with little focus on the patient's awareness of the strengths or weaknesses of each proposed surrogate. This applies as long as there are no concerns about the appropriateness of the surrogate and it is not a risky decision.

To accept a recommended medical procedure, the necessary capacity level is a consideration of the risks of failure and benefits of success from the procedure that is being recommended by the treating physician. To reject a recommended procedure, the necessary decisional capacity level involves knowledge of the risks of recovery without the procedure.

As with the varieties of risk among the different kinds of medical decisions, there is a spectrum of different levels of dispositional capacity that a patient might need. Overall, we can speculate that because dispositional capacity requires a greater degree of cognition for consistent and ongoing self-management, patients who "just barely" satisfy the functional criteria of valid decisional capacity for a routine medical procedure may nonetheless lack dispositional capacity.

Patients with poor cognitive function who lack capacity to refuse a medical or surgical procedure, are also likely to lack dispositional capacity. Conversely, a patient with a stable home, caring family members, good access to clinical follow-up, and adequate financial resources may be better able to manage post-hospital care at a lower level of cognitive and psychiatric function than a patient without ready access to these resources. Patients who are paranoid, either from a neurocognitive disorder or a psychotic disorder, may not fare as well in the community because they will not allow family or homecare agencies access to their home to provide needed assistance.

### CASE VIGNETTE #2

Ms B is a 90-year-old widow with hypothyroidism, schizophrenia, and mild neurocognitive disorder. She lives in her own home with the support of a home health aide and assistance from 2 sons. She has chronic paranoia and lifelong beliefs that the FBI is spying on her and targeting her children. Ms B's pharmacy packages risperidone in blister packs and her aid

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## Dispositional Capacity

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reminds her to take the medication.

She presents to the hospital with her son for abdominal pain and is found to have a perforated duodenal ulcer. Although she believes the FBI has caused the ulcer, she agrees to all recommended treatments and her decisional capacity is not questioned. Her hospital course is complicated by sepsis and delirium. She requires PRN risperidone, in addition to her standing risperidone, which is recommended by the consulting psychiatrist.

When it is time for discharge, the medical team recommends SAR. However, Ms B wants to go home because she believes that the FBI will have better access to her at SAR. The psychiatrist is called in for an assessment of dispositional capacity. Ms B explains her reasoning to the psychiatrist and acknowledges that others might choose differently. She agrees to resume her homecare services, and her sons agree to check on her daily.

Ms B scores in the mildly impaired range on the Montreal Cognitive Assessment with a score of 18. She has prominent delusions but her family and psychiatrist confirm that she is at her baseline; she has no homicidal or suicidal thinking. She is found to have dispositional capacity and is safely discharged home with resumption of her community supports.

### Summary

Dispositional capacity is a specific subset of decisional capacity that addresses a patient's ability to accept or reject a safe discharge plan. Psychiatrists are often called upon to assess dispositional capacity when a patient is refusing the recommended discharge plan, sometimes in concert with decisional capacity for informed consent for a medical procedure, and sometimes solely in the discharge context.

Assessment of dispositional capacity, framed as a distinct subtype of decisional capacity, includes a comprehensive diagnostic psychiatric evaluation as well as targeted evaluations by occupational and physical therapy staff and social workers to provide the optimal interdisciplinary assessment of the patient. This complete appraisal, tailored to the patient's specific circumstances, addresses the patient's safety and honors the 4 principles of biomedical ethics, specifically balancing patient autonomy against physician beneficence, nonmaleficence, and justice. Mastery of the dispositional capacity assessment is an essential core skill for consultation-liaison psychiatrists who are crucial members of the health care team. □

medical hospitals, primary care, and outpatient medical settings for patients with comorbid medical conditions.

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Death of Socrates. Jacques Louis David. Metropolitan Museum of Art, NYC. MARZOLINO/SHUTTERSTOCK.COM

## A “Sickness of Our Time”: How Suicide First Became a Research Question

» Greg Eghigian, PhD

In 1897, the French sociologist Émile Durkheim (1858-1917) published *Le suicide: Étude de sociologie* [*Suicide: A Study in Sociology*]. With it, Durkheim largely succeeded in achieving one of his main goals—to use an empirical analysis of the subject of suicide to launch the field of modern scientific sociology. Reading the book today, one is still impressed by its innovative methods. For example, its epidemiological approach based on international statistical data and its often surprising findings—for one, that suicide rates rose not during social crises, but rather at times when governing norms were breaking down.

While the work has been hailed as a founding text for the social sciences, historians have shown that Durkheim was perhaps less a pioneer than beneficiary of generations of research. As historian Daryl Lee puts it, the book “marks not the beginning but the culmination of nearly a century of intense anxiety and debate over the subject of suicide.”<sup>1</sup> What for centuries had been considered a matter for clergy, theologians, and philosophers alone to comment on became in the 19th century a problem that increasingly drew the attention of psychiatrists and sociologists. Why did things change?

If we look back to ancient Greece and Rome, philosophers there considered it a matter of debate whether it was morally acceptable to end one’s life. Intellectuals such as Socrates and Cato, both suicide completers, continued to enjoy respectable reputations after their passing. Christian Europe, however, expressed a far less tolerant attitude toward self-inflicted death. For over a thousand years, Christian thinkers shared the aversion to suicide of St. Augustine (354–430), who held the act to be an arrogant refusal to submit to God’s will; it was widely accepted, He and He alone rightfully decided on when an individual’s life should come to an end. As such, suicide was deemed a crime and the bodies of suicide completers were often desecrated and their possessions confiscated.

A shift in thinking began to take place between 1500 and 1800. While intellectuals of the 16th and early-17th centuries continued to pronounce suicide to be a moral abomination, some Enlightenment figures of the 18th century like Voltaire (1694–1778) and David Hume (1711–1776) argued for its legitimacy under certain situations. Historians examining judicial and church records have shown that in between these 2 periods, local authorities throughout Europe were slowly decriminalizing suicide, believing the penalties imposed on the corpses and estates of victims an unjustified burden on family members. Popular at-

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## Suicide

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titudes at the time also appear to have been evolving, as people gradually attributed suicides not to moral failings or the devil, but to deep emotions such as grief.<sup>2</sup> This opened the way in the 1700s for reform-minded thinkers to begin pathologizing suicide as an expression of melancholy.<sup>3</sup>

Clinical observers and researchers began taking up the subject in the early 19th century. In 1807, Danish physician Heinrich Callisen (1740–1824) dubbed it a form of illness and others soon followed suit.<sup>4</sup> This was not due to the emergence of any new clinical evidence, however. Rather, legal and judicial changes in defining criminal responsibility inspired debate within psychiatry over a range of issues: the possibility of “partial” insanities, the existence of emotional and volitional forms of madness, as well as whether suicide should be treated

simply as a symptom of an altered state of mind. On the latter question, some—like the famed French psychiatrist Jean-Étienne Esquirol (1772–1840)—generally believed it to be “a disorder of the emotions,” a view a later writer in 1857 would criticize as “. . . a dangerous and serious mistake which can give rise to undesirable moral consequences.”<sup>5</sup>

At the time, the debate within psychiatry represented only one thread of the discussion over suicide. In the early 19th century, there was widespread perception that the incidence of suicide was rising. Whether this was so is difficult to judge. What we do know,

however, is that this was exactly the moment when governments began to concerted collect statistics on suicide as part of a broad effort aimed at developing a more empirically-informed public policy.

While interest in the regularities of birth, marriage, and death rates dated back to the 18th century, during the 1830s the field of what was called “moral statistics” was ever more drawn to deviant acts like crime, alcoholism, and suicide. For moral statisticians, like the Belgian Adolphe Quetelet (1796–1874), the fact that these morally corrupt and seeming irrational actions followed consistent patterns in their incidence,

## Birthday Party

Richard M. Berlin, MD

Green hills patched with April  
snow and I've chosen to celebrate  
with a full slate of patients.

No cake or champagne  
in my sober waiting room,  
just another day losing myself

in the flow, prescribing pills,  
listening more than I speak,  
keeping secrets secret,

thankful for their gift of suffering,  
which allows me to be useful  
doing work I was born to do.

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prevalence, and distribution demonstrated that human behavior—like the rest of the natural world—followed certain laws. And these laws, he thought, could be scientifically discovered and analyzed. Here was compelling proof of the need for a social science on par with the physical sciences.<sup>6</sup> Thus, 2 lines of research emerged in 2 emerging fields, one rooted in psychiatry, the other in sociology. The 2 paths certainly diverged from one another: psychiatrists remained most interested in the psychopathology and treatment of individuals. Social scientists were drawn to identifying and influencing collective patterns.

Nevertheless, there were points where the interests of the 2 groups overlapped. Both statistician André-Michel Guerry (1802–1866) and physician Brierre de Boismont (1797–1881), for instance, separately took it upon themselves to classify and analyze the motivations of those committing suicide. Pouring over the letters, notes, and writings of thousands of victims, they sought out trends that might be common among those attempting to kill themselves.

But what continued to worry many analysts in both camps, however, was what seemed to be the shockingly high suicide rate in contemporary society. Thomas Ma-

saryk in his 1881 study of the topic put it bluntly: suicide was “the sickness of our time.” It appeared to be not just an epidemic in, but also endemic to the modern world. What was one to make of this?

The growing influence of Darwinian evolutionary theory moved some to search for answers there. The physician and writer Max Nordau (1849–1923) argued that the rising suicide rate reflected a more general pattern of “degeneration,” an evolutionary regression of the human race caused by society’s neglect of the moral and hygienic health of civilized peoples.<sup>7</sup>

Others, however, wondered whether the evolutionary connections between humans and other animals meant that suicide could be found in other species. Scottish alienist William Lauder Lindsay (1829–1880) believed so. A critic of the use of mechanical restraints and an advocate for psychotherapy in asylums, Lindsay argued that evidence showed that animals did commit suicide just like humans, not as “the simple product of malady, but of malady aggravated by mismanagement.” In other words, it was due to neglect and abuse. The famous British psychiatrist Henry Maudsley (1835–1918) begged to differ. He categorically dismissed the notion of animal suicide. Non-humans, he contended, lacked the capacity to deliberately seek their own deaths, and he criticized Lindsay for sacrificing scientific assessment in the service of a “spirit of romance.”<sup>8</sup>

Others saw less value in evolutionary arguments, opting instead to focus on recent historical changes. Durkheim entered the debate, emphasizing the impact modern secular and consumer values had on unmooring individuals from their familiar moral anchors. He was hardly the first to argue along these lines. Almost 2 decades earlier, the Italian physician Enrico Morselli (1852–1929) published *Suicide: An Essay on Comparative Moral Statistics* (1879), in which he related contemporary suicides to the rise in the unsatisfied desires and unregulated self-gratification characteristic of modern life.

By century’s end, many researchers concluded that suicide represented not so much an illness as a symptom—a response by some to the challenges posted by living in the modern world. □

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## PTSD and Suicide

Continued from page 4

found increased suicide rates of sub-threshold PTSD, even after controlling for MDD.<sup>10</sup>

### Conclusion

With little economic relief in sight in the foreseeable future, approximately a million Puerto Ricans are expected to present with PTSD in the next 2 years and hundreds will die by suicide as a result of the hurri-

cane. We hope that this article will serve to clarify protracted disaster-related psychopathology, especially within the context of psychosocial and economic stressors. In addition we hope heighten awareness among members of the World Psychiatric Association and American Psychiatric Association, at institutional-systemic and national-local levels, to offer assistance to those affected by this humanitarian crisis. □

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# INFLAMMATION AND PSYCHIATRY, PART 1

## INTRODUCTION:

# The Inflammation Connection

» Charles Raison, MD

**Dr. Raison** is Mary Sue and Mike Shannon Chair for Healthy Minds, Children & Families; Professor, Human Development and Family Studies, School of Human Ecology; and Professor, Department of Psychiatry, School of Medicine and Public Health, University of Wisconsin-Madison.

When I attended medical school in the mid-1980s, no one imagined that the immune system had anything to do with the brain. When I became a researcher in 2000, we were convinced that inflammation would only be relevant to patients with medical illnesses that might account for their immune activation. Now, in 2018 I find myself amazed that inflammation is frequently named as the root cause of all psychiatric conditions—the sine qua non of all mental illness.

This 2-part Special Report devotes itself to the new inflammatory world that we—as mental health clinicians and researchers—find ourselves in, and it does an admirable job of showing how most of our prior and current preconceptions about the role of immunity and mental illness have been—and are—wrong.

In retrospect, my years in medical school seem like the dark ages. We now know the immune system and the brain have everything to do with each other: really, they are best understood as part of one larger system with causal influences that move in both directions. Brain states that produce mental illness also tend to activate inflammation. And inflammation is equally capable of producing depression, anxiety, fatigue, and social withdrawal.

It seemed so logical in 2000 that inflammation could only produce mental illness when a person had a good excuse for inflammation, such as an infection or a cancer. We didn't know then that psychological stress activates inflammation and that this activation would be found to predict the later development of psychopathology.<sup>1</sup> Far from being specific to any one mental illness, or a sub-population within a mental illness, inflammation turned out to be a common denominator and likely risk factor for every manner of psychiatric disturbance, from schizophrenia to obsessive compulsive disorder, from mania to depression.<sup>2</sup>

On the other hand, our hopes that major depression might turn out to be an inflammatory condition that could be uniformly treated with anti-inflammatory medications turned out to be as wrong as all the other assumptions prevalent in the field and in my own brain. It is increasingly clear that inflammation is not the cause of depression: it is at best one cause of depression. We now know, in fact, that depressed patients with elevated depression have different patterns of brain functioning than do patients who are just as depressed but have low levels of inflammation.<sup>2</sup> And the story gets trickier, because several studies suggest that further lowering inflammation in these non-inflamed patients makes things worse, not better.

What does it all mean? Fortunately, the articles in this Special Report do an outstanding job of glossing our best current understandings, which are: What are these understandings?

• First, that inflammatory processes

induce changes in brain/body functioning that can contribute to the development of a wide range of psychiatric conditions. Inflammation is an equal opportunity risk factor, with specific disease pathogenesis depending on factors such as when in the life cycle the inflammatory event(s) occur and/or genetic predisposition of individuals.

• Second, that a wide range of environmental adversities, many of which—like stress—we don't tend to think of as immunological, can be proinflammatory and likely increase the risk of mental illness through this mechanism.

• Finally, that even though inflammation may be a cause of a given mental illness in a given individual, psychiatric disorders are not inflammatory conditions. There are plenty of other ways of getting depressed, or manic, or psychotic.

Our recent celebration of all things inflammatory will not allow an escape from the truth—that psychiatric treatment will never be “one size fits all.” How anti-inflammatory strategies will fit into our larger armamentarium is one of the most exciting questions facing the field of psychopharmacology.

Here's to hoping that when the next *Psychiatric Times* Special Report on inflammation comes out, we will have the answers. □

[The author reports that he is a consultant for Novartis, Usona Institute, and Emory Healthcare.]

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Special Report Chairperson *Charles Raison, MD*

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**Why Are Depressed Patients Inflamed? A New Path to Personalized Treatment in Psychiatry**  
Carmine M. Pariante, MD, PhD



# Five Things to Know About Inflammation and Depression

» Andrew H. Miller, MD

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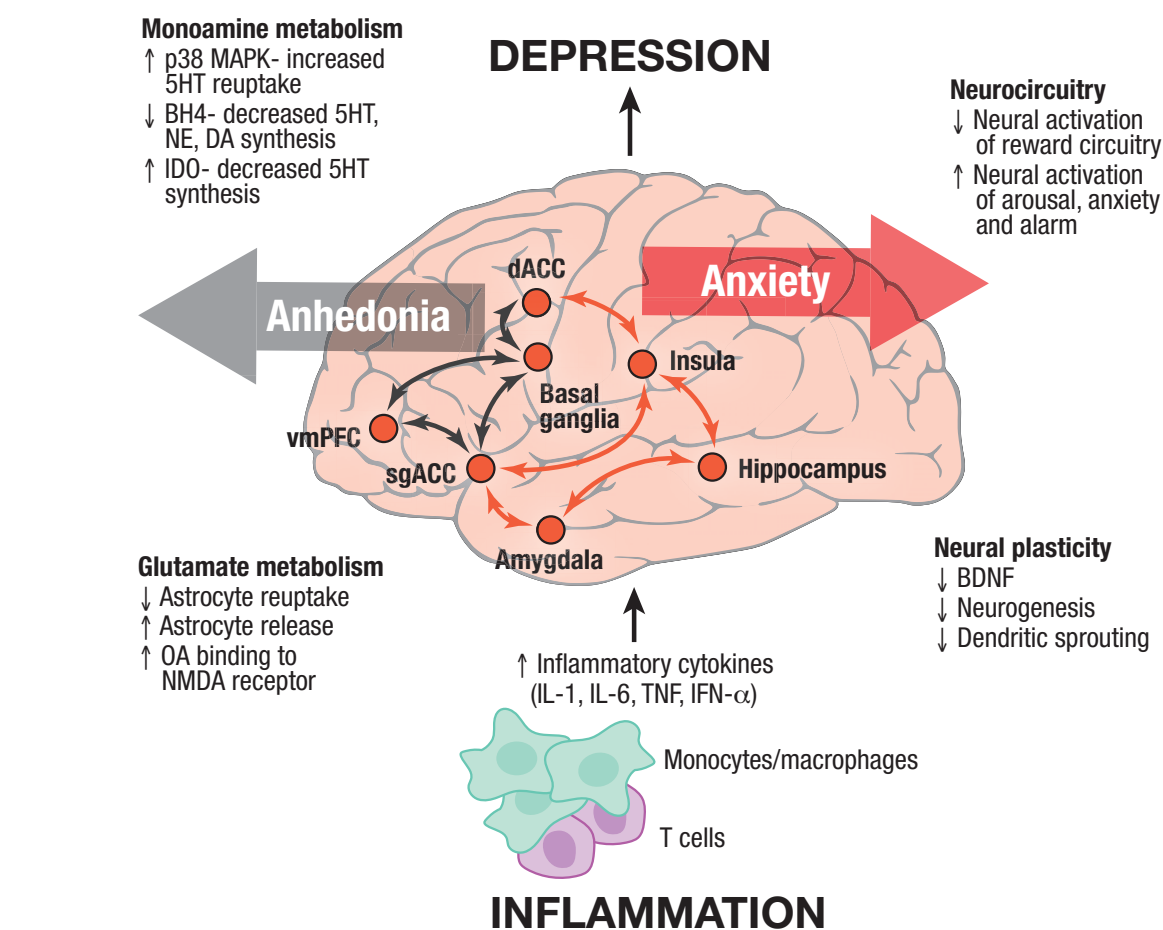
Understanding the immunological basis of disease has revolutionized the treatment of cancer and autoimmune and inflammatory disorders, benefitting millions of people with breakthrough immunotherapies. We now suspect that immunologic processes may also play a pivotal role in the development and maintenance of psychiatric disorders, opening an entire new avenue for novel strategies to prevent and treat psychiatric disease.

The immunologic processes connected to depression have received the most attention. A vast amount of data supports the hypothesis that the immune system in general and inflammation in particular, represent a pathway to pathology in a significant number of depressed patients. Although the relationship between inflammation and depression may at first glance appear straightforward, this relationship is much richer and more nuanced than is often believed. In hopes of embracing the complexity involved, 5 essential points that represent our current understanding of the field are presented.

## Depression is not an inflammatory disorder

Probably the most important lessons that we have learned about inflammation and depression are that depression is not an inflammatory disorder and not every patient with depression has increased inflammation. Although a multitude of studies have demonstrated increased mean concentrations of a variety of inflammatory markers in depressed patients compared with controls—including reproducible increases in the inflammatory cytokines tumor necrosis factor (TNF), interleukin (IL)-1 $\beta$ , IL-6 and the acute phase protein C-reactive protein (CRP)—there is considerable variability within the depressed population. Indeed, despite the question being asked repeatedly, we do not know the percentage patients in whom inflammation plays a role.

The difficulty in addressing this question is that the answer depends



**Figure** Impact of inflammation on the brain and behavior

5HT, serotonin; BDNF, brain derived neurotrophic factor; BH4, tetrahydrobiopterin; DA, dopamine; dACC, dorsal anterior cingulate cortex; IDO, indoleamine 2,3 dioxygenase; IFN-interferon; IL, interleukin; MAPK, mitogen activated protein kinase; NE, norepinephrine; NMDA, N-methyl-D-aspartate; QA, quinolinic acid; sgACC, subgenual anterior cingulate cortex; TNF, tumor necrosis factor.

## SIGNIFICANCE FOR THE PRACTICING PSYCHIATRIST

Understanding the impact of inflammation on the brain can lead to key insights on how to manage depressed patients, ranging from diagnostic considerations to targeted treatment strategies.

- Inflammation occurs in subgroups of high-risk depressed patients.
- Inflammation is associated with a poor response to conventional antidepressant therapy.
- Inflammation has specific effects on the brain, warranting tailored treatment and prevention.

on the patient population being considered. The more inflammatory risk factors a patient has, the more likely he or she will have inflammation. There are a multitude of factors associated with increased inflammation (Table 1) including treatment resistance. For example, 45% of patients enrolled in a study on treatment resistant depression had a CRP > 3 mg/L, which is considered high inflammation.<sup>1</sup>

Another pivotal point is that increased inflammation not only occurs in depression but also in multiple other psychiatric diseases including bipolar disorder, anxiety disorders, personality disorders, and schizophrenia. These data suggest

that inflammation is transdiagnostic in nature, occurring in subpopulations of patients within a number of psychiatric disorders.

## Inflammation has specific effects on the brain and behavior

As we gain more insight into how inflammation affects the brain, it is becoming increasingly clear that there is a surprising specificity on the impact of inflammation on behavior. Such specificity is apparent in the neurocircuits and neurotransmitter systems that appear to be most affected by inflammation both in the context of the administration of inflammatory stimuli or in association with inflammatory markers in pa-

tients with depression or other psychiatric disorders (Figure). For example, administration of the inflammatory cytokine interferon (IFN)- $\alpha$  to patients or administration of typhoid vaccination or endotoxin to healthy volunteers has shown that inflammation affects subcortical and cortical brain circuits associated with motivation and motor activity as well as cortical brain regions associated with arousal, anxiety, and alarm.<sup>2-4</sup>

Similar results have been found in patients with depression where increases in peripheral blood concentrations of the CRP were correlated with decreases in connectivity within motivation and reward circuits involving the ventral striatum and ventromedial prefrontal cortex (vmPFC), that in turn were associated with anhedonia.<sup>5</sup> Greater inflammatory responses to stress as reflected by salivary concentrations of soluble TNF receptor 2 have also been correlated with activation of threat assessment circuits in the brain involving the dorsal anterior cingulate cortex (dACC) and insula.<sup>6</sup> This latter effect of inflammation on threat and fear-related neurocircuitry

**Table 1. Factors associated with increased inflammation**

Obesity
Sedentary lifestyle
Disordered sleep
Childhood maltreatment
Emotional and physical trauma
Medical illnesses (eg, cardiovascular disease, diabetes, cancer, autoimmune and inflammatory disorders)
Bacterial or viral infection (including exposure to a high pathogen load [eg, unsanitary living conditions, poor dentition, poor hygiene])
Medical treatments (eg, surgery, radiation, chemotherapy)
Antidepressant treatment resistance

may explain the emerging literature on the association of inflammatory markers with suicidal ideation and suicide attempts.<sup>7</sup> Indeed, threat sensitivity has been shown to independently predict suicide risk, and data suggest that increased inflammatory markers may be preferentially associated with depressed patients who have attempted suicide.<sup>7,8</sup>

In terms of the neurotransmitter systems involved, inflammation reduces the availability of monoamines by increasing the expression and function of the presynaptic reuptake pumps (transporters) for serotonin, dopamine, and norepinephrine and by reducing monoamine synthesis and release by decreasing enzymatic co-factors such as tetrahydrobiopterin.<sup>1,2</sup> Cytokine-induced decreases in basal ganglia dopamine release have been observed in humans and directly correlated with reduced motivation in laboratory animals.<sup>1,2</sup>

Inflammation also decreases relevant monoamine precursors by activating the enzyme indoleamine 2,3 dioxygenase, which breaks down tryptophan, the primary precursor for

5-HT, into kynurenine. Activated microglia can convert kynurenine into quinolinic acid, which can lead to excessive glutamate, an excitatory amino acid neurotransmitter. Excessive glutamate can lead to decreased brain-derived neurotrophic factor (BDNF) and excitotoxicity. Increased CRP has been directly correlated with increased glutamate in the basal ganglia of patients with depression.<sup>9</sup> Finally, based on the inhibitory effects of inflammation on monoamine metabolism and BDNF, it is not surprising that inflammation is associated with a poor response to conventional antidepressants, whose efficacy relies in part on increasing monoamine availability and inducing BDNF and neurogenesis.

### The immunology of inflammation in depression is only beginning to be understood

Our understanding of the immunology underlying inflammation in depression is limited to a small number of human studies in addition to animal studies. Thus, the relative contribution of innate and adaptive immune

responses is unknown. One might suspect from the inflammatory mediators that are increased in the blood of depressed patients (eg, TNF, IL-1 $\beta$  and IL-6) that the primary drivers of inflammation in depression involve monocytes and activation of the innate immune response. Consistent with this notion is a recent report of increased perivascular monocytes/macrophages and monocyte chemoattractant protein (MCP)-1, a protein that attracts monocytes to the tissues in postmortem brain samples of presumably depressed suicide victims.<sup>10</sup>

Findings from animal studies also suggest that stress-induced increases in catecholamines stimulate the release of monocytes from the bone marrow.<sup>2</sup> Once in the blood, these monocytes encounter danger- or microbial-associated molecular patterns derived from stress-induced alterations in metabolism or microbial products from the gut that in turn activate inflammatory signaling pathways such as nuclear factor  $\kappa$ B (NF- $\kappa$ B) leading to TNF and IL-6 as well as the inflammasome, which leads to

(CONTINUED ON PAGE 18)



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## Inflammation and Depression

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the production of IL-1. TNF in turn has been shown to activate microglia to produce MCP-1, attracting monocytes to the brain notably in areas that regulate fear and anxiety including the amygdala.<sup>11</sup> Recent data indicate that chronic social stress in laboratory animals can also lead to permeability in the blood – brain barrier that allows peripheral inflammatory signals including IL-6 to enter the brain in regions relevant to motivation and reward.<sup>12</sup> Consistent with these laboratory animal data, peripheral blood immune cells from depressed patients have shown evidence of activation of both nuclear factor  $\kappa$ B and the inflammasome.<sup>13</sup>

Despite evidence that monocytes and the innate immune response play a pivotal role in effects of inflammation on the brain, there is growing evidence to suggest that T cells and the adaptive immune response may also be involved.<sup>14</sup> Decreased anti-inflammatory T regulatory cells and increased hyperinflammatory Th17 cells have been described in depressed patients and animal models of depression.<sup>13-15</sup> Moreover, T cells and their production of IL-4 have been associated with resilience to stress and depression in laboratory animal models.<sup>1,14,16</sup> These data are especially intriguing given recent characterization of the lymphatic system within CNS that allows the

T cells to patrol the brain.<sup>17</sup> Whether inflammatory responses are primarily driven by innate immune responses and monocytes versus the adaptive immune response and T cells will have profound implications for immunotherapeutic targeting of the immune system to treat depression.

### Inflammation is related to treatment response

A major advantage of a pathophysiologic process that is believed to largely emanate from the periphery and spread to the brain is the opportunity to use blood tests to identify specific individuals for treatment targeting and ultimately precision care. Indeed, inflammatory markers alone or in combination have been shown to predict treatment response to conventional antidepressants and psychotherapy as well as advanced treatment strategies such as ketamine and anti-cytokine immunotherapy.<sup>13,18</sup> Unfortunately, these studies are post hoc in nature, and no study has yet to prospectively assign patients with one or more level of inflammatory marker to a given treatment and predict response.

The greatest challenge is to determine which inflammatory marker(s) exhibits the greatest predictive value, while also being readily available for clinical application. Findings suggest that individuals with a CRP >1mg/L, which is the cut off for moderate inflammation, were less likely to respond to SSRIs.<sup>19,20</sup> High CRP was also shown to predict response to the anti-inflammatory drug infliximab,

an inhibitor of TNF.<sup>1</sup> Given the relative availability of CRP in clinics and hospitals throughout the US and elsewhere, it may be that until other data are available, clinicians can use CRP as a general yardstick for inflammatory load.

There has been recent interest in identifying inflammation directly in the brain of depressed patients using positron emission tomography to identify activated microglia reflected by upregulation of the translocator protein (TSPO).<sup>21</sup> Although there has been an assumption that increased TSPO binding signals neuroinflammation, the TSPO ligand is not able to distinguish microglia that are activated to perform important neuroprotective and neuroregulatory functions from microglia that are inflammatory. Therefore, these ligands are not ready for prime time, and results from the published literature using TSPO ligands should be interpreted with caution.

### Therapeutic implications are imminent

Clearly, there is much to be learned about the relationship between depression and inflammation. Nevertheless, the most exciting aspects of this work are the clear therapeutic implications ranging from blocking inflammation to targeting the downstream effects of inflammation on neurotransmitter systems and neurocircuits to implementing lifestyle interventions that reduce inflammation (Table 2).

Several clinical trials are underway using immunotherapies that target TNF and IL-6. In each instance, a precision medicine approach is being taken: individuals with increased inflammation of CRP >3 mg/L are being treated. Whether targeting these cytokines versus targeting T cell-derived cytokines such as IL-17 is more efficacious and for whom remains to be determined. In addition, studies have suggested that both minocycline, which blocks microglial activation, and inhibitors of the inflammatory mediator cyclooxygenase (COX)-2 have antidepressant efficacy.<sup>18</sup> However, more data are needed, given that precision targeting of patient populations with high inflammation has not been incorporated into the clinical trial design of these studies. Based on the impact of inflammation on dopaminergic and glutamatergic pathways, drugs that enhance dopamine signaling or block glutamate receptors may be especially relevant for patients with depressive symptoms and increased inflammation. □

*Dr Miller reports no conflicts of interest concerning the subject matter of this article.*

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**Table 2. Considerations for the treating clinician**

#### Assessment

Conduct a thorough history for risk factors associated with increased inflammation

Consider obtaining a peripheral blood measure of inflammation (eg, CRP): <1 mg/L, low inflammation; 1-3 mg/L, moderate inflammation; >3 mg/L, high inflammation<sup>a</sup>

#### Treatment (for patients with multiple inflammatory risk factors and/or increased blood inflammatory markers)

Consider not using selective serotonin reuptake inhibitors as first-line therapy

Consider using (or augmenting with) medications that increase dopaminergic signaling or block glutamate: bupropion, stimulants (eg, methylphenidate, dextroamphetamine), pramipexole, ketamine

Implement lifestyle interventions to reduce inflammation: weight loss, exercise, sleep hygiene, meditation and yoga (increases parasympathetic outflow, which inhibits inflammation), aggressive management of medical illnesses and infections

Use of anti-inflammatory drugs (COX-2 inhibitors) or minocycline (not ready for prime time, although this literature should be followed closely)

<sup>a</sup>Based on level of risk for cardiovascular disease (an inflammation-related disorder).



# Is PTSD a Systemic Disorder?

» Janine D. Flory, PhD and Rachel Yehuda, PhD

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In addition to psychosocial problems, there is a growing realization that PTSD may also lead to or exacerbate chronic medical health conditions. Several large cohort studies demonstrate a prospective association between PTSD symptoms and cardio-metabolic disorders, such as myocardial infarction, stroke, type 2 diabetes mellitus, and coronary heart disease.<sup>1</sup> The associations generally persist after adjusting for comorbid depression, which occurs

in about half of all PTSD cases and findings are consistent across civilian and veteran samples.

The association between PTSD and medical illness appears to differ by race and ethnicity: black and Latino adults with PTSD are at greater risk relative to whites. The impact of sex and gender on this association also warrants further examination as many of the large prospective studies have been conducted using same-sex cohorts.

More recently, PTSD has been linked with autoimmune disorders and neurodegenerative diseases. O'Donovan and colleagues<sup>2</sup> reported that patients with PTSD had a greater risk for thyroiditis, inflammatory bowel disease, rheumatoid arthritis, multiple sclerosis, and lupus erythematosus. Findings from this retrospective cohort of more than 600,000 Iraq and Afghanistan veterans were not associated with age, race, or gender.

The temporal association between

PTSD and autoimmune disorders has not been studied extensively. However, results from one longitudinal cohort study of women showed that the onset of trauma exposure and PTSD symptoms preceded the development of lupus erythematosus.<sup>3</sup> The public health significance of understanding why and how trauma exposure/PTSD are linked to medical illness is enormous. Recent results from gene expression studies offer some intriguing research possibilities for investigation.

## SIGNIFICANCE FOR THE PRACTICING PSYCHIATRIST

It is important to understand how and why trauma affects medical illness and whether successful treatment for PTSD is associated with improvements in physical health. Alternatively, behavioral health treatments that address physical health conditions may also contribute to improvements in PTSD symptoms.

- ▶ There is a growing realization that PTSD may lead to or exacerbate chronic medical health conditions.
- ▶ An unanswered question is whether reductions in PTSD symptoms following treatment also lead to changes in immune system functioning.
- ▶ The association between PTSD and medical illness appears to differ by race and ethnicity, with black and Latino adults with PTSD at greater risk relative to whites.

## Is PTSD symptom severity associated with metabolic and inflammatory markers?

Genome-wide transcription studies of trauma exposure and PTSD have identified specific genes, as well as causal pathways that implicate dysregulation of the immune system. Breen and colleagues<sup>4</sup> undertook a mega-analysis using the results from 5 PTSD transcriptome studies. They

(CONTINUED ON PAGE 20)

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## PTSD

Continued from page 19

observed that PTSD was associated with differential expression in genes that regulate innate immunity, cytokine production, and type I interferon signaling. The study included more than 225 cases and 300 controls, which allowed for sub-analyses by gender and trauma type.

Lower expression of cytokine-related genes was observed in men exposed to interpersonal trauma relative to women exposed to interpersonal

the effects of long-term disruption in GC functioning—as observed in PTSD—which contribute to sustained low-grade inflammation that damages target organs.

Findings have not always been consistent in studies of cross-sectional associations between PTSD symptoms and inflammatory markers. A recent meta-analysis demonstrated that PTSD is associated with higher interleukin 6 (IL-6), interleukin (IL)-1 $\beta$ , tumor necrosis factor (TNF)  $\alpha$ , and interferon (IFN)- $\gamma$  relative to controls.<sup>6</sup> Also relevant is the prospective association between elevat-

the inflammatory signature associated with PTSD reflects an extension of trauma-related pathophysiology, or whether it is an inevitable outcome of the behaviors that are associated with PTSD (eg, tobacco use, physical inactivity, imprudent dietary choices, disrupted sleep). If the inflammatory signal is an extension of trauma-related consequences that associate with, or possibly even lead to, other medical illnesses, this would suggest that PTSD is part of a larger systemic illness linked to psychological trauma.

Evidence-based psychotherapies for PTSD address psychological

benefits for patients with PTSD.<sup>10</sup>

One study examined changes in inflammatory markers following treatment of PTSD with paroxetine.<sup>11</sup> Findings from this open trial do not show a decline in IL-6 despite a decline in PTSD symptoms. In contrast, SSRI treatment of depression is associated with a decline in cytokines. Sertraline and transcranial direct current treatment of depression were associated with declines in 6 of 7 cytokines in a randomized clinical trial.<sup>12</sup>

Some of the novel PTSD pharmacotherapy approaches currently under investigation may also have the added benefit of targeting the immune system. One of the exciting developments in pharmacotherapy involves the use of glucocorticoid-related drugs to either prevent the development of PTSD, augment the gains of psychotherapy, or treat symptoms of chronic PTSD.<sup>13</sup> Glucocorticoids are primarily used in a variety of medical ailments because of their anti-inflammatory properties.

Ketamine, an NMDA-receptor antagonist, is under investigation for PTSD. Findings indicate that it influences cytokine production in animal models.<sup>14</sup> Although controversial in some settings as a treatment option, cannabinoids have immunosuppressive properties.<sup>15</sup> The anti-inflammatory properties of these agents may augment the potentially beneficial effects on psychological symptoms.

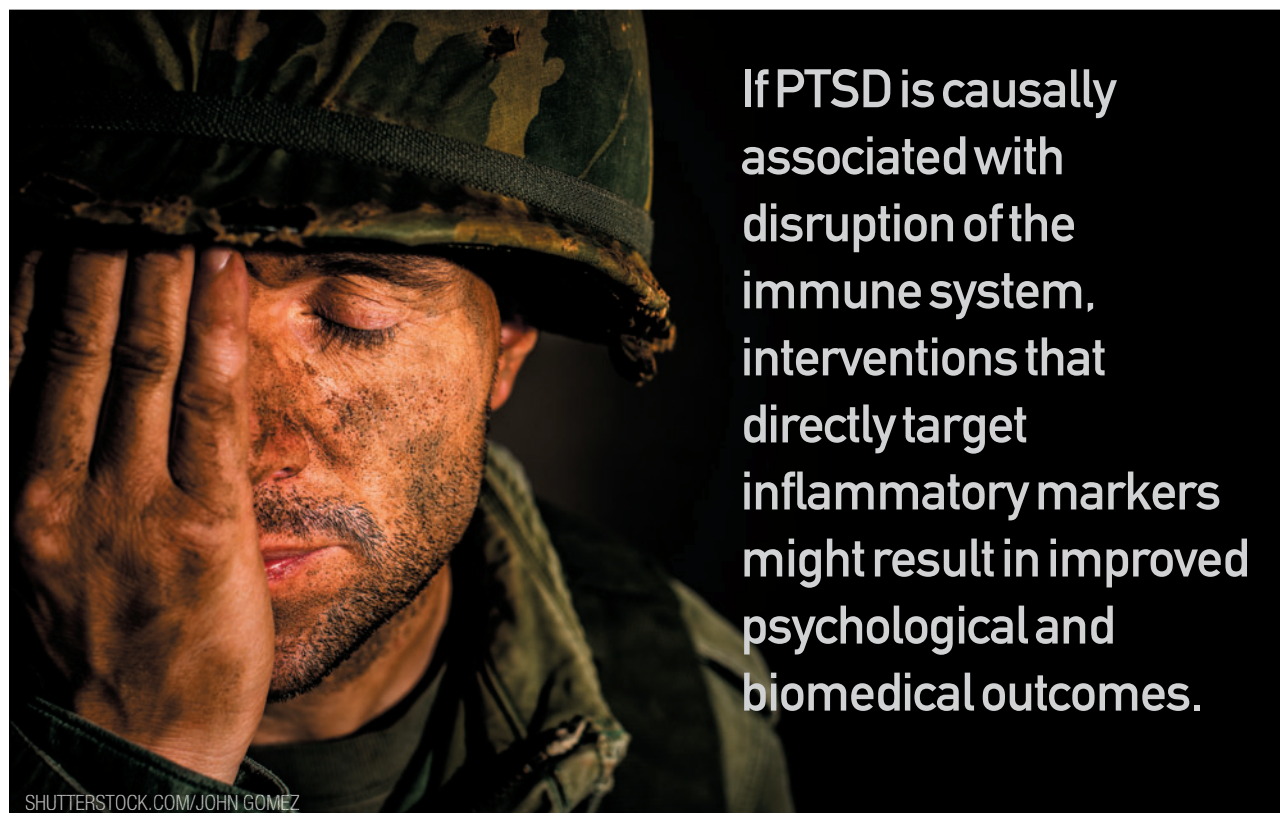
An intriguing possibility is whether these and other medications for PTSD exert direct benefits on symptoms as a result of their influence on the immune system. If so, it is critical to consider the broader implications of the inflammatory signature of PTSD and its psychiatric and medical comorbidities.

**Future directions**

The link between PTSD and chronic illness has been established but the potential role of immune system markers in mediating this association is only beginning to be examined. As new psychotherapeutic and pharmacological treatments are developed, there is an opportunity to examine the relationships between inflammatory markers and symptoms as they change over time.

Future research should examine how and whether psychotherapy affects inflammatory markers, and also to determine the extent to which inflammation is reduced by medications that alleviate PTSD symptoms. It is possible that the growing interest in alternative therapies for PTSD such as meditation, yoga, acupuncture, and other interventions that increase physical activity or alter dietary intake may

## SPECIAL REPORT



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**If PTSD is causally associated with disruption of the immune system, interventions that directly target inflammatory markers might result in improved psychological and biomedical outcomes.**

trauma or men exposed to combat. Further work is needed to explore whether gene expression differences associated with gender and trauma type, which may carry over to observed group differences in the expression of chronic medical illness.

These genome-wide studies complement an established body of research on PTSD biomarkers that have focused extensively on the stress response, including dysregulation of the hypothalamic-pituitary-adrenal (HPA) axis.<sup>5</sup> Stress exposure initiates downstream release of endogenous glucocorticoids (GCs), which bind to GC receptors on target metabolic and immune system tissue (eg, adipose tissue, skeletal muscle, pancreas). Following stress exposure, increases in GC activity lead to immunosuppression, increases in metabolic activity, and negative feedback of the HPA axis to establish homeostasis. The link between PTSD and chronic illness may stem from

ed C-reactive protein, an inflammatory marker of cardiovascular disease risk and the development of PTSD in trauma-exposed Marines.<sup>7</sup> Similarly, higher IL-6 levels measured within 24 hours of a motor vehicle accident predicted PTSD symptoms in children and adolescents.<sup>8</sup>

While some inflammatory activity may relate to psychotropic medication use, comorbid depression, or even trauma exposure itself, there is little doubt that PTSD is associated with immune system functioning. For example, see Lindqvist and colleagues<sup>9</sup> who report no group differences in some of these measures in combat-exposed veterans with and without PTSD; this suggests that trauma exposure by itself may lead to increased inflammatory activity.

**Does behavior mediate the relationship between PTSD and chronic health problems?**

It is important to understand whether

symptoms, but it is not known whether they also affect the immune system. However, the presence of markers of inflammation and metabolic dysfunction (eg, elevated lipid profile, weight gain or increase in waist circumference, insulin resistance) in people with PTSD suggests a need for a more comprehensive approach to the biomedical consequences of trauma.

**Does pharmacotherapy for PTSD affect inflammatory markers?**

If PTSD is causally associated with disruption of the immune system, interventions that directly target inflammatory markers might result in improved psychological and biomedical outcomes. Many people with PTSD are treated with psychotropic medications, but to date, there have been only a few attempts to develop novel pharmacotherapeutic agents for PTSD. FDA-approved SSRIs are associated with reduced inflammation and may have both direct and indirect



provide benefits through their anti-inflammatory effects.

It is also important to examine whether the association between PTSD and immune markers is part of a broader association between mental illness and poor health or whether there is specificity between trauma exposure and particular markers and disease outcomes. Moreover, it is important to identify the contributions of trauma type, sex, race, and ethnicity to these associations. □

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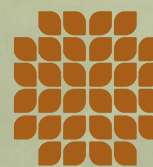
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# College Students Under Stress

» Brunhild Kring, MD, for the GAP, College Student Committee

Dr. Kring is Associate Director, Psychiatry Services, Counseling and Wellness Services, New York University, NY.

Providing psychiatric care for college students is different from treating other grown-ups. These emerging adults are in the midst of a tremendous emotional growth spurt and a leap of neurocognitive maturation. During this bewildering life transition, they often cannot articulate straightforwardly what bothers them. They appear mercurial: at times, they may speak in hyperbole and sound very dramatic. At other times, they shroud what ails them in secrecy because of embarrassment, fear, and hopelessness. Eventually, school stress and academic performance problems propel students to seek assistance. Mental health clinicians attending to this population need to keep an open mind and consider a host of differential diagnoses.

## CASE VIGNETTE

"Jerry" is a 19-year-old sophomore at a liberal arts college in the Northeast who wants to transfer to a prestigious business school. Two months into the fall semester and 1 week before midterms, Jerry reluctantly comes to the counseling service of his college. His dean accompanies him after receiving several alerts from professors about flagging academic performance.

Jerry unenthusiastically agrees to meet with a psychiatrist. He appears tired and says that he feels unmotivated. He is upset with his parents. As an only child, he feels pressured to succeed in business, but is hopeless about ever measuring up to their ambitions for him. He admits to relying on alcohol and marijuana daily for sleep initiation and anxiety management. When asked what would be most helpful to him, Jerry seems surprised by the question: "Everyone tells me that I have an attention problem; my roommate gave me Adderall, and it worked!"

The psychiatric conditions most frequently observed among college students are anxiety, depression, ADHD, substance abuse, and bipolar disorder. Eating disorders carry a high risk for medical comorbidity. Stress and anxiety may worsen during exam periods. Moreover, most psychiatric disorders have their onset during late adolescence and young adulthood. Students in crisis may present with suicidality or psychotic symptoms. Excessive use of alcohol and marijuana pose further health hazards.

When they hit a roadblock with their academic work students like Jerry, who initially reach out to the counseling service for urgent help, often request anxiolytic or stimulant medications for immediate relief. Emboldened by societal opinion and the stubbornly persistent

## CLINICAL HIGHLIGHTS

- Explore school stress in the context of the academic calendar
- Be aware of the normative crises of psychological development in young adults
- Assist the student with improving self-management skills: sleep, exercise, diet, relationships
- Evaluate the student's reliance on alcohol and drugs for symptom relief
- Consider onset of major psychiatric disorders in the differential diagnosis and treat accordingly
- Promote engagement in talk therapy and other nonpharmacological modes of treatment
- Engage parents for collateral information and support, if helpful and with the student's permission

urban myth that stimulants are "smart drugs," students expect our assistance with cognitive enhancement to prevail in competitive contexts.

Studies estimate that about half of cases with childhood onset of ADHD persist into adulthood.<sup>1</sup> However, because of the well-known rates of diversion and abuse, psychiatrists in college health services are wary of prescribing stimulants without a thorough diagnostic work-up.<sup>2</sup> An in-depth psychiatric interview, screening with the Adult ADHD Self-Report Scale, and a referral for neuropsychological testing are recommended by a fair number of counseling services before any prescriptions for stimulants are issued. Ideally, the psychiatric work-up should include a basic medical exam, EKG, and routine lab testing. Students are also made aware of the university's academic support resources.

Students who have come to rely on alcohol and marijuana during adolescence for alleviating anxiety, depression, self-esteem issues, camouflaging inter-personal conflict, and for fun are loath to give this up. They feel culturally emboldened to take advantage of the "medicinal" effects of the various marijuana strains. "I only smoke Blue Dreams," Jerry announces, referring to a variety of marijuana high in cannabidiol content with purported anxiolytic properties.

How best to treat comorbid mood, anxiety, and substance use disorders has been the subject of a longstanding debate. A review of recent evidence-based studies recommends the integrated treatment of co-occurring mood and substance use disorders to achieve a superior outcome.<sup>3</sup> The FDA has approved medications to address alcohol, opiate, and nicotine dependence, but the treatment for excessive marijuana use consists of psychosocial interventions.

Yet, psychiatrists should keep in mind that academic performance problems are a multifactorial phenomenon. They may be related to poor study habits, or academic under-prepared-

ness. This can create a loss of confidence and narcissistic injury among competitive peers or result in oppositional behavior towards authority figures. There can be a lack of motivation because the student's major was not his or her first choice. Students may be disappointed about not being accepted by their dream school and therefore not apply themselves.

Undergraduate students, in particular, face the difficult task of being away from home and adjusting to life on their own. Despite frequent electronic communication with parents and friends, they may be suffering from homesickness. Maintaining good self-care is surprisingly difficult to achieve. Sometimes the success or failure of the semester is in question because the student fails to establish a predictable sleep/wake cycle and get to class on time. Chronic sleep deprivation is a major contributor to lack of concentration and focus. Without the infrastructure their families provided, students need to learn to eat 3 nutritious meals a day rather than rely on unhealthy snacks. Similarly, in times of stress, it is a challenge to achieve a reasonable work/life balance and have time for leisure activities such as socialization with peers or exercise. Relationship difficulties and romantic disappointments loom large.

Back to Jerry, a fictionalized, albeit typical case. In the initial visit, the psychiatrist explores the nature of the concerns in a non-judgmental fashion, forms rapport with the student, and gains an understanding of his level of psychological maturity and ability to collaborate in making decisions about health care. Creating a shared language about what the basic issues are builds the foundation for a working alliance.

After meeting with the psychiatrist for several sessions, Jerry acknowledges his passion for creative writing. With encouragement, Jerry opens up to his parents. To his surprise, they respond supportively. His anxiety ebbs and he decreases his daily marijuana and alcohol consumption. He is discouraged from using his roommate's Adderall. He agrees to a referral for CBT for anxiety and insomnia. Jerry's parents are quite willing to participate in family sessions by conference call. The psychiatrist decides that treatment with medication does not seem necessary for now. □

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## Lifeline for Pregnant and Postpartum Women Who Are Drowning in Plain Sight



Nancy Byatt, DO, MS, MBA

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One in 7 women suffers from a mood disorder during pregnancy or in the first year postpartum.<sup>1</sup> It is imperative that we, as psychiatric providers, guide each woman to make thoughtful decisions that take into account the effects of the illness and the treatment on her and her baby. Depression, anxiety, and other psychiatric illnesses that occur during pregnancy and the postpartum period have deleterious effects on mom, her child, and her family.

### CASE VIGNETTE #1

"Sonja," a 26-year-old with a history of postpartum depression and panic disorder reports that she experienced severe postpartum depression and panic disorder within a month of giving birth to her 2-year-old son. The symptoms resolved shortly after she began taking 20-mg escitalopram daily. Three months ago, Sonja and her husband decided that they wanted to have another baby. Her psychiatrist told her that she had to discontinue the escitalopram before attempting to conceive. She followed his recommendations and the depression symptoms and daily panic attacks soon returned. Without the escitalopram, she is completely immobilized

and unable to function. She recently saw her psychiatrist, reported the symptoms and her inability to function and requested that he restart the escitalopram. He responded, "You will not take the escitalopram if you care about your baby." She left the psychiatrist's office feeling guilty and inadequate, and that she had no choice but to suffer for the sake of the baby she hoped to conceive.

Sadly, this is just one example of countless similar incidents that occur daily. As this case illustrates, we miss the opportunity to have a trans-generational impact by optimizing maternal mental health, which in turn affects infant and child health. It is a complete fallacy that a woman needs to ignore her mental health or suffer for her baby. Having a baby is extraordinarily challenging. The best thing a woman can do for herself and her baby is get the treatment that she needs and deserves. There are many safe and effective treatment options for pregnant women.

### Risks to mother and child

Although there can be adverse effects of psychotropics on (CONTINUED ON PAGE 24)

### ACTIVITY GOAL

To understand the risk differential of pharmacotherapy compared with no treatment during pregnancy and help women make treatment decisions before, during, and after pregnancy.



### LEARNING OBJECTIVES

At the end of this CE activity, participants should be able to:

- Rationalize the need for continued treatment for psychiatric illness during pregnancy
- Explain the risks involved when switching medications during pregnancy and how it affects the fetus
- Discuss the best options for treating psychiatric illness in pregnant women

### TARGET AUDIENCE

This continuing medical education activity is intended for psychiatrists, psychologists, primary care physicians, physician assistants, nurse practitioners, and other health care professionals who seek to improve their care for patients with mental health disorders.

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Program, the Perinatal Depression Advisory Board for the Janssen Disease Interception Accelerator Program, the Physician Advisory Board for Sage Therapeutics, and is a Council Member of the Gerson Lehrman Group. She also serves as a speaker for Sage Therapeutics.

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## Maternal Mood Disorders

Continued from page 23

the mother and fetus, there are inherent risks of the illness itself. If medications are discontinued in pregnancy, there is a high risk of illness relapse. The duration of and number of depressive episodes pre-pregnancy are the greatest predictors of the same for during pregnancy. Other risk factors include personal or family history of postpartum depression, history of mood changes related to hormonal contraception, and premenstrual dysphoric disorder. Medications should not be automatically discontinued due to pregnancy. It is critical to ask: “What could happen if my patient does not take her medication? How might her illness affect her ability to take of herself and her baby?”

The FDA’s A, B, C, D, and X categories for medicines used in pregnancy are extremely limited and misleading. For example, the risks of untreated illness are not included. Realizing this, the FDA developed a new approach to replace the risk categories and better support evidence-based decisions.<sup>2</sup> The new system, the Pregnancy and Lactation Labeling Rule, uses a narrative model that includes 3 sections on the prescription label for pregnancy-related information: (1) Pregnancy; (2) Lactation; and, (3) Females and males of reproductive potential. Each section summarizes risks to the fetus, illness-related considerations, and available safety data.

Because approximately 50% of pregnancies are unplanned, it is imperative to consider and discuss the possibility of pregnancy with all women of reproductive age. This should include discussing and documenting birth control and the current use of all medications and their risks—especially important with highly teratogenic medications, such as valproic acid. Being aware of interactions between hormonal contraceptives and mood stabilizers is crucial and also needs to be discussed. Some hormonal contraceptives decrease levels of anti-convulsant medications, such as lamotrigine. Conversely, ocarbazepine and topiramate can decrease the efficacy of hormonal contraceptives. Any discussions and documentation of preconception planning should also include recommendations for prenatal vitamins and folic acid.

### Depression

Depression during pregnancy is associated with poor health care use, increased use of substances, and poor maternal health care. It is also associated with poor birth outcomes, including low birth weight in preterm delivery. Children of women with maternal depression have also been found to be at increased risk of cognitive delays or behavioral problems.<sup>3,4</sup> Moreover, maternal suicide is a leading cause of death among postpartum women.<sup>5</sup> It is critical to educate women about the various options for treating depression during pregnancy. It is also essential that non-pharmacologic treatments and lifestyle changes be included in treatment planning (**Table**). Evidence-based psychotherapy, such as cognitive behavioral therapy and interpersonal psychotherapy, should be considered as first-line therapy when possible. However, many women will need a combination of psychotherapy and pharmacotherapy to achieve full symptom remission. Pharmacotherapy may be the only treatment option for women who do not have access to psychotherapy or who do not see the value of psychotherapy.

### CASE VIGNETTE #2

**"Melissa" is a 32-year-old with a history of severe depression who has 2 children. She is now 14 weeks pregnant. She is currently asymptomatic and taking 300-mg bupropion XL. She notes that she had been severely depressed to the extent that it has affected her functioning and her ability to parent. Once she started taking bupropion, the symptoms resolved. During a visit with her psychiatrist, she reported that she had Googled bupropion because she was concerned about the risks of taking it during pregnancy. As a result of her Google search, she believes that she should stop the bupropion and start sertraline. She notes that the information she found online indicated that sertraline is safer and the best option.**

How should her psychiatrist counsel her? Melissa’s fetus has already been exposed to bupropion. If bupropion is continued, the fetus will likely experience only a single exposure. While bupropion has less available reproductive safety data than the SSRIs and has been associated with a possible increased risk of congenital heart defects, it is important to consider the risk of switching medications during pregnancy.

### Table Things to consider during treatment planning for pregnant women

- Conduct an individualized risk-risk analysis that considers the risks of treatment and the risks of no treatment or undertreatment
- Use medications that are currently or have previously been effective (considering available reproductive safety information)
- Provide education about nonpharmacologic treatments
- Use lowest effective dose while avoiding undertreatment
- Minimize switching medications
- Monotherapy is preferable
- Be aware of the need to adjust dose as pregnancy advances
- Discourage stopping SSRIs prior to delivery

If her psychiatrist were to discontinue the bupropion and start sertraline, there is a risk of 3 exposures: her fetus is 14 weeks gestational age and has already been exposed to bupropion; switching would expose the fetus to a second medication (sertraline); and, sertraline may not be as effective as bupropion. Melissa could relapse and expose the fetus to illness. In general, pregnancy is not a good time to switch medications.

To avoid exposure to untreated or undertreated illness and more than one medication, it is best to continue medications with known efficacy. Moreover, the risks of untreated illness need to be considered because the risks of exposure to illness are often as or more important than the risks of exposure to the medication.

There may be a small risk of birth defects when taking antidepressants during pregnancy—the data for paroxetine are most concerning. These findings, however, are inconsistent and the absolute risk of birth defects is small; most meta-analyses have been reassuring.

Antidepressant use during pregnancy has been associated with transient neonatal symptoms. This is a self-limited syndrome that can occur in up to 30% of newborns exposed to antidepressants during pregnancy. It can present as irritability, tachypnea, and/or tremulousness. The syndrome is time-limited and resolves within days; in rare cases it can last 1 to 2 weeks. Discontinuing SSRIs in the third trimester has not been shown to decrease the risk of transient neonatal symptoms.<sup>6</sup>

Although the data are inconsistent, antidepressant use in pregnancy has also been associated with a small increase of risk (baseline rate of 1–2/1000 births) for persistent pulmonary hypertension (PPHN) in the newborn. While there may be a small increased risk (3–4/1000 with antidepressant use during pregnancy), the absolute risk of PPHN appears to be small and more modest than suggested by initial studies.<sup>7</sup>

Antidepressant use during pregnancy has also been associated with preterm labor and low birth weight; changes in IQ or language development have also been seen. However, depression itself has been associated with an increased risk of preterm birth and low birth weight as well as with changes in IQ or language development.<sup>8</sup>

Some studies suggest that the risk of autistic spectrum disorders in the offspring of women with psychiatric illness may be higher with exposure to antidepressants during pregnancy. However, other studies suggest that lack of antidepressant exposure increases the risk of autistic spectrum disorders. Overall, results from available studies do not suggest long-term neurobehavioral effects on children.

### Bipolar Disorder and Psychosis

The perinatal period is the time of highest risk for first onset or recurrence of bipolar disorder episodes. Bipolar disorder among perinatal women is associated with self-injury, substance use, disruption of mother-child bonding, suicide, and infanticide. Psychotic illnesses have been associated with increased risk of pregnancy complications, including cesarean deliveries, intensive care unit admissions, and higher neonatal morbidity. Moreover, bipolar disorder is the most potent, best-established risk factor for postpartum psychosis.

Lithium is considered the treatment of choice for patients with type 1 bipolar disorder who are pregnant or are of child-bearing age. Preconception levels can be used to guide the therapeutic range of lithium during pregnancy.

Lithium use during pregnancy has been associated with preterm labor, polyhydramnios, polyuria/polydipsia, and lithium toxicity. In addition, ba-



bies of mothers who are on lithium during pregnancy may be large for gestational age at birth, have cardiac and neural tube defects, neonatal adaptation symptoms, and changes in long-term neurodevelopment. More recent studies suggest that the risk of major cardiovascular anomalies, such as Ebstein's anomaly, is less than previously thought.

Women who take lithium during pregnancy should be monitored carefully by an obstetrician who is experienced in high-risk pregnancies. A 3D echocardiogram is needed at 16 to 18 weeks gestational age. Lithium should be continued during labor and delivery. To prevent lithium toxicity, patients should be well hydrated during labor and immediately post-partum. Postpartum, infant levels of lithium, thyroid-stimulating hormone, and renal function need to be checked. Consider decreasing the dosage to that of pre-pregnancy in the postpartum period.

Lamotrigine is often considered a first-line medication for women with type 2 bipolar disorder who are pregnant or are of child bearing age. Preconception lamotrigine levels can be used to guide dosing throughout pregnancy with the goal of maintaining the therapeutic preconception level. Postpartum, lamotrigine dose should be decreased to the preconception level.

While early reports suggested an increased risk of cleft lip and palate with first trimester exposure, more recent data are reassuring—lamotrigine has not been associated with an increased risk of neurodevelopmental disorders. However, the following limitations need to be considered before prescribing lamotrigine:

- It can increase cycling at higher dosages
- It needs to be titrated slowly, thus is not ideal for acute treatment
- It needs to be taken consistently because of the need to re-titrate slowly if not taken consistently

Antipsychotics are often indicated for the treatment of mood disorders with or without psychotic features or primary psychotic illnesses. It is important to use antipsychotics that are currently or have previously been effective, while taking into account the relative risk of the medication.

No single malformation has been consistently reported with antipsychotics, although some data suggest a possible association with septal defects. In addition, antipsychotic use during pregnancy has been associated with pre-term labor, low and high birth weight, increased risk of postnatal adaptation syndrome, and increased neonatal intensive care unit stays.

There are more data for typical than for atypical antipsychotics. Typical antipsychotics have been associated with a small increase in risk for transient abnormal muscle movement; however, limited long-term data are reassuring. Compared with high-potency agents, low-potency agents have been more strongly associated with teratogenic effects. Atypical antipsychotics have been associated with gestational diabetes and obesity; but the limited data from studies that followed women for up to 12 months are reassuring.<sup>9</sup>

## Conclusion

Anticonvulsants such as carbamazepine and oxcarbazepine have been associated with neural tube defects and cognitive deficits among offspring and should be avoided. Valproic acid is highly teratogenic and should be avoided by pregnant women. Supplementation with folic acid is required for women taking an anticonvulsant during pregnancy.

Changes in absorption, distribution, metabolism, and elimination that occur in pregnancy can lower psychotropic drug levels and possibly treatment effects, particularly in mood stabilizers, during the perinatal period. Vigilant monitoring of clinical symptoms is needed for all classes of medications during pregnancy and the postpartum period to assess for symptom recurrence and the need for dose adjustments. Mood stabilizers also require therapeutic drug monitoring in combination with clinical monitoring.

When considering treatment options for pregnant women, there's no such thing as no exposure: there is no risk-free choice. We need to work with our patients to assess the risks of untreated psychiatric illness and the risks and benefits of medication treatment. A detailed and individualized discussion of the risks, benefits, alternatives to medication treatment, and the risks of untreated psychiatric illness is needed. Careful consideration and discussion of risks of treatment and under-treatment or no treatment can help decrease the risk of decompensation during pregnancy or the postpartum period. And, it will mitigate negative effects on birth, infant, and child outcomes associated with untreated psychiatric illness. □

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Post-tests, credit request forms, and activity evaluations must be completed online at [www.cmeoutfitters.com/PT](http://www.cmeoutfitters.com/PT) (requires free account activation), and participants can print their certificate or statement of credit immediately (80% pass rate required). This Web site supports all browsers except Internet Explorer for Mac. For complete technical requirements and privacy policy, visit [www.neurosciencecme.com/technical.asp](http://www.neurosciencecme.com/technical.asp).

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### Adjustment Disorders

James J. Strain, MD

Expiration Date: July 20, 2019

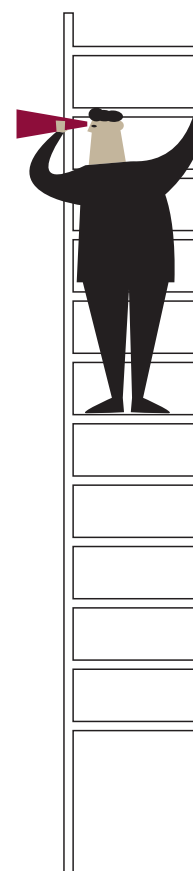
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### Traumatic Brain Injury and Psychosis: Clinical Considerations

Robert van Reekum, MD, FRCPC, Emma Alaine van Reekum

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Northwest Permanente, P.C. is currently seeking **BC/BE Adult Psychiatrists to staff our facilities throughout the Portland Metro area and Salem, Oregon as well as in Longview-Kelso and Vancouver, Washington.** The positions are outpatient with some virtual care, consultations occurring in our ERs and require compatibility with physicians in the primary care setting. Candidates should have experience in medication consultation, crisis intervention, evidence-based psychiatric treatments and psychiatric consultations. **We also have openings for Inpatient Psychiatrists at our Brookside Center in Portland, Oregon.**

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- Write orders for admission, transfer, discharge, medications, seclusion, and suicide precautions
- Provide individual and group psychotherapy

We currently have opportunities at the following facilities:

- California Health Care Facility – Stockton
- California Medical Facility – Vacaville
- Salinas Valley State Prison – Soledad

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## ARIZONA


**Psychiatrist Position  
Arizona State Hospital  
Phoenix, AZ**

The Arizona State Hospital has an opening for an adult BE/BC psychiatrist for full time inpatient duties. The duties revolve around managing 18-23 inpatients, who have been admitted for long term treatment. The psychiatrist can expect to do 1-2 admissions per month on average. Call is from home, and the hospital does not routinely do after hours or weekend admissions. Call is electively shared among the psychiatry group, and if the psychiatrist does not wish to routinely participate in the call system, they can expect to be assigned on average 1-2 times per month. Call is compensated as a separate stipend. The hospital functions on a "co-attending" model, with primary care practitioners providing routine medical care. Benefits are excellent, and include:

- Yearly compensation 215K BE, 220K BC
- Health insurance \$115 per pay period for family PPO plan (\$47 for individual)

- Long Term Disability included
- Enrollment in the defined benefits retirement plan, the Arizona State Retirement System, which guarantees a retirement income after vestiture
- 21 days of annual leave, 12 days of sick leave, and 10 paid holidays

 For more information, contact  
Steven Dingle, M.S., MD., Chief Medical  
Officer at [steven.dingle@azdhs.gov](mailto:steven.dingle@azdhs.gov),  
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## CALIFORNIA


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Salary is \$290,000 with the opportunity for additional paid shifts for night and weekend coverage. Benefits include a generous contribution of \$36,500 per full year to a 401K plan plus individual pretax deferrals up to \$18,500. We offer \$300 towards health insurance and a cafeteria plan that allows additional health and dental expenses to be pretax. There is also \$5,000 in reimbursements for professional expenses.

**Please contact Keith Gordon, MD for  
additional information at**
[GordonK@armc.sbcounty.gov](mailto:GordonK@armc.sbcounty.gov)

Please include your CV in the inquiry

Outpatient Adult and Child Psychiatrists are needed for Stanislaus County Behavioral Health & Recovery Services, in the Central Valley less than two hours from San Francisco and Yosemite.

Recovery-oriented treatment provided in a multidisciplinary setting with friendly and dedicated staff members. Recently revised rates with full malpractice coverage and pension plan (PARS) as a Personal Service contractor with an income potential of over **\$325 K per year for adult psychiatrist and over \$355 K per year for child psychiatrist** for F/T work.

P/T options and the opportunity to combine Tele-Psych with limited onsite work are also available. Excellent work environment with NO Call Requirement, lower than average case load and comprehensive nursing & ancillary support makes this a very pleasant and rewarding opportunity. J 1 applicants are welcome.

 Fax CV to Uday Mukherjee, MD at  
(209) 558-4326 or  
Email: [umukherjee@stanbhhs.org](mailto:umukherjee@stanbhhs.org)

**San Diego-Coastal Psychiatric Medical Associates is looking for an adult psychiatrist and a child and adolescent psychiatrist to join a rapidly growing group practice. Please contact Robert J. Solomon, M.D. at (760) 753-5283 or [robertjaysolomon@yahoo.com](mailto:robertjaysolomon@yahoo.com).**



PACIFIC COAST PSYCHIATRIC ASSOCIATES has openings for Adult, Child and Adolescent Psychiatrists (full and part-time). Our physicians have the opportunity to practice both therapy and med management without restrictions in our San Francisco, Lafayette, and Los Angeles (in the West Hollywood, Beverly Hills, Century City and Culver City area) offices. We are a collaborative practice of psychiatrists and therapists with full-time office staff to provide complete administrative support.

Founded in California's technology center, we benefit both internally and externally from the industry's advancements. Internally, our doctors' familiarity with EMRs, online scales/charts and electronic prescriptions is an important component of our culture. Externally, our patients have the ability to schedule appointments through our website, manage their accounts through the patient portal, and meet with their provider over the internet (via telepsychiatry or tele-health appointments). We strive to simplify records management for our patients, our providers, and the environment.

Our competitive compensation includes:

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**Psychiatrist Position****J-1 Visa Opportunity in California**

Imperial County Behavioral Health Services is currently recruiting for a full time psychiatrist. Imperial County is located 90 miles by freeway to the city of San Diego to the west, and 90 miles to Palm Springs to the north. Located in a rich farming area, Imperial County has a population of 180,000 and borders with Yuma, Arizona and with the cosmopolitan city of Mexicali, Mexico population 1.2 million. San Diego State University maintains a satellite campus in Calexico and there are a number of private and public universities located in Mexicali, the state capital of Baja California Norte. Imperial County's location and diversity make it the perfect place for a psychiatrist to relocate under the J-1 Visa program or for any reason.

The position pays a highly competitive salary, including health benefits for you and your family, and requires no hospital work and minimal after hours work freeing you up for more leisurely activities.

The successful candidate diagnoses and treats patients with mental, emotional, and behavioral disorders. Qualified candidate must have CA medical license or ability to obtain.

Send CV to Imperial County Behavioral Health Services, 202 North 8th Street, El Centro, CA 92243.

**J-1 applicants welcome.**

**For additional information, please contact:**

Kristen Smith (442)265-1606  
kristensmith@co.imperial.ca.us



The doctors of **TRADITIONS BEHAVIORAL HEALTH** are the largest provider of MD psychiatric services to adult populations in institutional and community based programs in California. We provide services to the seriously and persistently mentally ill and have openings in the San Francisco Bay Area, Santa Barbara, San Diego and Los Angeles. Overall we plan to add 50 more Fulltime psychiatrists in California to bring our medical staff team to 400 psychiatrists. **Our packages vary from a minimum of \$300,000 per year plus \$10,000 in bonuses and a benefit package valued at approximately \$90,000, to up to \$500,000, for the industrious physician.** Our generous benefit package includes almost **7 weeks paid time off per year.** If you are creative and think outside the box, if you value diversity and cultural competency, if you like innovative programs that are patient driven, using a rehabilitative, rather than illness model, if you want more time to work with patients, to get the best results, then TBH is the company for you. To learn more about the specific job openings and salary and benefit packages, check out our Website at:

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As the largest public health care system in northern California, we offer comprehensive healthcare resources to a large and diverse patient population. Psychiatrists are part of a robust team of staff that work in collaboration with other medical specialties to provide integrated health care to patients.

Psychiatrists are eligible for numerous benefits including 7 weeks of annual leave, 1 week of educational leave, 12 holidays, \$4500 educational funds, health benefits, life insurance and CalPERS retirement plan.

If you are interested in working in a dynamic and collegial work environment, please submit a CV and letter of interest directly to:

Dr. Tiffany Ho,

Behavioral Health Medical Director:

[tiffany.ho@hhs.sccgov.org](mailto:tiffany.ho@hhs.sccgov.org)

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BE or BC psychiatrist needed. Following locations have immediate openings:

- **Camarillo, CA:** 16-20hrs per week. Pay Rate: \$182 - \$205 per hour (Contractor)
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- **San Bernardino/Fontana, CA:** Schedule: 40hrs per week. Pay Rate: \$359,840. Benefits eligible.
- **San Jose, CA:** Schedule: 14 hours per week Pay Rate: \$180 - \$205 per hour (Contractor)
- **Santa Ana, CA:** Schedule: 40hrs per week. Pay Rate: \$299,332 per year. Benefits Eligible.
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**To find out more, please contact  
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- Provide no more than two clinical service days to understand the patient population and identify process enhancements
- Guide clinical care for Physicians, Nurse Practitioners, Pharmacists, Nurses, Therapists, and other staff

This position will be based out of our Pleasanton corporate headquarters located near BART and close to downtown Pleasanton.

For further information, please contact  
Cedric Hurskin at:  
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## CONNECTICUT

Psychiatrist to work FT or PT for Behavioral Health Consultants, LLC, a private outpatient clinical and consulting practice. The successful candidate would join a staff of 13 non-medical clinicians offering services across a wide range of diagnostic categories. BHC is part of an ACO in the South Central CT region and is located near New Haven. Please contact Arnold Holzman, Ph.D. 203-288-3554, ext 12 or adholzman@bhcservices.com. EOE

## FLORIDA



**Florida Licensed BE/BC psychiatrist and/or psychiatric ARNP needed for a Joint Commission Accredited community mental health center and psychiatric hospital. Excellent benefits and location (West Palm Beach and Belle Glade, FL).**

**Contact: Diana Kowsari, Program Manager, Jerome Golden Center for Behavioral Health, 1041 45th Street, West Palm Beach, FL. Phone: (561)-383-5917; Fax (561) 514-1239**



Meridian Behavioral Healthcare, Inc. is a CARF accredited community mental healthcare facility located in the heart of Florida. Currently, we have full time position Staff Psychiatrist position available with an excellent salary and benefits package. Looking for someone who can work with a flexible schedule – preferably Adult and Child, with the mixture of inpatient and outpatient to be discussed. Meridian has been a part of the lives of thousands since 1972; providing a safety net for those in crisis. Since then, Meridian has expanded to 16 sites across Central Florida, touching over 22,000 lives through over 325,000 direct care visits a year. Gainesville is home to the University of Florida and serves as the cultural, educational and commercial center for the north central Florida region.

For more information, contact:

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- Weekend Call 1:4 weekday call 1:5
- Current staff includes 2 NP's and 3 Psych-Hospitalists
- This is a Hospitalist position with expectations of teaching participation.

The unit consists of 42 inpatient beds - 32 Adult and 10 Gero-Psych Inpatient programming consists of an Adult unit, Geriatric unit, STAR (Stress, Trauma, Addiction, Recovery) unit specializing in the treatment of PTSD and a new, busy ECT service. Coliseum Center for Behavioral Health in Macon, Georgia provides mental health services to assist adults with psychiatric disorders in a safe, nurturing environment. For over 30 years, our mental health specialists and psychiatrists

have provided individualized treatment plans for our patients, giving them the best chances of a full recovery and stability.

Macon, GA is only an hour drive from Atlanta! It is the 5th largest city in Georgia, situated in the heart of the state, and is the perfect sized city offering many amenities of a larger city with a small town feel. Here you can experience the change of seasons, enjoy outdoor activities year-round and enjoy beautiful lakes and numerous parks. Macon also boasts great shopping with major department stores, as well as, unique boutiques. Macon is a great place for music lovers as the city hosts many concerts throughout the year. Macon is located off of I-75 and I-16, making it easily accessible for travel.

Please contact: Melissa Sampson  
(904) 702-6627

melissa.sampson@hcahealthcare.com

## ILLINOIS

### CHICAGO!

**Horizon Health** is seeking a **Medical Director** for a 12-bed Geriatric and 30-bed Adult inpatient psychiatric service line in metro Chicago. The Medical Director provides program administration and oversight services regarding service line policies, practice, development, compliance, and performance improvement. Also provides training, supervision, and consultation to staff. Previous Medical Director experience and Board Certification required. Excellent compensation. For more information contact:

Mark Blakeney,  
Voice: 972-420-7473,  
Fax: 972-420-8233;  
email: mark.blakeney@horizonhealth.com  
EOE

### Assistant/Associate Professor of Clinical Psychiatry

The Department of Psychiatry and Behavioral Medicine at the University of Illinois College of Medicine at Peoria is recruiting full-time faculty positions at the rank of Assistant or Associate Professor to join our expanding department. Two Clinician-Educator (CE) positions and one Psychiatry Residency Program Director (PD) position are open. Competitive applicants to the CE positions should value providing and teaching high-quality patient care and supporting the scholarship efforts of residents and medical students. The PD position is a planned changeover in leadership and available to applicants with experience and interest in educational administration and quality teaching. Highly competitive salary and benefits are commensurate with rank.

Responsibilities for the CE position include leading an interdisciplinary general psychiatry adult inpatient teaching unit composed of residents, medical students, nursing, social work and support staff. The PD position includes directing our 16-resident, ACGME-approved training program, promoting a culture of excellence, resident recruitment, teaching and resident evaluation. Other duties for both positions will be tailored to the interest of the applicant and include opportunities in adult and child outpatient clinics, partial hospitalization program, elec-

troconvulsive therapy (ECT), transcranial magnetic stimulation (TMS), community outreach, college student mental health, geriatric and forensic psychiatry, among others.

Faculty members have protected time to pursue professional interests including clinical or educational program development or research. Our department values a positive, collegial culture and supports the growth, development and advancement of its members. The department has high faculty and resident satisfaction and low turnover.

Peoria and the surrounding Central Illinois area offer an attractive mix of small town charm and big city offerings. The large, diverse and supportive medical community is the area's top employer. Peoria offers a diverse population, entertainment, arts, cuisine, low cost-of-living, excellent schools and an array of recreational activities with convenient access to larger cities such as Chicago, St. Louis and Indianapolis.

To inquire confidentially about a position, please contact Dr. Timothy Bruce, Search Chair, at (309) 495-1647 or tjbruce@uicomp.uic.edu.

Minimum requirements: graduation from an ACGME-approved psychiatry residency training program, board certification or board eligibility in general psychiatry and eligibility for an unrestricted Illinois medical license. UIC is an EOE/AA/M/F/Disabled/Veteran employer. For fullest consideration, please apply by April 5, 2018 at the following link:  
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The University of Illinois may conduct background checks on all candidates upon acceptance of a contingent offer. Background checks are performed in compliance with the Fair Credit Reporting Act.



Advanced Psychiatry of Elgin is a family-focused practice in a highly desirable suburb, 20-25 minutes from Chicago. We strive to provide the highest quality of care to help patients make positive changes in their lives. We value, respect, and embrace the uniqueness and diversity of all individuals.

We are currently looking for a board-certified psychiatrist to join our highly trained staff. This position works in an outpatient practice and must be able to provide patients with emotional tools and methods for recovery.

Duties and requirements:

- Provide services to children and adults with compassion and empathy
- Must be comfortable evaluating, diagnosing, and treating all age groups to determine treatment and recovery plans
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## HAWAII



### HAWAII STATE HOSPITAL ASSOCIATE ADMINISTRATOR, CLINICAL SERVICES, Oahu

The Hawai'i State Hospital (HSH) is the only publicly-funded, state psychiatric hospital in Hawai'i. HSH provides adult inpatient psychiatric services, is part of the Department of Health (DOH) Adult Mental Health Division (AMHD) and is accredited by The Joint Commission.

The Associate Administrator reports to the HSH Administrator and serves on the hospital executive team.

The primary purpose of this position is to provide clinical and administrative supervision of the following units: Psychiatry Services, Social Work Services, Clinical Psychology Services, Psychosocial Rehabilitation, Occupational Therapy, Recreational Therapy, Medical Services, State Operated Specialized Residential Services, Clinical Safety, Forensics Services and ancillary services including pastoral care. The Associate Administrator of Clinical Services (AACS) is responsible for the development, implementation and coordination of policies and procedures that provide for the development and maintenance of effective programming and services.

This is a non-civil service exempt position. Applicants must have successful completion of one of the following courses of study in an accredited college of university: 1. Psychiatry – Possession of a M.D. or D.O. degree or equivalent and completion of accredited psychiatric residency required. Graduate from an approved medical school in the United States or Canada or graduate from a foreign medical school and certification by the Educational Council of Foreign Medical Graduates (ECFMG). Completion of one year of approved internship and four years of psychiatric residency training. Board certification from the American Board of Psychiatry and Neurology. 2. Nursing – Possession of a Master's Degree in nursing.

In addition, applicant must have Specialized Experience: Three and one-half years of progressively responsible professional work experience in a psychiatric inpatient program concerned with directing the development, implementation and coordination of treatment and rehabilitation programming and services.

Supervisory Experience: A minimum of two (2) years of supervisory experience in an inpatient program setting, including performance evaluation and labor relations.

This position must be licensed in accordance with Hawaii Revised Statutes as applicable to the discipline of the incumbent.

For more information or to apply for this position please forward your resume and salary requirements to Jodi Polendey, Human Resources Specialist at Hawaii State Hospital, 45-710 Keaahala Road, Kaneohe, Hawaii 96744 or email [jodi.polendey@doh.hawaii.gov](mailto:jodi.polendey@doh.hawaii.gov)

## INDIANA



Meridian Health Services Corp. seeks Psychiatrist in Muncie, IN, Indianapolis, IN, and West Lafayette IN to provide both inpatient and outpatient psychiatric care for mainly adult patients. Requires MD or foreign equiv.; current & valid IN Physician License by 7/1/18; compl. of 4 yr. residency in Psychiatry by 7/1/18; & Bd. Certified or Bd. Eligible in Psychiatry by 7/1/18. Must have current auth. to be empl'd in U.S. w/out emp. sponsorship.

Email resumes to Tammy Hargrave,  
Meridian Health Services Corp.,  
[Tammy.Hargrave@meridianhs.org](mailto:Tammy.Hargrave@meridianhs.org).  
Refer to Job #0014.

## KENTUCKY

### TELEMEDICINE COVERAGE AVAILABLE!

**Horizon Health** is seeking a **Psychiatrist** to provide coverage for a 12-bed Geriatric inpatient psychiatric program in central Kentucky. The Psychiatrist will provide rounding and treatment on patients for the inpatient program, as well as program administration and oversight services regarding service line policies, practice, development, compliance, and performance improvement. On-site coverage preferred, but telemedicine is available and will be considered for daily rounding and call coverage. Excellent compensation. For more information contact:

Mark Blakeney,  
Voice: 972-420-7473,  
Fax: 972-420-8233;  
email: [mark.blakeney@horizonhealth.com](mailto:mark.blakeney@horizonhealth.com)  
EOE

## MARYLAND

### Featured position: Assistant Medical Director

**MHM Services works with Maryland Department of Public Safety and Correctional Services and since 2005 we have provided mental health to this underserved population. Several new positions have been added in Baltimore and Jessup!**

Join MHM and experience the benefits of a career in correctional mental health.

**We also have Full-time and Part-time Staff positions**

**Why explore a career in correctional healthcare?**

- **Regular hours**
- **NO insurance paperwork or managed care hassles**
- **Reasonable caseloads and diverse patient population**
- **Secure and supportive work environment**
- **The opportunity to make a real difference in the lives of those who need it most!**

**In addition to rewarding work and highly competitive salaries, we offer a comprehensive benefits package for employees working 30 hours per week or more.**

- **Company-sponsored health, life, dental**
- **& disability insurance**
- **Generous time off, plus paid holidays**
- **401(k) plan with employer match**
- **Paid malpractice insurance**
- **CME reimbursement and additional paid days off**
- **Flexible spending accounts for health-care and dependent care**
- **Same sex domestic partner benefits**



## MASSACHUSETTS

### Psychiatrists Opportunities in MA

**Cambridge Health Alliance (CHA)**, a well-respected, nationally recognized and award-winning public healthcare system is seeking full-time/part-time Psychiatrists in our Inpatient and Outpatient services. CHA is a teaching affiliate of both Harvard Medical School (HMS) and Tufts University School of Medicine. Our system is comprised of three hospital campuses and an integrated network of both primary and specialty outpatient care practices in Cambridge, Somerville and Boston's Metro North Region.

#### Practice Highlights

- CHA offers a wide variety of inpatient and outpatient Psychiatry services for all ages, including the Psychiatric Emergency Service within the CHA Cambridge Hospital emergency department.
- We are proud to offer a collaborative practice environment with an innovative clinical model. This allows our providers to focus on patient care and contribute to community health and primary care innovation projects.
- Fully integrated electronic medical record (EPIC) is utilized.
- Applicants should share CHA's passion for providing the highest quality care to our underserved and diverse patient population.
- CHA is a teaching affiliate of Harvard Medical School (HMS) and academic appointments are available commensurate with medical school criteria.
- CHA offers competitive compensation and a comprehensive benefits package including health and dental insurance, 403b retirement accounts with matching, generous PTO, CME allotment (time and dollars) and much more.

If you are interested in making a difference, please contact us!

#### How to Apply

Qualified candidates may submit CV to Fatema Khorakiwala, Provider Recruiter at [fkhorakiwala@challiance.org](mailto:fkhorakiwala@challiance.org) or visit our

website [www.CHAproviders.org](http://www.CHAproviders.org). CHA Provider Recruitment Department can be reached by phone at (617) 665-3555 or by fax at (617) 665-3553.

*CHA is an equal opportunity employer and all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability status, protected veteran status, or any other characteristic protected by law.*

## MISSOURI



**Compass Health**, is a large non-profit health system delivering Behavioral Health services in multiple settings, both inpatient and outpatient in forty-nine Missouri counties. We have immediate openings for full and part-time Psychiatrists in multiple locations in Missouri. Candidates must have MD or DO degree, be ABPN board-certified or eligible in Psychiatry and possess or obtain a Missouri license. We offer a competitive compensation and benefit plan.

Apply online at  
[www.compasshealthhome.org](http://www.compasshealthhome.org)  
or send your CV to  
[cgrigg@compasshn.org](mailto:cgrigg@compasshn.org).

Candidates with J-1 or H1-b visa status are welcome to apply.  
EOE

## NEW JERSEY

**Two Openings: BAYONNE- CONSULTATION LIAISON POSITION and JERSEY CITY-OUTPATIENT POSITION** - Full-time employment with benefits through Carepoint Health.

Please call for details. Terry Good, 804-684-5661; [terry.good@horizonhealth.com](mailto:terry.good@horizonhealth.com);  
Fax: 1-804-684-5663. EOE



Pediatric Psychiatry – Outpatient  
Consultation Position  
Full Time \* Multiple locations  
in New Jersey

Hackensack Meridian Health is seeking a Board Certified/Board Eligible Child and Adolescent Psychiatrist to join this growing team. With 4 hospitals in the top 10 ranking in New Jersey, this is an outstanding opportunity to join the area's largest healthcare network.

This opportunity is an outpatient consultation position working with the Pediatric Psychiatry Collaborative Hub Teams (social worker, case manager, data analyst), to provide consultation to Pediatricians and also directly to families and children. The ideal candidate will work collaboratively with Pediatricians in our statewide collaborative hubs to provide comprehensive patient care.

Learn more about Hackensack Meridian Behavioral Health Services at:  
<https://www.hackensackmeridianhealth.org/services/behavioral-health/>  
**Highlights:**



- Academic Affiliations with the new Seton Hall - Hackensack Meridian School of Medicine.
- Collaborations among multiple sites (statewide).
- Call is not required.
- Outpatient/Consultative setting.
- Competitive Salary.
- Comprehensive Benefits Package.

#### Duties and Responsibilities:

- Provide consultation support to Primary Care Pediatricians (PCPs) via telephone.
- Document consultations according to program guidelines.
- Provide screening and treatment services to patients referred by the PCPs according to program guidelines.
- Document treatment and screening services provided.
- Participate as required and as available in weekly Service Hub conference calls.
- Participate in educations of Pediatricians as determined in conjunction with the Program Co-Principal Investigators.

**For immediate consideration, please submit your CV to:**  
**Renee.Theobald@HackensackMeridian.org**

**or contact Renee Theobald at 732.751.3597.**

As the area's premier provider, Hackensack Meridian Behavioral Health Services has provided comprehensive mental health and substance abuse services to the residents of Monmouth, Ocean, and Middlesex Counties

for over forty years. Hackensack Meridian Health is dedicated to providing outstanding Behavioral Health Services to all members of our communities.

Hackensack Meridian Health is a leading not-for-profit health care network in New Jersey offering a complete range of medical services, innovative research, and life-enhancing care aiming to serve as a national model for changing and simplifying health care delivery through partnerships with innovative companies and focusing on quality and safety.

**HACKENSACK MERIDIAN HEALTH**  
[www.hackensackmeridianhealth.org](http://www.hackensackmeridianhealth.org)  
*An Equal Opportunity Employer M/F/D/V*



#### PSYCHIATRY OPPORTUNITIES New Jersey

**Hackensack Meridian Health** is a leading not-for-profit health care network in New Jersey offering a complete range of medical services, innovative research, and life-enhancing care aiming to serve as a national model for changing and simplifying health care delivery through partnerships with innovative companies and focusing on quality and safety.

As the area's premier provider, **Hackensack Meridian Behavioral Health Services** has provided comprehensive mental health and substance abuse services to the residents of

Monmouth, Ocean, and Middlesex Counties for over forty years. We are currently accepting applications for Psychiatrists to join our Mental Health and Addiction Interdisciplinary Teams in the following positions:

- **Consultation Liaison Psychiatrist** – Jersey Shore University Medical Center-Neptune, NJ
- **Geriatric Psychiatry** – Private Practice setting with Opportunity to teach Psychiatry Residents, Ocean County, NJ
- **Staff Psychiatrist** – Riverview Medical Center, Red Bank, NJ
- **Medical Director of Adult Inpatient Unit** – Riverview Medical Center, Red Bank, NJ
- **Outpatient Psychiatry** – Bay Behavioral Health – Old Bridge, NJ
- **Staff Consultation** – Hackensack Behavioral Health – Hackensack, NJ

In addition to our collegial work environment, we offer a highly competitive compensation package which includes: medical/dental plans, 403(b) retirement plan, and relocation assistance.

**For immediate consideration, please contact Renee Theobald, at:**  
**Renee.Theobald@hackensackmeridian.org**  
**or call: 732 751-3597.**

#### HACKENSACK MERIDIAN HEALTH

[www.hackensackmeridianhealth.org](http://www.hackensackmeridianhealth.org)

*An Equal Opportunity Employer M/F/D/V*

## NEW YORK

### PSYCHIATRISTS & PSYCH NURSE PRACTITIONERS

#### CONSULTATION SERVICES IN LONG TERM CARE (NH, SNF)

#### NEW YORK CITY & WESTCHESTER COUNTY

Part Time / Full Time / Per diem

Excellent salaries, flexibility, autonomy, no call, comprehensive benefits.  
 J-1 & H-1B Visa Waiver

Send CV to [recruitment@medcarepc.com](mailto:recruitment@medcarepc.com)  
 Fax: (718) 239-0032  
[www.medcarepc.com](http://www.medcarepc.com)

**OSWEGO, NY – Great Work/Life Balance**  
**- College Town on Lake Ontario – 20 Minutes from the Northern Suburbs of Syracuse** – Outdoor enthusiasts' paradise: numerous lakes; skiing options close by; 40 minutes from the Thousand Islands; festivals and concerts every weekend throughout the summer. Seeking an additional Psychiatrist to work on a 28-bed adult inpatient psychiatric unit in the Oswego Hospital. Work with a great group of people in a very supportive hospital. Offering salaried position with benefits.

Please contact **Terry B. Good, Horizon Health**, at **804-684-5661**,  
 Fax#: 1-804-684-5663;  
 Email: [terry.good@horizonhealth.com](mailto:terry.good@horizonhealth.com).  
 EOE

**(203) 523-7026**



#### Adult Outpatient Psychiatrists – NYC Suburbs

The Northwell Department of Psychiatry and Behavioral Health Service Line are seeking Board Eligible/Board Certified Psychiatrists to join our newly-established *Behavioral Health Group Practice (BHGP)* locations located on Long Island, NY.

The BHGP opened in August 2015 to meet the extraordinary demand for patients and families seeking access to psychiatric care that accepts commercial insurance. This pioneering initiative now seeks to bolster its staff with additional psychiatrists motivated to function in a progressive, private practice like environment that marries efficiency and quality, and encourages paid incentive activity during a typical work day. Psychiatrists work in collaboration with on site therapists to ensure high quality, coordinated care. The BHGP serves a diverse ambulatory patient population with varied diagnoses. Our clinicians work closely with our affiliated primary care practices.

The BHGP is connected to our Health System's flagship behavioral health facility, The Zucker Hillside Hospital (ZHH). ZHH has been named one of the nation's top psychiatric facilities by *US News and World Report*, and has an 87-year tradition of pioneering clinical, research and teaching programs for psychiatric residents and fellows, psychology trainees, and medical students – now rotating from the Hofstra-Northwell School of Medicine. Additionally, we will serve as a training site for NP and PA students.

Long Island, NY, a suburb of New York City, is known for its diverse communities, educational opportunities and leisure activities. Throughout the Island, you will encounter breathtaking stretches of the Atlantic Ocean or Long Island Sound, recreational parks and nature preserves, historical landmarks, and excellent school systems. Highlight like the Hamptons and Montauk Point, Jones Beach, Long Beach, Fire Island, dozens of museums, bike paths, and emerging wineries are all within reasonable driving distances of our facilities.

We offer a highly competitive compensation with productivity bonuses and excellent benefits along with working in a collegial atmosphere. Academic appointment with the *Hofstra North Shore – Northwell School of Medicine* is commensurate with credentials and experience.

To learn more and apply, please send your CV to [OPR@northwell.edu](mailto:OPR@northwell.edu)  
 EOE M/F/D/V

# Psych Times



**Jacobi Medical Center (JMC)** is a modern, state-of-the-art, Level 1 Trauma Center located in an attractive and safe residential Bronx neighborhood just 20 minutes north of Manhattan. It is a North Bronx Healthcare Network hospital affiliated with North Central Bronx Hospital and a teaching site and academic affiliate of the Albert Einstein College of Medicine. It offers a full continuum of acute care inpatient and outpatient services in diverse Medical and Surgical specialties, including Psychiatry. The Department of Psychiatry has 89 Adult Acute Inpatient beds, a Comprehensive Psychiatric Emergency Program (CPEP), a Consultation-Liaison Service, an Adult Ambulatory Practice, and a Community-Based Assertive Community Treatment Program. The department employs evidenced-based best practices in providing the highest quality care to its patients, in a patient-centered approach that is respectful of their individuality, culture, and community.

**North Central Bronx Hospital (NCB)** is a modern, state-of-the-art community hospital located in an attractive and safe residential Bronx neighborhood just 20 minutes north of Manhattan. It is a North Bronx Healthcare Network hospital affiliated with Jacobi Medical Center and a teaching site and academic affiliate of the Albert Einstein College of Medicine. It offers a full continuum of acute care inpatient and outpatient services in diverse Medical and Surgical specialties, including Psychiatry. The NCBH Department of Psychiatry has 70 Adult and Geriatric Acute Inpatient Beds, a Partial Hospital Program, Psychiatric Emergency Consultation-Liaison Service, an Adult Ambulatory Practice, and a community-based Assertive Community Treatment Program. The department employs evidenced-based best practices in providing the highest quality care to its patients, in a patient-centered approach that is respectful of their individuality, culture, and community.

**Jacobi Medical Center & North Central Bronx Hospital** are currently accepting applications and referrals for the following opportunities:

- **Inpatient Attendings (JMC and NCB)**
- **Attending Psychiatrist ER-CPEP (JMC)**
- **Inpatient Unit Chief (JMC)**
- **Attending Psychiatrist ER (NCB)**
- **Moonlighting opportunities also available! (JMC and NCB)**

An academic appointment at Albert Einstein College of Medicine is offered. We offer a generous income package along with outstanding benefits, opportunities for advancement, retirement plan, malpractice, and much more!!

For immediate confidential consideration, please contact:  
 Carmen Velez – Office of Physician Recruitment: [Velezc@pagny.org](mailto:Velezc@pagny.org)  
 646-494-7559

[www.pagny.org](http://www.pagny.org)

Physician Affiliate Group of New York [PAGNY] is comprised of over 3,600 physicians and healthcare professionals who provide services to NYC Health + Hospital, the largest public healthcare system in the United States. Our practitioners are highly skilled professionals with outstanding credentials who deliver the highest level of quality healthcare to patients throughout New York City.

EOE M/F/D/V





Chairperson, Department of Behavioral Health and Psychiatry: Staten Island University Hospital

Staten Island University Hospital (SIUH), the Staten Island medical center of *Northwell Health*, is seeking a new Department of Psychiatry Chairperson. This exciting position offers the opportunity to lead and continue to develop an academically-oriented behavioral health center of excellence on Staten Island.

The Department serves diverse patient populations on its adult inpatient units, New York State Office of Mental Health (OMH) and New York State Office of Alcoholism and Substance Abuse Services (OASAS)-licensed outpatient clinics serving adults, consultation-liaison service for SIUH's 800+ medical-surgical inpatients at SIUH North and South sites, and emergency psychiatry program.

A growing psychiatry residency training program, SIUH also serves as a training site for several regional medical schools, and for psychiatric nurses, PAs, and social workers. Interested and qualified candidates may initiate projects in and/or collaborate with *Northwell's Center for Psychiatric Neuroscience* at its *Feinstein Institute for Medical Research and Zucker Hillside Hospital* sites.

Through collaboration with *Northwell's Behavioral Health Service Line*, the SIUH Department of Psychiatry is able to interact with many innovative system-wide activities including emergency tele-psychiatry; a CMS-funded practice transformation network; the behavioral health performance improvement coordinating group, pharmacy and therapeutics committee, and incident review committee; the digital behavioral health workgroup; collaborative care models; and an ambulatory provider network, IPA, and behavioral health group practice.

Interested candidates must have or be eligible for a NYS medical license; be ABPN board-certified in Psychiatry; possess consummate leadership skills, program development experience, financial acumen, and a strategic vision to help shape the future direction of a dynamic multi-faceted department; possess an academic portfolio in clinical service delivery, education, or research; be motivated to engage developing value-based payment methodologies and other health care reform initiatives; drive optimal quality, patient satisfaction, and staff engagement indices; and thoughtfully interact with both SIUH and *Northwell Health* clinical and administrative leaders.

Salary – competitive for the New York market

Academic appointment at the *Zucker School of Medicine at Hofstra/Northwell* commensurate with experience.

To learn more and apply, please send your CV to OPR@northwell.edu  
EOE M/F/D/V



**Northern Westchester Hospital of Northwell Health** is seeking **FULL-TIME BC/BE Psychiatrists** to join the Behavioral Health Hospitalist team.

- Shifts are 9A-5P & 5PM-11PM on weekdays, 11AM-11PM on weekends
- We have a need for three 12 hour days or 5 days (flexible)
- Holiday coverage also available
- Emergency Department and Inpatient Psychiatry Unit coverage
- 45 Minutes North of Manhattan and only 5 minutes from Metro North Rail Station

Founded in 1916, **Northern Westchester Hospital** is committed to providing high-quality, patient-centered care close to home through a unique combination of medical expertise, leading-edge technology and a dedication to humanity that ensures our patients and their families receive treatment in a caring, respectful and nurturing environment. Improving and protecting the health of community members through programs that promote wellness and prevention remains central to our mission.

Northern Westchester Hospital's **Department of Behavioral Health** provides comprehensive psychiatric care in a private, patient-centered environment. Services include:

- Inpatient psychiatric hospitalization for adults age 18 and over on a dedicated unit of the hospital
- Emergency Department coverage 24-hours a day provided by board certified psychiatrists
- Consultation on the medical and surgical units of the hospital provided by psychiatric and social work staff

15-bed inpatient unit provides short term hospital care to evaluate and stabilize patients with acute psychiatric disorders. There is a strong focus on returning patients to normal functioning as soon as possible while rebuilding self-esteem and improving socialization.

For further information and to apply, please email: OPR@northwell.edu  
EOE M/F/D/V

## NORTH CAROLINA



**We Want You to Join Our Behavioral Health Team!**

Cape Fear Valley Behavioral Health is one of the largest comprehensive, multi-tiered behavioral health services in North Carolina. Behavioral Health Care's mission is to meet and respond to the mental health needs of the community. We offer evidence-based, best practice treatments. Staffed by psychiatrists, psychologists, clinical social workers, psychiatric nurses, licensed profes-

sional counselors, and other mental health professionals, Cape Fear Valley Behavioral Health Care provides a team approach to mental wellness. Behavioral Health Care is accredited by The Joint Commission and licensed by the State of North Carolina.

The Health System is seeking providers for the following due to regional volumes and commitment to expand services:

### Emergency Opportunity

- Two BE/BC providers with experience in ED or trained in ED/Psychiatry. The Emergency Department maintains a Psychiatric Unit of 9 beds for patients in crisis. Support team is specialty trained. Schedule consists of 16 hour shifts, approximately 10 shifts per month.

### Adult Outpatient Opportunity

- BE/BC provider with training/experience in a variety of mental health treatment conditions as well as Chemical Dependency and Substance Abuse. Candidate with experience in treatment of Bipolar Disorder, Borderline Personality Disorder, and Mood Disorders is preferred. Additionally, ECT training and experience is highly desirable. Well established adult team is flexible and transparent for either or both inpatient and outpatient services. Clinic hours are Monday - Friday with limited call.

### Child Outpatient Opportunity

- BE/BC Child & Adolescent providers. The current structure is for 90% outpatient Monday through Friday work schedule.

We offer best in class compensation plus generous benefits including Paid Malpractice, CME Time and Allowance, Accrued Paid Time Off, 403(b) match and 457(b), Health, Dental, and other desirable benefits.

Please contact Suzy Cobb,  
Physician Recruiter for more details  
at (910) 615-1889  
or scobb2@capefearvalley.com.

## PENNSYLVANIA

**PSYCHIATRISTS NEEDED FOR 24/7 CRISIS SERVICE IN DARBY** – Day and night shifts available (8am to 5pm or 5pm to 8am) at the Mercy Fitzgerald Hospital. Please contact Terry B. Good, Horizon Health, at 804-684-5661,

Email: terry.good@horizonhealth.com;  
Fax #: 1-804-684-5663. EOE



**The Penn State Health Milton S. Hershey Medical Center Department of Psychiatry** is currently recruiting board eligible/certified psychiatrists for inpatient and outpatient positions in both adult and child psychiatry.

We are a growing, vibrant department in a strong academic medical center. We host specialty clinical and research programs, including research that crosses the translational spectrum. Our educational programs include adult psychiatry residency, child fellowship, psychology internship, externship and post-doctoral fellows. We have a strong collaboration with basic and clinical

science in other neuroscience disciplines across several Penn State campuses.

With our clinical partner, the Pennsylvania Psychiatric Institute, the Department staffs several outpatient and partial hospital programs for children and adults, 89 inpatient beds, ECT and other neuromodulation services, specialty sleep and eating-disorders programs, and expanding psychiatric consultation and integrated care programs for Hershey Medical Center.

Successful candidates should have strong teaching as well as clinical skills and, optimally, potential for scientific and scholarly achievement. We offer an attractive compensation package commensurate with qualifications. Tenure-track positions are possible.

For consideration, send your CV to:  
Jenna Spangler Physician Recruiter  
Phone: 717-531-4271  
Email:  
jspangler2@pennstatehealth.psu.edu

*The Penn State Milton S. Hershey Medical Center is committed to affirmative action, equal opportunity and the diversity of its workforce. Equal Opportunity Employer – M/W/V/D*

## WISCONSIN

### PSYCHIATRIST

Clinical excellence and quality living, Winnebago Mental Health Institute (WMHI), is seeking a Board Certified/Board Eligible (BC/BE) psychiatrist. This position provides diagnosis and treatment of assigned patients and works with a multidisciplinary treatment team on an inpatient unit. Excellent fringe benefit package.

Winnebago Mental Health Institute is a 280-bed psychiatric facility accredited by the Joint Commission located near Oshkosh, the center of the Fox River Valley, one of the fastest developing areas of Wisconsin. The Oshkosh area offers a safe environment, rich in cultural and recreational opportunities. Excellent public and private schools with three universities in the area. Oshkosh is within 1 ? hours of Milwaukee or Madison. Information on WMHI can be found at

[http://www.dhs.wisconsin.gov/MH\\_Winnebago/](http://www.dhs.wisconsin.gov/MH_Winnebago/).

For application instructions, go to [www.wisc.jobs](http://www.wisc.jobs) and search for Psychiatrist (Job Announcement Code: 17-02966).

### Contact:

**Medical Director's office**  
P.O. Box 9, Winnebago, WI 54985-0009  
Phone: (920) 235-4910 ext. 2210



An Equal Opportunity Employer

**CALL TODAY**  
**203 523-7026**