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Psychiatry

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contents

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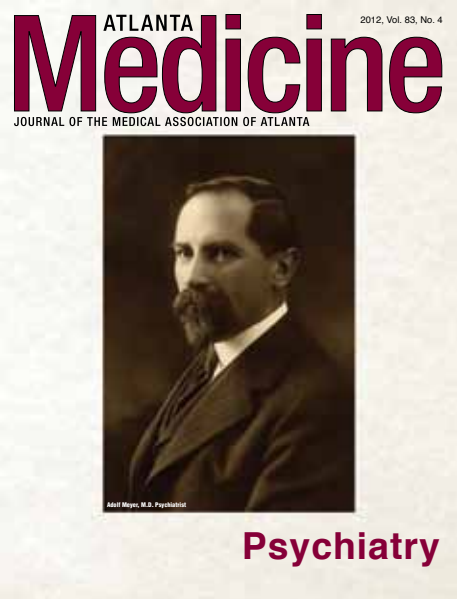

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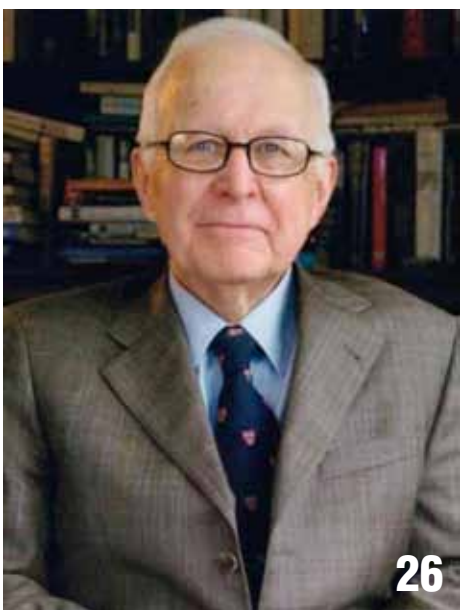

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Michael C. Hilton, M.D.

Psychiatry: What is it and where is it headed?

The simple definition of psychiatry as listed in Webster's Dictionary is a branch of medicine that deals with mental, emotional or behavioral disorders.

As physicians, we would probably elaborate on that. In reality the definition of psychiatry is constantly changing and evolving. A German physician, Johann Christian Reil, first used the term psychiatry in 1808. At that time, treatment of the mentally ill consisted in large part on removing these individuals from society and housing and protecting them in asylums.

Treatments were crude and embarrassing by today's standards. The practice of trepanation involved drilling holes in the skull to let demons out. Rotational therapy, a practice of spinning patients rapidly in a chair, was practiced. Hydrotherapy was practiced in many forms, including the spraying of patients with high-powered hoses. Franz Mesmer developed a theory that magnetism played a role in mental illness. He treated individuals with magnets to interrupt the disruptive influence of the moon's gravity. There were theories involving a woman's uterus being responsible for her emotional illness (hysteria) and attempts at calming the uterus. The field of phrenology developed, which might be appreciated by many today as an advanced form of palm reading.

Psychiatry, once in danger of losing its recognition as a medical specialty, has worked hard to maintain its medical affiliation, and today's psychiatrists see themselves as more mainstream physicians than at any point in the history of psychiatry.

During the transition from the 19th century to the 20th century, psychiatry became more organized and scientific in its approach. Many of the early leaders in psychiatry were actually trained as neurologists, and there was an attempt at one point to move psychiatry under the umbrella of neurology.

At the turn of the century, various schools of psychiatric thinking started to develop. Jean Martin Charcot (1825-1893), a French neurologist, was a leader in the field of neurology and used a scientific approach to bring together the fields of medicine and psychology with his work on neuroses. Sigmund Freud (1856-1939), an Austrian neurologist, took an analytical approach to psychotherapy and was the founding father of psychoanalysis.

Some of the early psychiatric pioneers were biologically based. Emil Kraepelin (1856-1926), a German psychiatrist, approached mental illness from the standpoint of symptoms and disease rejecting psychoanalytical theories. Adolf Meyer (1866-1950), a Swiss neuropathologist later turned psychiatrist, came to the United States in 1892 and as the director of the Henry Phipps Psychiatric Clinic at Johns Hopkins Hospital developed a biopsychosocial approach that incorporated schools of thoughts from psychoanalytic theory, social theory and the biological proponents.

During the first 50 years of the 20th century, psychiatry struggled to find itself. Competing schools of thought had very little interaction with each other. Psychiatry lacked a common language and a common approach. Depending upon where one presented for treatment, individuals with the same set of complaints could be treated in dramatically different ways.

In 1952, the Diagnostic and Statistical Manual-I (DSM-I) was published. It was an early attempt at creating uniformity

through a common language. Subsequently there have been additional revisions of the DSM. In 1968, DSM-II was published followed by DSM-III in 1980, DSM-IV in 1992 and now DSM-V is expected out in 2013.

Each addition has attempted to refine the language while at the same time usually expanding upon the number of diagnoses. These additions have helped to refine diagnostic criteria, guide research, and promote uniformity in treatment, but an attempt at causal explanations has been lacking. There have been many who hoped that the DSM-V would attempt to address issues of causation. We now know that this will not happen in the DSM-V, but it will happen and is necessary for the growth of psychiatry. Psychiatry, once in danger of losing its recognition as a medical specialty, has worked hard to maintain its medical affiliation, and today's psychiatrists see themselves as more mainstream physicians than at any point in the history of psychiatry.

As psychiatry heads into the next century, other healthcare providers seeking encroachment into the boundaries of psychiatry are increasingly squeezing psychiatrists. Psychologists and social workers provide psychotherapy. Primary care physicians and neurologists are becoming increasingly more comfortable writing prescriptions for psychotropic medications. Psychologists are seeking prescribing privileges. Insurance companies and healthcare systems are pushing psychiatrists to reduce face-to-face time with patients, use checklists and become medication management specialists.

The risk for psychiatrists, if not careful, is that they will come to be known only as medication prescribers who treat only a part of mental illness. Jerome Frank (1909-2005), a leading American psychiatrist whose career spanned from the mid 20th century to the late 20th century and trained under Adolf Meyer, emphasized the uniqueness of each patient and the importance of the doctor-patient relationship and its connectedness as a healing power.

If psychiatrists abdicate their role of being the expert at the doctor-patient relationship, others will fill the void. Psychiatrists must remember that we treat patients, not clients nor consumers, and that it is our relationship with the patient that is the cornerstone of our healing power. ■

Michael C. Hilton, M.D. grew up in Birmingham, Alabama. He attended the University of Alabama followed by medical school at the University of Alabama in Birmingham. He then did a surgical internship at Carraway Methodist Medical Center followed by a psychiatry residency at Johns Hopkins Hospital and a Fellowship in Forensic Psychiatry at the University of Maryland. He has been in the private practice of General and Forensic Psychiatry in Buckhead for over 20 years and is an avid college football fan.

Brian Teliho, M.D.

Transcranial Magnetic Stimulation

A FDA-cleared procedure for depression

Yes, psychiatrists actually perform procedures, and not all of them are reserved for the severely ill. Transcranial magnetic stimulation, or TMS, is a form of neuromodulation that has gone through the rigors of study for more than twenty years.

With the advent of magnetic resonance devices for imaging, ideas about other potential medical applications using such powerful magnets have abounded. As you might guess, in psychiatry, we have focused on the brain. For 75 years, we have used electricity to rid patients of the most debilitating forms of depression.

Electroconvulsive therapy, however, affects the whole brain. Patients seize, require generalized anesthesia, and may struggle with resultant side effects. Would it not be wonderful to focus that energy we drive into the brain? Avoid areas responsible for movement, memory, breathing?

The most widely used TMS device uses a 1.6 Tesla magnet, similar to most MRI machines. The energy released from a coil that rests against the head penetrates about 3cm into the brain, thus limiting the areas directly affected by its power.

For most patients struggling with depression, treatment is focused over the left dorsolateral prefrontal cortex. Localization is usually determined by first placing the coil over the left motor strip and slowly delivering individual magnetic pulses until one can visualize a motor twitch in the contralateral thumb. This area correlates well on the sagittal plane with the area treated.

Once localization is determined, the amount of stimulation needed for treatment is sought by running an algorithm of pulses of varying intensities and looking for the percentage of time one elicits that contralateral twitch. This figure is termed the motor threshold, or MT, and it varies from brain to brain. Age and various medications can alter it.

The coil is then moved anteriorly 5.5cm to 6cm for treatment. A typical treatment session will deliver 3,000 pulses over the course of 35 to 40 minutes. The intensity is typically 120 percent of the MT. Twenty or more sessions are usually required to treat the typical acute phase of a major depressive episode. It is an outpatient procedure, requiring no sedation or anesthesia. Patients may return to normal activities immediately after a session. There is no negative effect on memory or cognition.

So, how does it work? As you know, our hearts and brains are more than chemical organs. They are electrical as well. Using time-varying magnetic fields, on the order of hundredths of milliseconds, we induce an electrical current in the adjacent tissue, or brain in this case. Repetitively depolarizing the neurons in the left dorsolateral prefrontal cortex has been linked to aiding in depression.

This stimulation then results in functional changes in more distant areas and neural pathways that are directly connected to this area of the cortex, yet are outside the direct influence of the magnetic field. The image in Figure 1 (left) is of a SPECT scan showing activation of the fronto-cingulate brain circuit following TMS applied to the left dorsolateral prefrontal cortex in a patient with depression.

It works. The FDA indication reads: "TMS is indicated for the treatment of adult patients with major depressive disorder who have failed to receive satisfactory improvement from one prior antidepressant medication at or above the minimal effective dose and duration in the current episode." Most patients seeking

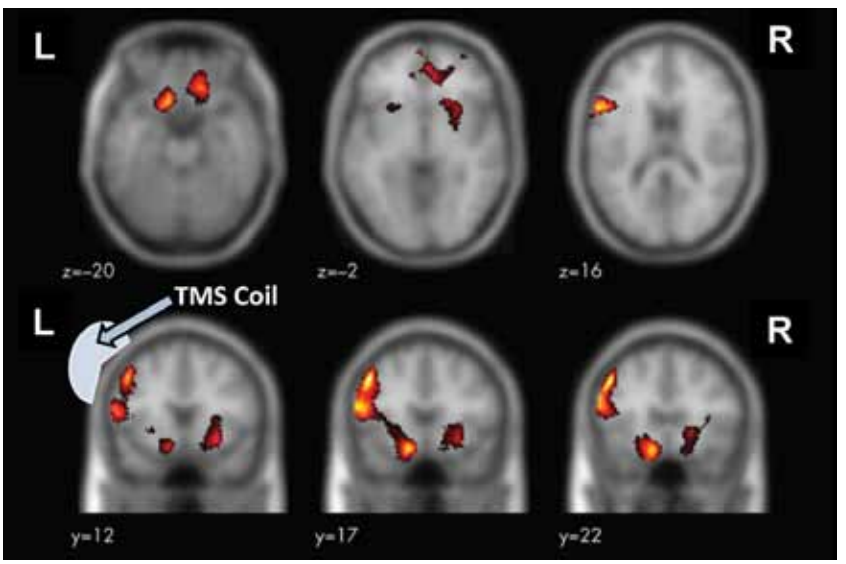

Figure 1

treatment have failed several trials of antidepressants.

Summarizing several clinical studies, including the 2008 FDA clearance study, response rates fall between 50 percent and 60 percent, and remission rates hover around 30 percent. All studies considered are double-blinded and sham controlled, with patients free of any antidepressant medication. The disease burden for most patients in these studies is high. Depression inventory scores are moderate to severe in degree, with nearly all patients struggling with recurrent episodes of depression. I emphasize these points to illustrate that the response and remission rates are actually profound when we consider the patients studied. Similar success rates are often quoted in pharmaceutical studies that have excluded patients with recurrent illness or have failed prior medication trials.

Further, a six-month follow up arm in the FDA clearance study, with patients then placed on monotherapy antidepressant medication, showed a relapse rate of 11 percent. This figure compares very favorably to six-month relapse rates with comparable patients in the well-established Sequenced Treatment Alternatives to Relieve Depression (STAR*D) study. That study, looking at antidepressant medication alone, found six-month relapse rates above 50 percent.

Is it a cure-all? No. TMS does not appear to be as effective in treating depression as ECT, which remains the treatment of choice for most psychiatrists working to help their most depressed patients. Over time, however, different protocols or treatment algorithms may change this view. After all, TMS is non-invasive and non-systemic, with relatively few downsides.

Most studies have found patient withdrawal rates under 5 percent. The most common side effect is a transient headache around the application site, usually lasting an hour or so following the procedure. Most patients who initially complain of headache find they acclimate to the stimulation after a few treatments. Rarely, some complain of scalp irritation at the application site as well. Again, this is usually short lived. More serious is the risk for seizure. This risk stands at about 1 in 50,000. I write this noting that there were no seizures in the 10, 000 treatments provided prior to FDA clearance, and there have been three in the now more than 150,000 treatments delivered since 2008. Proximity to the motor strip is thought to have played a role, as well as treating patients with medications known to lower the seizure threshold.

As you might guess, contraindications for TMS include those with implanted ferro-magnetic devices or objects in or around the head. Caution is advised for patients who have an implanted device that is activated or controlled by physiologic signals, such as pacemakers or implantable cardiac defibrillators, because the TMS magnetic field may affect their functioning. Having a history of seizures is a caution for treatment, but many have been treated without incident.

In the nearly four years since FDA clearance, there are now more than 350 centers around the country offering TMS. Research continues, with efforts to find even more

NeuroStar TMS device

effective algorithms to treat depression, as well as other conditions. Off-label treatments have focused on bipolar depression, various forms of anxiety, Parkinson's Disease, tinnitus, pain syndromes and fibromyalgia. There stand to be many potential uses for TMS, since the coil may be placed over different regions of the brain, with the ability to depolarize or hyperpolarize neurons. Stay tuned. ■

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Brian Teliho, M.D. is a Board-certified psychiatrist who has worked at the forefront of TMS therapy in the Southeast. As Medical Director for the Atlanta Center for TMS, he has treated many patients with this novel therapy and participated in clinical research. He has lectured throughout the South on TMS, teaching psychiatrists and other mental health professionals about the many benefits this treatment has to offer.

Dr. Teliho received his medical degree from the State University of New York's Health Science Center in Syracuse before completing his residency training at Emory University School of Medicine, where he also served as Psychiatric Chief Resident of Grady Memorial Hospital. He continues an affiliation with Emory as a Clinical Assistant Professor of Psychiatry.

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Mark C. Hutto, M.D., DFAPA

Sandra Thomas, M.D.

Resurgence of Electroconvulsive Therapy

Mr. Jones was a 65-year-old retired successful businessman who became depressed when he "realized" that he had not kept adequate financial records for his personal finances and they would not be adequate to support his retirement. He became obsessed with his finances, thinking about them all the time, although his wife, brothers and financial consultant felt he was in good shape. He continued to be depressed all the time, obsessing about his finances constantly, and he had insomnia, sleeping only one to two hours without medication and only four hours with medication; had low energy; low motivation; no enjoyment for over a year; severe indecisiveness; no loss of appetite but with a 10-pound weight loss without effort; experienced slowed thought processing and extreme difficulty concentrating; felt reduced self worth and reduced sense of hope; and had ideas of suicide by overdose. One day, he fainted at a social gathering. He was evaluated at a local emergency room, including echocardiogram and MRI of the brain – all negative. He was referred to his internist who did further tests, 24-hour ambulatory heart monitor and two stress tests – all negative.

Previous history revealed that his first episode of depression occurred at 25 years of age, when he was in graduate school and became overwhelmed. He engaged in therapy with a psychiatrist, quit school and began working for a local financial institution. He felt his life was "180 degrees out of phase" until he got Christ in his life. He did well, married and began a family. His second episode of psychiatric illness occurred 19 years later, characterized by severe suicidal intent with purchasing a gun with intent to shoot himself. However, he was convinced by family to submit to treatment and was hospitalized at a psychiatric hospital. He was diagnosed with Bipolar Disorder, based upon a history of hypomanic episodes, and responded to lithium therapy. He continued lithium therapy until 2000, when he was changed to lamotrigine. He had continued lamotrigine with other anti-depressants until the current episode, which was not responding to maximum dosage of anti-depressants and mood stabilizers.

He was referred by his psychiatrist for electroconvulsive therapy. After consultation, Mr. Jones was diagnosed with Bipolar II Disorder, depressed and was approved to start treatment. He had 10 treatments with rapidly improving mood during the first week of treatment. He had mild memory loss for recent events during the weeks prior to treatment, but no substantial memory loss thereafter. Four years later, he has continued to have a normal mood, feels confident about the security of his financial situation and continues to take mood- stabilizing medication and is enjoying a full life in retirement.

Major Depressive Disorder (MDD) affects from 13 to 20 percent of adults during their lifetime[1]. MDD affects millions of adults in the U.S. each year. The World Health Organization estimates that, at current rates, depression will become the second most common cause of disability worldwide by 2020. Very often unrecognized and most of the time undertreated in the less severe stages (National Co-morbidity Study), it may be quite severe, life threatening and impossible to ignore. The disorder differs from a simply "depressed mood," which anyone can have in reaction to events and circumstances. A merely depressed mood, perhaps in response to loss of a job or death of a loved one, doesn't typically result in alteration of daily functions or social interactions. A good example may be conjured up by recalling the last funeral you attended. People are sad, some shedding tears, but most people are eating the food provided, talking with friends, catching up with relatives they haven't seen in a while, even laughing at pleasant memories of the deceased or others. Most people go home and sleep well that night and return to their usual activities the next day.

But Major Depressive Disorder is different from this. In MDD, there is a persistently depressed mood or loss of interest or pleasure in all or almost all activities for most of the day and nearly every day for at least two weeks, which is a significant change from pre-morbid functioning accompanied by multiple other symptoms – at least four other symptoms out of the following: significant weight loss or weight gain without intention or change in appetite; insomnia or hypersomnia; psychomotor agitation or retardation that is observable by others; fatigue or loss of energy; feelings of worthlessness or inappropriate guilt (sometimes of delusional proportions); diminished ability to think, concentrate or indecisiveness; and recurrent thoughts of death or suicidal ideas, with or without a specific plan or attempt. Severe depression can significantly impair a person's quality of life and, at worst case, contribute to death by suicide. To make the diagnosis, these symptoms must cause clinically significant distress or impairment in social,

occupational or other areas of functioning and are not due to another illness (e.g. hypothyroidism) or are the result of substance abuse.[2]

Initially greeted with much enthusiasm and holding great promise, the anti-depressant era began in the early 1950s with amitryptline and imipramine. These "tricyclic" anti-depressants (TCAs) were expected to take the place of the only other successful "somatic" treatment for depression that had been utilized since 1938 – Electroconvulsive Therapy (ECT), so-called "shock treatment." A host of other TCA's were spawned, and complications associated with the practice of "un-modified" ECT resulted in a significant diminution of the utilization of ECT by the late 1960s.

However, it soon began to be recognized that a substantial number of depressed persons, especially those with psychotic depression, did not respond to medication therapy, even with multiple efforts to augment the basic anti-depressant medication, including adding anti-psychotics, stimulants, lithium and thyroid hormone. Even with the advent of the newer generation of anti-depressants, beginning with fluoxetine (Prozac, 1983) and continuing with multiple selective serotonin re-uptake inhibitors (SSRIs)[3] and the more recent serotonin and norepinephrine re-uptake inhibitors (SNRIs), MDD has remained difficult to treat to full remission of symptoms. The newer medications are better tolerated than the old TCAs but may not be any more powerful than the old standards.

Recent studies have demonstrated the difficulty in treating MDD to remission of symptoms. A large NIMH-funded study of anti-depressant response (or lack of response) and "what to do next," the Sequenced Treatment Alternatives to Relieve Depression (STAR*D) study demonstrated that many patients with recurrent depression (as many as 63 percent) do not get better with initial anti-depressant medication treatment and subsequent "switching" or "add on" therapies, including psychotherapy, result in a decreasing percentage of the non-responders responding.

There are several theories about how ECT is effective. These include a range of effects on the neurobiological features of depression. There are increased amounts of the neurotransmitters serotonin, norepinephrine and dopamine present in the brain after ECT. There are increased cortical gama-amino butyric acid concentrations. ECT has effects on the hypothalamic-pituitary axis, and recent studies indicate that neurogenesis is enhanced. Overall, ECT causes a change in functional brain activation.

Hence, the resurgence of electroconvulsive therapy. ECT has an 80 to 90 percent effectiveness in MDD and is often dramatically, some say "miraculously," effective in severe and psychotic MDD. It is often the only treatment that saves a severely depressed person from death due to suicide or extreme debility, such as catatonia. It is also very effective in bipolar depression and mania, although seldom used in mania due to the difficulty in convincing someone who is manic that they need treatment. Almost all patients referred for ECT are considered to have "treatment resistant depression," that is, they have failed to respond to at least four anti-depressant medications given for adequate length at

A modern stimulus generator allows for adjustment of the various parameters of the electrical stimulus to be administered. This one features a "touch screen" for making various adjustments. ECT is delivered by the psychiatrist with the assistance of an anesthesiologist, who provides ventilation and monitors patient's cardiovascular response. Various monitors record the patient's condition during and after the procedure. (Real psychiatrist and anesthesiologist pictured, but not a real patient – instead, our very competent nurse who agreed to be photographed.).

adequate dosage. In Georgia, ECT is a voluntary procedure that requires the informed consent of the person receiving the treatment or their guardian in the case of a minor or person who is incompetent.

Beginning in the mid to late 1960s, ECT began to be "modified" by the use of anesthesia. This practice began to alleviate most of the overt side effects and bad outcomes of ECT, e.g. awareness of pain when the electrical shock was administered, fractures of the long bones or vertebrae and poor oxygenation during the grand mal seizure that is an essential part of the treatment.[4]

Initially, when I began my practice of ECT in 1982, anesthesia and treatment was given by the psychiatrist with the assistance of one or two nurses. Intravenous access was obtained with a "butterfly" needle. 0.2 to 0.4 mg of atropine was injected to prevent asystole and reduce salivary secretions. 60 to 100 mg of methohexital was injected to achieve unconsciousness, followed by 40 to 80 mg of succinlycholine to achieve paralysis. The patient was ventilated until fully paralyzed, then a sine wave electrical stimulus was applied either unilaterally to the right temple and crown of the head or bi-temporally, producing a seizure in the brain but not seen in the body unless a less-than-adequate dose of succinylcholine was given or a sphygmomanometer was used as a tourniquet to prevent paralysis of one extremity. A seizure of 30 to 60 seconds duration was the desired outcome, and the patient was ventilated until he or she began to breathe spontaneously.

This practice was far more tolerable for the patient, had fewer complications, but still left the patient at risk for possible myocardial infarction due to increased oxygen demand of the heart or cerebrovascular bleeding due to excessive hypertension. Still, the risks were acceptable given the severe debilitating effects and risk of suicide in treatment-resistant depression. In the early '80s at my hospital, we were providing treatments for three to six patients most weeks.

About 1987, the standard of care in Atlanta began to change, and an anesthesiologist was added to the ECT treatment team. This brought the advantage of another person solely dedicated to airway management and with greater expertise in controlling the cardiovascular complications of the sympathetic discharges associated with the seizure.

Current ECT treatment is not as dramatic as portrayed in the various popular movies of the past or even recent television shows. Patients may be in-patient or out-patient with 24-hour supervision. Patients arrive at the ECT treatment suite instructed not to eat or drink after midnight. After signing in, an intravenous line (line?) is placed, and they take a seat to wait their turn.

Soon, the patient takes a place on a gurney and is rolled into the treatment bay, where they are greeted by the psychiatrist, anesthesiologist and nurses. Various devices are applied to the patient to monitor EEG, EKG, blood pressure, oxygen saturation and temperature. After all vital signs are deemed appropriate, a short-acting hypnotic is given intravenously, usually propofol, methohexital or etomidate.

As soon as the patient is asleep, succinylcholine is administered. When adequate paralysis is achieved, an electrical stimulus is administered in one of three different placement configurations: unilateral right (right temple and to the right of the vertex), bifrontal (1 ½ to 2 inches above the outer canthi of the eyes), or bitemporal (right and left temple one-half way between the outer canthus and the ear canal). This results in a seizure usually between 30 to 60 seconds in duration.

Usually, some motor activity is observed, but generally not the severe movements seen in a spontaneous generalized tonic-clonic seizure. Patients are ventilated using a bag and mask device with close to 100 percent oxygen throughout the procedure and continue to be ventilated after the seizure is completed until they begin to breath spontaneously. At this point (10 to 15 minutes after arriving in the treatment bay), the patient is moved to the post-ECT recovery bay where a nurse continues to monitor vital signs for 10 to 15 minutes while the patient regains consciousness and is oriented to their condition. Patients then go to the nearby post-recovery area, where they are monitored for approximately 45 to 60 minutes and where they are invited to break their fast with juice and crackers. If an in-patient, they return to their unit; if out-patient, they go home with their caregiver. All together, we expect the procedure, from arrival to departure, to take approximately two hours.

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Besides the variable of lead placement, which is determined by the psychiatrist's preference, concerns about any preexisting cognitive impairment, patient's diagnosis and previous response, there are various parameters of the electrical stimulus that may be adjusted. Current stimulus is a square wave electrical stimulus, in what is considered a "brief pulse" or "ultra-brief pulse" of electrical energy, measured in joules (maximum of 101.4 joules[5]). Most stimulus generators allow for setting the duration of each pulse (measured in microseconds), the frequency of the pulses (measured in hertz, maximum of 120 hertz), the duration of the stimulus (measured in seconds, maximum of eight seconds), and current (measured in amps, maximum of 0.8 amps). Adjustment of parameters is made initially based upon patient's age, gender and lead placement and subsequently upon previous response to stimulation. If no seizure or an inadequate seizure is obtained, the strength of the stimulus is increased and a second or third stimulus may be given during a single period of anesthesia.

Treatments are generally given two to three times a week during the initial phase of treatment with a goal of between six and 12 total treatments, thus a period of two to four weeks of treatment determined by the patient's response, with a more rapid response to treatment resulting in fewer numbers of treatments. This will result in return to a normal mood, hopefully feeling as good as ever a person felt before the onset of his illness, in 80 to 90 percent of patients with MDD. This normal mood may persist for many years, but with MDD and BD, there is always a risk of relapse, so most patients will be prescribed maintenance medication after their course of ECT. Patients with a history of rapid relapse or frequent relapse may be assigned to maintenance ECT, with gradually increasing time between treatments, with a goal of having one treatment every month, sometimes as infrequently as one every three months.

During each treatment, the clinicians are concerned with minimizing the risks of major complications, such as myocardial infarction, cerebrovascular accident, aspiration pneumonia, malignant hyperthermia and other rare events. The anesthesiologist will frequently administer medications to control blood pressure and heart rate. On rare occasions, the psychiatrist may direct the use of a short-acting benzodiazepine to stop a seizure that is lasting too long or to prevent severe confusion or agitation in the immediate post-treatment phase.

Over the course of an acute series of treatments, our greatest concern is short-term memory loss and confusion. Anyone having a generalized tonic-clonic seizure three times a week is going to become disoriented and have memory loss for events occurring just before the beginning of treatment and during the series. For this reason, out-patients are instructed that they are not allowed to drive, work or make important decisions and must have a trusted adult supervise them during the course of treatment and for approximately two weeks after the last treatment. This includes monitoring medication usage that the patient may be taking while receiving treatment. Patients should not be left alone during the treatment, although when the patient is sleeping, the caregiver may certainly sleep as well. When in maintenance treatment, the patient is instructed to have supervision and is not allowed to drive for 24 hours after the treatment.

Cognitive changes associated with ECT have been of concern. Long term/permanent memory loss is rare. But in assessing cognitive changes, one should keep in mind that depression itself can be accompanied by cognitive changes. Secondly, research done over the years has found no relationship between ECT and brain damage.

There are three possible types of cognitive impairment with ECT: postictal disorientation, interictal confusion, and amnesia that involves anterograde and retrograde memory changes. The risk for cognitive side effects increases with factors such as: number of treatments, frequency of treatments, patient age, preexisting cognitive deficiencies, stimulus intensity, stimulus waveform and electrode placement. One should keep in mind, however, that the alternative to treatment with ECT can be severe, debilitating and life-threatening depression, and such concerns necessitate treatment.[6]

The recognition that medication will not successfully treat every depression and therefore the importance of ECT to treat people with treatment-resistant depression has driven a resurgence of ECT. At my hospital, there are five psychiatrists specially credentialed for practicing ECT. In an average week, we perform between 100 to 200 individual treatments for patients in the acute and maintenance phase of treatment. In the Atlanta area, there are three other centers that provide ECT, and at least three more are developing ECT services. ■

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1. National Co-morbidity Study – Replication Study. 2005. Harvard School of Medicine.

2. Diagnostic and Statistical Manual of Psychiatry IV-TR. American Psychiatric Association. 2000.

3. The SSRIs are really serotonin uptake inhibitors, but the acronym SUI was too similar to SUIcide to be palatable.

4. Un-modified ECT is still utilized in rural areas of some third-world countries.

5. The maximum stimulus strength is set by the Food and Drug Administration. Other countries allow for greater stimulus strengths.

6. Lisanby, S. (2007, November). Electroconvulsive Therapy for Depression. New England Journal of Medicine, 357:1939-45.

Mark C. Hutto, M.D., DFAPA, has been practicing psychiatry at Peachford Hospital for 30 years. He is a graduate of Sandy Springs High School ('70), the University of Georgia ('74, BS/Biochemistry), Emory University School of Medicine ('78, MD) and Emory Affiliated Hospitals Residency Program ('82, Psychiatry). He is an Atlanta native and knows all the back roads and shortcuts to get around the traffic. He has been active in organized medicine, serving in MAA and the Georgia Psychiatric Physicians Association.

Sandra Thomas, M.D., recently completed her psychiatry residency at Duke University Hospital and her family medicine residency at Case Medical Center. She has been working with North Atlanta Psychiatric Associates since September 2011 and also practices ECT at Peachford Hospital. She is originally a New Yorker but is enjoying getting to know Atlanta and the south.

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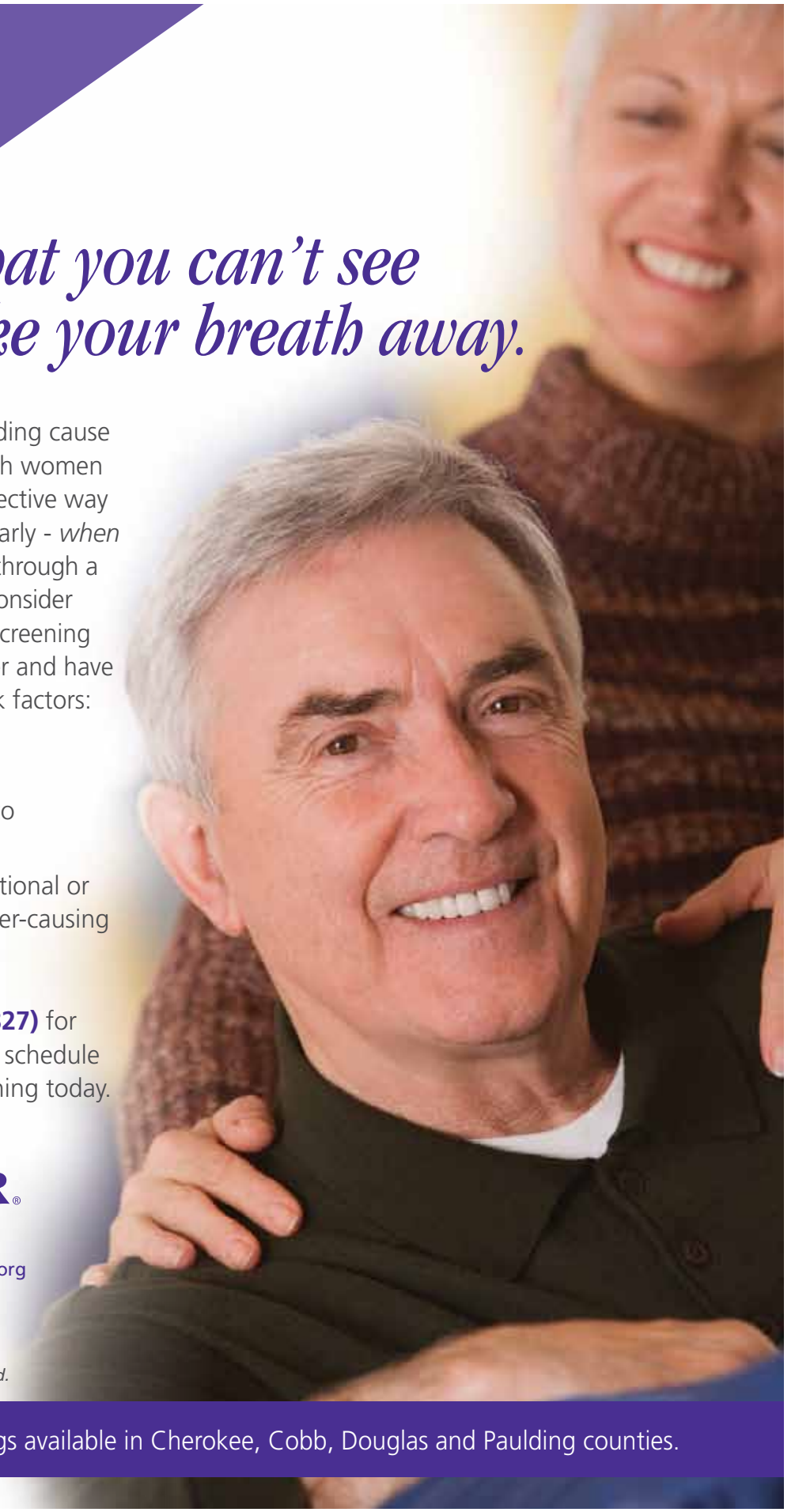

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Michael Tascarella, M.D.

ADHD & Psychiatric Comorbidities and Their Relationships to Substance Use Disorders

This article is focused on ADHD and other comorbid axis I diagnoses and their interplay with substance use disorders. The conclusions were drawn from the study of subjects with morbid obesity (BMI>40) who had sought out a surgical approach to treating their medical/behavioral illness. The initial data was compiled in an independent study conducted at the Institute for Higher Living and was presented to the American Society of Bariatric Surgery (ASBS) at their annual meeting.

The experience and knowledge that was gained through working with this patient population provided a new foundation on which to develop algorithms that have improved diagnostic accuracy and treatment outcomes enormously.

Objectives:

- To understand how this data, as well as treatment methods that proved effective in treating the morbidly obese patient population, led to advances in the treatment of alcoholism and other substance related disorders. It also provided an opportunity to develop a more thorough understanding of the underlying axis I and axis II diagnoses that predispose to a whole host of impulse control disorders, including eating behaviors that lead to morbid obesity and substance use patterns that lead to alcohol dependence and substance dependence.

- Examination of the study data also supports the initial working hypothesis that morbid obesity and alcohol dependence are essentially parallel disease processes and that the incidence of both in family histories are almost identical. It appears that the only difference is in the choice of substances abused. The morbidly obese patients in our study group so often swore that they would never drink a drop of alcohol after seeing how destructive it was to their own family members. They, in turn, chose an alternative carbohydrate, namely food. They described their inability to stop eating despite the negative consequences of their excessive and addictive consumption in much the same way an alcoholic or addict would describe their compulsions.

- It is also noteworthy that following completion of a gastric bypass procedure, these patients could no longer "self-medicate" with food, due to reduced gastric capacity (decreased from the potential size of a football to that of a golf ball). Many would turn to alcohol, as they could often consume larger amounts of it (vs. food) in a relatively short period of time without the consequences of vomiting. This was in large measure to not only satisfy their carbohydrate craving, but also to "self-medicate" to diminish the severity and uncomfortability of negative emotions and feelings. This risk of developing alcohol dependence, or of having poor outcomes in terms of weight loss following gastric bypass surgery, was especially high in patients that had little in the way of behavioral treatment in the year preceding their surgical procedure.

Psychiatric Comorbidities:

Putting Things in Perspective Etiology: Consideration must be given to neurochemistry, medical and behavioral family histories, parenting/modeling behavior and any history of emotional/psychological trauma as well as accurately diagnosing the various axes diagnoses.

Diagnoses: Achieving accuracy in ascertaining the axis I, axis II and axis III diagnoses involves the use of various behavioral and medical assessment techniques. Axis III diagnoses may include sleep disorders, such as sleep apnea and restless leg syndrome, as well as other medical and/or surgical comorbidities. It is essential to underscore the importance of careful review of personal and family medical histories due to the fact that so many behavioral health symptoms that meet criteria for certain axis I disorders may actually be medical problems presenting with behavioral symptoms. In more than 20 percent of initial consultations, the history reveals that there are medically relevant issues that require further intervention and are often causative or contributory to the behavioral symptomatology. It is all too common that people that present with depression, anxiety, mental dullness, impaired cognitive function, poor concentration, diminished recall, lethargy, fatigue, weight change, insomnia, hypersomnia, etc., have a treatable medical condition such as hypothyroidism, hypertension, dehydration, diabetes, electrolyte imbalances, UTI's, anemia, sleep apnea and/or vitamin deficiencies, to name a few, that are of a severity to precipitate significant behavioral and/or constitutional symptomatology.

Behavioral Health Treatments: Behavioral health treatments need to be individualized, although typically include psychotropic medication, psychotherapy (individual,

couples, group and family therapy), patient/family education and patient/family support groups.

Study Protocol: 488 patients were screened for psychopathology to determine whether they were acceptable candidates for a bariatric surgical procedure by utilizing a clinical interview with a psychologist and an MMPI-2 (Minnesota Multiphasic Personality Inventory-2). The screening process revealed 213 patients with psychopathology that was determined to require further evaluation and treatment before they could be "psychiatrically cleared" for surgery. The analysis of the clinical data presented below involved these 213 non-randomly selected morbidly obese patients (n=213) who required further evaluation and treatment.

Axis I Diagnoses Noted in These Patients

Eating Disorders: Eating disorder, NOS: 94.4 percent, bulimia nervosa: 20.7 percent, anorexia nervosa: 0.46 percent (one patient), binge eaters: 57.9 percent, history of purging: 22.1 percent, bingers, purgers or both: 78 percent.

Depressive Disorders: Major depression: 86 percent; dysthymic disorder: 50 percent; depressive disorder NOS: 2 percent. Not a single patient in this study group with major depression had ever been successfully treated to remission. Reasons for this included: inadequate dosing or poor selection of antidepressant medication, comorbid medical conditions that were never diagnosed and/or treated, or the presence of other axis I comorbid behavioral conditions that were never diagnosed, and therefore, never treated, with ADHD being the most common.

Anxiety Disorders: Social phobia: 51 percent; generalized anxiety disorder: 48.8 percent; panic disorder: 30 percent; anxiety disorder NOS: 11.7 percent; PTSD: 3.9 percent (post-traumatic stress disorder); obsessive-compulsive disorder: 0.9 percent (OCD); substance-induced anxiety disorders (i.e. caffeine) were common, although the data did not allow for the exact incidence to be determined.

Disorders Usually First Diagnosed in Infancy, Childhood, or Adolescence: ADHD: 53.1 percent (attention deficit hyperactivity disorder).

Substance Related Disorders: nicotine dependence: 25 percent; alcohol dependence/abuse 25.3 percent; other substance dependence: 12.6 percent.

Family History: Alcohol dependence: 64.2 percent; obesity/ morbid obesity (BMI > 40): 62.1 percent; depressive disorders: 45.3 percent; physical abuse: 42.1 percent; emotional/verbal abuse: 35.8 percent; nicotine dependence: 34.7 percent; sexual abuse/incest: 32.6 percent; violence: 22.1 percent; suicide (completed): 7.4 percent; disability history: 5.3 percent; other psychiatric illness: 22.1 percent.

Key Points:

- High prevalence of impulse control disorders.
- High concordance rates between obesity/morbid obesity and alcohol dependence.
- Simple fact that all forms of alcohol abuse and obesity have a commonality of being carbohydrate-craving phenomena.

Dietary History: Patient histories in this treatment population revealed that the most success, in terms of pounds lost and length of time the weight loss was sustained, were noted to be attributable to active participation in Weight Watchers. This parallels the successes seen in alcoholics and addicts that become active in Alcoholics Anonymous or other 12-step recovery programs. One aspect of the success of such programs is the fact that these programs provide structure for people that often find difficulty in structuring themselves. There is also enormous benefit to be derived from aligning oneself with people that have their sights set on the same goals, as well as becoming immersed amongst like-minded cohorts who have succeeded in attaining their goals by learning from other members who have succeeded and in turn pass on their experience, strength and hope to others. Helping others only reinforces one's own success in recovery.

Effect on Non-Surgical Outcomes: In our study group of 213 patients, we had 14 patients who lost their goal weight within a 12-18 month period without a surgical intervention and without doing any specific dieting. Success in achieving treatment goals hinges on treating the underlying psychopathology and providing supportive and cognitive-behavioral psychotherapy. Other components include life coaching as well as providing inspiration, hope, structure and encouragement.

Mood Disorders: Depression and anxiety disorders are often comorbid conditions with each other, and/or with ADHD, due to the similarities in neurotransmitter dysfunction. The neurotransmitter dysfunction(s) in mood disorders is (are) most often tied to reduced levels of serotonin, norepinephrine and/or dopamine in the central nervous system. GABA (gamma-amino butyric acid), the primary inhibitory neurotransmitter in the central nervous system, and glutamate, the primary excitatory neurotransmitter in the CNS, often play a significant role as well. Untreated ADHD invariably leads to significant symptoms of depression and anxiety as well as mood lability. These mood symptoms are due to the hallmark neurotransmitter deficiencies seen in ADHD of dopamine, and, to a lesser degree, norepinephrine. These mood symptoms that occur concurrently with ADHD could represent a component of the ADHD symptomatology or they can occur simultaneously as completely separate axis I entities, having a basis in neurotransmitter imbalances other than dopamine and/or norepinephrine.

ADHD: Attention Deficit Hyperactivity Disorder: ADHD has a strong correlation with morbid obesity (as well as other substance use disorders) due to the following factors: poor impulse control, poor self-awareness and patients often turning to food (or alcohol, drugs) in order to relax and get relief from their "inner restlessness" and inner turmoil. These states of being so often result from chronic avoidance and procrastination, especially when related to tasks that require a lot of organization or concentration, particularly tasks that don't hold a special interest or foster a particular inherent talent for that person. In addition, there is a reduced ability to pick up on normal social cues that might otherwise deter a person from facing the negative social consequences associated with obesity or any other substance use disorder.

There is a carbohydrate-craving phenomenon seen in obesity, likely linked to comorbid ADHD, having many similarities to the carbohydrate craving that is typical in

alcoholism. The craving for refined carbohydrates that is common to both obesity and alcoholism surely has a root cause in that refined carbohydrates have a high glycemic index and cause a rapid rise in serum glucose levels in the brain and body.

ADHD: Diagnosis: ADHD is the most common missed diagnosis in behavioral healthcare. It is probably the most common undiagnosed psychiatric disorder in adults. Eighty-five percent of ADHD patients are never diagnosed with this disorder. The current and most accurate way to refer to this disorder, based on DSM-IV-TR classification, is ADHD rather than ADD. The diagnosis of ADHD is then followed by the sub-classifications that include: primarily inattentive, primarily hyperactive/impulsive or combined type. ADHD is characterized by inattention, distractibility and impulsivity/hyperactivity. Other characteristics include restlessness, labile mood, quick temper, hyperactivity and disorganization. Failure to diagnose ADHD often leads to either treatment failure of other disorders (i.e. a patient who diagnostically appears to have major depression who fails to respond adequately to antidepressant treatment. These are patients who so often present with a history of having been on a myriad of different antidepressants, yet they never achieve full remission). ADHD symptoms tend to decline as a person gets older, especially the hyperactive symptoms.

ADHD: Domains of Impairment: Academic/occupational, self-esteem, driving or operating vehicles or machinery, psychosocial functioning, health/injury,;criminality, sexual behavior, parenting and substance use disorders (SUD's) including abuse/dependence of alcohol, prescription medications and illicit drugs.

ADHD and Nicotine: Adults with ADHD have almost double the incidence of nicotine dependence compared to the general population and a quit rate that is less than half that of the general population. Seventy-six percent of people with ADHD have a history of nicotine dependence.

ADHD & SUD's (Substance Use Disorders)

- Stimulant treatment in children and adolescents is associated with a two- to four-fold risk reduction for SUD's (Substance Use Disorders).

- When children and adolescents were treated for ADHD into adulthood, long-term studies show that they had a 50 percent or greater reduction in the incidence of SUD's. Some studies report as much as a four to eight-fold reduction in SUD's in adulthood when ADHD is treated from childhood, through adolescence and into adulthood.

- Treating ADHD significantly reduces the risk of chemical dependency and reduces the overall incidence of impulse control problems (including over-eating).

- Despite many healthcare providers concerns about prescribing psycho-stimulants in patients with substance use disorders, the fact of the matter is that when long-acting stimulants are prescribed to treat ADHD, the incidence of substance abuse and substance dependence is reduced substantially. Long-acting stimulants also diminish the potential for abuse, dependence and diversion because the rise in dopamine levels in the brain are much more gradual compared to short-acting stimulants and do not typically produce intense euphoric effects, even at higher-than-normal doses.

- Another consideration as to why properly dosed stimulants actually reduce the incidence of substance abuse and dependence is that they have a paradoxical effect in patients with ADHD versus patients that do not have ADHD. In ADHD, stimulants have a calming effect, which lessens the symptoms of intolerance of boredom and allows a person to be able to overcome their observable outward restlessness, as well as their "inner restlessness," and be able to sit and relax or be able to focus without having to self-medicate with things such as alcohol and/or marijuana, which are of the first line drugs of choice, along with caffeine and nicotine, in substance-related disorders in patients with ADHD.

ADHD Treatment Options

Medication: Stimulant medication remains the first-line choice in initiating medication therapy in ADHD. It is best to use long-acting stimulants, with the newest agents having a duration of action of 12 to 14 hours. Short-acting stimulants are much more prone to abuse and diversion, and they require multiple doses in the course of the day. By avoiding medication that requires mid-day dosing, you avoid the typical pitfall of the fact that more 50 percent of midday doses get missed. In children and adolescents, long-acting stimulants can be monitored by parents at home and the stigma of being taken out of a classroom setting to go to the school nurse to receive medication can be avoided.

Psychotherapy: Cognitive-Behavioral Therapy (CBT) is particularly effective when treating ADHD. Other types of psychotherapy also play a beneficial role in obtaining the best treatment outcomes.

Additional Observations/Conclusions Relating to ADHD

- The majority of patients who present with Substance Use Disorders will typically have ADHD as one of their underlying comorbid conditions.

- It is interesting to note that in Alcoholics Anonymous publications, including the "Big Book" and the "12 Steps and 12 Traditions," the "character defects" that are often ascribed to a person with alcoholism reads like a laundry list of the character traits that are so common in patients with ADHD. The Big Book was first published in 1939.

- In terms of clues that can tip one off to the fact that a patient may have ADHD, it is important to take a very careful history of a person's using habits. The more common drugs of choice in patients with ADHD are nicotine and caffeine by day, whereas the drugs of choice by night are typically alcohol and/or marijuana. Opiates, benzodiazepines, sedative/hypnotics and barbiturates take a distant third place to the aforementioned substances in terms of drugs of choice. Almost all of the patients encountered in our practice setting with dependencies to stimulants such as cocaine, amphetamine and

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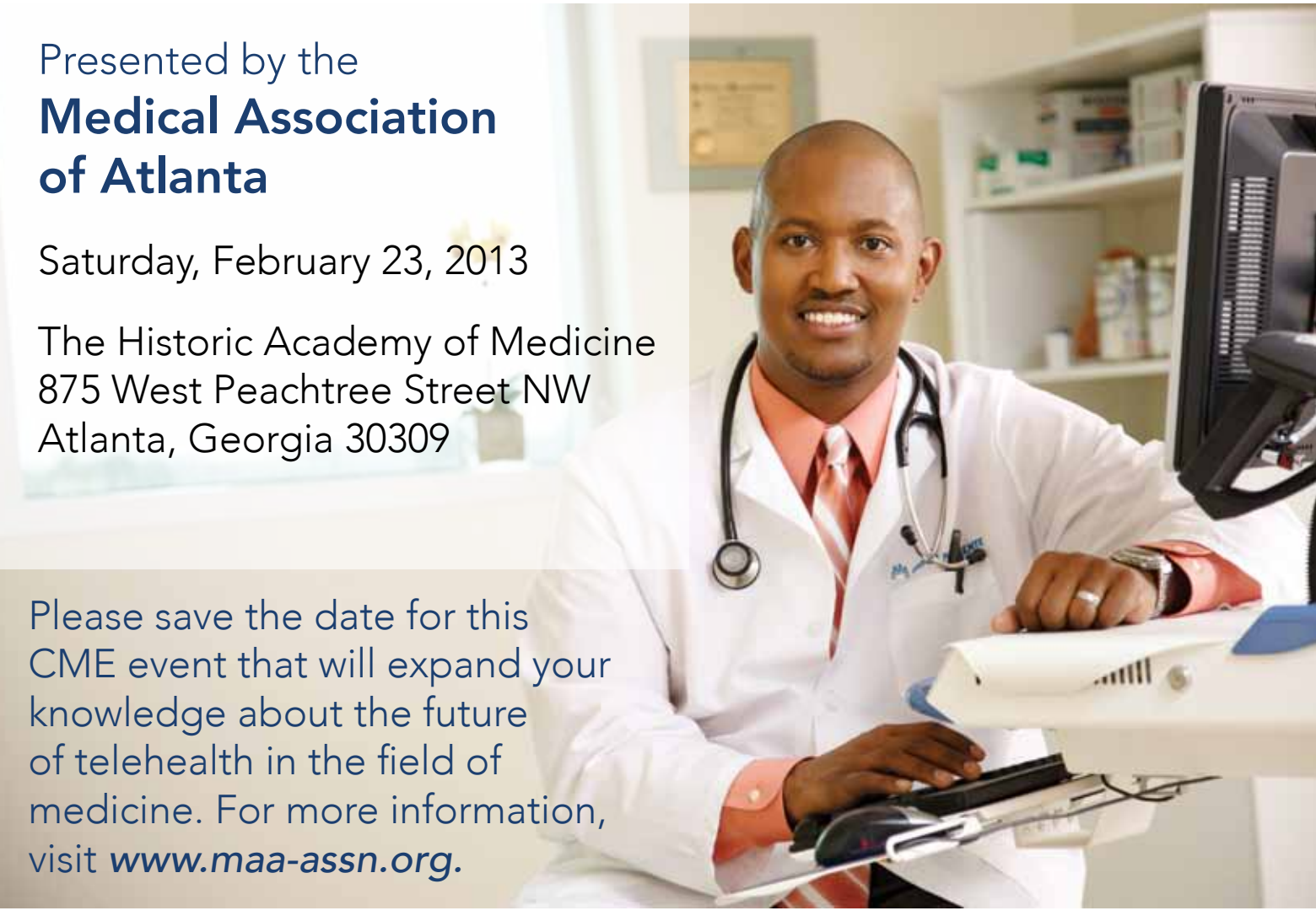

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methamphetamine ultimately were found to have ADHD. Nicotine dependence is so common in ADHD because the stimulant effect of nicotine helps a person's brain with ADHD to function better.

- Recent studies have disproved earlier beliefs that sugar in the diet could be a causative factor in the etiology of ADHD in children.

- In our practice, 70 percent to 80 percent of patients with substance use disorders achieve sobriety by their second or third visit. The basis for these success rates involves accurately diagnosing ADHD and other comorbid conditions and treating them from the very start with the appropriate psychopharmacological agents. Psychopharmacological intervention in conjunction with psychotherapy, CBT (cognitive behavioral therapy) being the primary focus of most psychotherapeutic interventions involving SUD's and/or ADHD, appears to have enormous clinical benefits in terms of treatment outcomes.

- When prescribing stimulants, it is important to advise patients that they should not feel stimulated or over-stimulated while taking a properly dosed stimulant. Persons that take psycho-stimulants that do not have ADHD will typically find it to be a rather unpleasant experience. In patients with ADHD, the psycho-stimulants have a paradoxical effect and will in fact calm the person down and diminish the feeling of "inner restlessness," the force that often drives the impulsive/hyperactive component of ADHD and often leaves a person with ADHD to describe feeling like they are driven by a motor. The fact of the matter is that sub-therapeutic doses of psycho-stimulants will often lead to sadness, depression, lethargy and fatigue. This is the most likely reason why we have all heard stories of children being turned into "zombies" when prescribed methylphenidate or amphetamines for treatment of their ADHD during childhood. During titration of a stimulant, if a patient begins to feel stimulated or overstimulated, then it is typically the case that they're dose is too high or they have not curtailed their use of caffeine. (It may also simply be representative of the fact that 99 percent of patients who initiate stimulant medication therapy will complain of one or more adverse events in the first three months of therapy, whereas at nine months, only 1 percent or less will harbor complaints of adverse side effects]. If the stimulant dose is not reduced, it will cause depletion of natural stores of dopamine and norepinephrine in the brain, which will subsequently lead to diminished attenuation of ADHD symptoms over time. Doses that are too high will also typically cause a person with ADHD to push the limits of what they can accomplish in a day. They will cut back on sleep day after day, but they will not be impacted by the effects of this sleep deprivation for weeks, or even months, because of the fact that their morning dose of stimulant medication masks their building sleep debt and their need for more sleep. Over time, the sleep debt ends up wreaking havoc upon executive functioning and leads to a steady decline in the benefit that a patient will derive from their psycho-stimulant medication.

Conclusions: The interplay and overlap of various behavioral health disorders and their associated neurotransmitter imbalances are complex and fascinating. The variability in how behavioral disorders display themselves from person-to-person, as well as the variability observed in how treatment responses can vary from person-to-person using the same treatment methods for the same diagnostic entities, only underscores that so much of the success in behavioral health treatment outcomes is both art and science. ■

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Legal Insanity in Murder

A Case Analysis

In a criminal trial, a jury is required to find an accused not guilty by reason of insanity where it is demonstrated that he was, in fact, legally insane at the time of the commission of the act in question. This complex and fact-sensitive legal standard can be applied to the field of psychiatry in a manner that is subject to evolving conceptualizations of what it means to be insane and how this should interface with the justice system.

The Shooting

On November 18, 2010, Hemy Neuman, an engineering executive at General Electric, walked into the parking lot of the Dunwoody Prep Day School and shot and killed Russell (Rusty) Sneiderman, sending shock waves through the community and making headline news.

The criminal trial that ensued revealed the following facts: After the shooting, Mr. Neuman fled the scene, returned his rental car and went to work to conduct business as usual. He was arrested less than two months later and tendered a plea of not guilty by reason of insanity.

Mr. Neuman had no known history of mental illness and was a successful engineering executive. He planned the murder and undertook to cover his tracks, raising the question of whether someone can intelligently plan a murder and still be legally insane.

Abandonment in Childhood

– The Genesis of the Insanity

Mr. Neuman was the middle of three children. His father, a Holocaust survivor, was often absent from home due to work obligations and had a violent temper. His mother did not work, but was also frequently away visiting friends or on shopping trips.

At age 13, Mr. Neuman was sent to boarding school in Israel. He arrived alone in a land bereft of a familiar face and where he did not speak the language. He considered this as the ultimate abandonment by his family.

He spent his first winter break on the school premises, alone in a farmhouse since he was not allowed to remain in the dormitory. He became depressed and, for the first time, experienced a presence that later became known as the "Shack Demon." This menacing demon made disparaging comments about Mr. Neuman's worth and encouraged him to kill himself.

Over the ensuing years, Mr. Neuman had several depressive episodes heralded by the appearance of the demon and marked by feelings of worthlessness, hypersomnia, poor motivation and occasional passive suicidality.

Mr. Neuman completed high school in Israel and returned to the states to obtain a bachelor's degree at Georgia Tech. He worked in Israel for nearly 20 years until he moved back to Atlanta.

In addition to suffering from depression, Mr. Neuman had episodes of hypomania where he experienced the following: sleeping three to four hours a night, increased creativity, masturbation three to four times a day, assuming more projects at work, impulsivity and excessive spending. For the most part, these episodes went unnoticed by those outside of his family until 1998, when he impulsively quit his job in Israel and moved his family to Boca Raton, Fla., without first securing employment.

While there he bought a home and enrolled his children in private school. After a year of unemployment, Mr. Neuman moved back to Israel. This period of hypomania and subsequent episodes eventually resulted in an accumulation of enormous financial debt.

Mr. Neuman's last depressive episode prior to the shooting occurred when the demon surfaced after a lengthy absence in the context of marital and financial problems. He looked to his job for validation but was disappointed when he did not secure the recognition expected from superiors during his employment annual review. Mr. Neuman felt suicidal and unsuccessfully tried to drive his car off the road.

The Influence of Andrea Sneiderman

In April 2010, shortly after recovering from a depressive episode, Mr. Neuman hired and trained Andrea Sneiderman. On their second business trip, Mr. Neuman told

Andrea Sneiderman

Mrs. Sneiderman about his abandonment experience and being sent off to Israel. He felt Mrs. Sneiderman listened and understood his perils, which allowed him to form a special connection to her. They took several more business trips alone and their relationship became progressively more intimate.

Meanwhile, Mr. Neuman transitioned from a depressive episode to hypomania where he worked long hours, masturbated frequently, slept a few hours a day and became increasingly emotionally attached to Mrs. Sneiderman.

After the third business trip, Mr. Neuman experienced the presence of what he called an angel, which, in appearance and demeanor, was the opposite of the demon seen earlier. The angel told Mr. Neuman that he and Mrs. Sneiderman were going to be together and that he was the father of her children.

Mr. Neuman informed Mrs. Sneiderman of this revelation, at which time she told him she was committed to her husband. They continued to talk about what Mrs. Sneiderman perceived as Rusty Sneiderman's shortcomings and how he was not attentive to the children's needs. The angel then made another appearance to Mr. Neuman, stating that the children were in danger and their safety was contingent on killing Mr. Sneiderman. Believing this to be true, Mr. Neuman then proceeded with a plan to terminate Mr. Sneiderman.

The Insanity Defense

Georgia's legal standard for insanity is that at the time of the offense, a mental illness must prevent the accused from knowing right from wrong in relation to the offense, or the accused must have had a delusional compulsion that overmastered his will to resist committing the offense.

Since there was no delusional compulsion claim by the defense, the second prong of this criteria was moot: The jury was instructed to focus solely on whether a mental illness prevented Mr. Neuman from distinguishing between right and wrong as it related to the shooting.

The Prosecution

The prosecution's expert examined Mr. Neuman and

asked him to correlate the sound of the voices of the angel and demon to particular people. Mr. Neuman then identified their voices as sounding like Barry White and Olivia Newton-John. The expert opined that these were false hallucinations and not consistent with genuine mental illness. She therefore concluded that Mr. Neuman was malingering (feigning) mental illness.

True hallucinations affect any of the sensory modalities, but auditory hallucinations are more commonly seen in a psychiatric illness such as bipolar disorder. Although we do not completely understand the mechanism of the hallucinatory experience, we believe auditory hallucinations result from neuronal firing in the auditory pathways of the brain, and visual hallucinations originate from the visual cortex. In the absence of a drug intoxication or major metabolic disturbance, it would be unlikely for an individual to experience a true hallucination that he can see and hear simultaneously.

Therefore, according to the prosecution's expert, since Mr. Neuman did not have a mental illness, he failed to meet the criteria for insanity. The prosecution's expert stated that Mr. Neuman's ability to plan and hide his actions suggest that he was cognizant of the wrongfulness of his actions. Furthermore, the expert noted that although Mr. Neuman's reported symptoms were consistent with bipolar disorder, it is unlikely that his condition would go undetected for so long.

The Defense

Mr. Neuman's case received attention from the media, which focused on the issue of him allegedly saying that Barry White and Olivia Newton-John told him to kill Mr. Sneiderman. However, Mr. Neuman did not claim those celebrities commanded him to do anything. These identifications were made in response to leading questions by the expert.

Also, Mr. Neuman conceded that these figures may have been imaginary. Defense experts concluded that the experiences were not hallucinations, but were rather projections of his own thoughts into physical forms, a defense mechanism supported by psychological testing. Ergo: There was no reason to consider Mr. Neuman to be malingering mental illness.

Defense experts observed that Mr. Neuman's experience in Israel with the Shack Demon was the first manifestation of his mood disorder. He provided a history supported by collateral sources of discrete and periodic episodes of depression and hypomania spanning many years. It was not until the last episode that the hypomania became mania, leading to the delusional state that was related to his abandonment experience as a child.

Through his interactions with Mrs. Sneiderman, the defense experts found that she primed Mr. Neuman's delusions by planting the idea that her husband was harming the children in the same way that Mr. Neuman's parents harmed him: by callous neglect. This idea was streamlined into his delusional belief system, causing him to commit this act.

The defense contended that Mr. Neuman's attempts to hide his actions related not to evading justice but to preventing Mrs. Sneiderman from discovering that Mr. Neuman had killed her husband. Mr. Neuman feared her reaction since she was adamant that she was committed to a relationship with her husband.

The assertion that bipolar disorder, if genuine, would have been detected sooner was refuted by noting that Mr. Neuman's behavior was noticed by those close to him. His depressive states interfered with his social and marital life but did not render him unable to work. His hypomanic states, while creating personal and financial problems, increased his work productivity. It was not until the summer before the shooting that his colleagues noticed his over-commitment at work and irritable demeanor. Therefore, a person can

The prosecution left to right: Chief Assistant District Attorney: Don Geary, Pamela Crawford, M.D., District Attorney: Robert James

be hypomanic for extended periods of time without there being overt behavioral changes, especially if he continues to successfully meet essential work or personal responsibilities.

Often with psychiatric disorders, a key component in diagnosis is the degree of personal or occupational impairment. Mr. Neuman at baseline was intelligent and high functioning. Therefore, his deviation from baseline rendered him still functional to the degree that he was able to avoid treatment.

The defense left to right: Adriana Flores, PhD, Doug Peters, Bob Rubin and Tracey Marks, M.D.

The summer before the shooting was his first experience with psychosis. Rarely is someone with bipolar disorder who becomes actively psychotic able to avoid the attention of health care professionals or the police. Unfortunately, Mr. Neuman's first psychosis resulted in disastrous violent consequences.

Mr. Neuman's colleagues may not have noticed his delusional state because his delusions were non-bizarre and markedly circumscribed in content. A non-bizarre delusion is one where its surrounding circumstances are logically plausible, albeit highly improbable. The ability to compartmentalize one's delusions can enable the person to remain quietly delusional and continue to function well in areas that don't involve the delusion.

As for the ability to distinguish between right and wrong, the standard requires that one be unable to distinguish between them in relation to the act in question. The defense did not argue that Mr. Neuman was unable to know that murder was morally wrong. Instead, the defense contended that Mr. Neuman, while capable of knowing that murder is wrong, did not conceptualize the act as murder because of his delusion that he needed to protect the children. In other words, because of his delusion, the act was justified.

Ordinarily, killing someone to save a child from abandonment is unjustified. But, in Mr. Neuman's mind, the pain he suffered as a child was equal to the danger that in normal circumstances would justify the taking of another's life. This inability to understand the level of danger to which the children were subject rendered him incapable of appreciating the wrongfulness of his action.

Conclusion

The jury rejected the defense and found Mr. Neuman guilty but mentally ill. He was sentenced to life in prison without parole. Later, the jury foreman stated the jury believed Mr. Neuman had a mental illness at the time of the shooting but should nevertheless not be released from custody because he terminated a life.

The jury here may have reached its verdict based on an assessment of the merits of the insanity defense in murder cases rather than an objective application of the legal criteria to the facts. This underscores the evolving challenges of interfacing law with medicine in a way that leads to a uniform and predictable application of legal criteria to the insanity defense. ■

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Sheldon B. Cohen, M.D..

A Member of the Medical Association of Atlanta since 1959

I'm grateful to Michael Hilton for asking me to reflect on my association with the Medical Association of Atlanta for this special issue. And I'm grateful for the opportunity to think back on what the organization, and, more importantly, the people associated with it, who have meant so much to me for more than half a century.

After two years on the faculty at Tulane, I came to Atlanta with my family in 1959 to continue my career in psychiatry. I soon joined what was then known as the Fulton County Medical Society (FCMS), whose monthly professional meetings were held in the Academy of Medicine. The scientific MAA bulletin was published monthly.

Our Organization

In those days, the FCMS meetings were opportunities for metro Atlanta doctors to meet, compare notes and learn from each other. It was a most collegial group. I felt welcomed. The monthly meetings were held at the Academy of Medicine, then owned by FCMS, and dinner was served by the wives. Subsequently, with the geographic spread of hospitals and their educational programs, the MAA shifted its format to quarterly meetings, which more and more focused on bread-and-butter issues. Likewise, the publication shifted from monthly to quarterly and from strictly scientific epistles to those that concerned physicians' practices.

At that time, America, including Atlanta and FCMS, was undergoing a revolutionary change in race relationships. In 1952, MAA was integrated. William Mason was the first African American admitted as a "scientific member." In September 1962, Lee Shelton and Asa Yancy became full members.

In my 53 years as a member of the MAA, we've been lead by a succession of distinguished physicians who went on to serve the Medical Association of Georgia, and one, Harrison (Jack) L. Rogers Jr., became president of the AMA. As a longtime member and having served on the Board of Trustees for three terms, beginning in 1988, I was privileged to know and work with many of these physicians, some of whom became lifelong friends.

After many gyrations, the Medical Association and the Atlanta Medical Heritage went separate ways. The Academy of Medicine was given to Georgia Tech, which has refurbished the venue. MAA has found a new home. MAA now sponsors periodic scientific and social events, which are lively and stimulating. In my opinion, it will continue to be a focus for doctors of the area, as we try to move forward out of the current state of mismanaged, non-caring reimbursement to something that will enable us to continue to serve our patients

Leadership Changes

Teresa (Terry) E. Clark was the first woman to break the glass ceiling as president in 1989. In 1994, Michael A. Haberman became the first psychiatrist to become president. In 2002, Gary C. Richter was the first African-American president.

My Saga at MAA

Shortly after attending one of my first meetings at MAA, I volunteered to give a presentation about a couple, both of whom were alcoholics. At that time, I didn't know much about alcoholism. I had to become a quick read when I was appointed Chair of the Committee on Alcoholism. (This shows what can happen if you don't keep your mouth shut!) I continued my boyhood involvement with the Scouting Committee, doing physicals at Camp Bert Adams and coleading the Explorer Medical Group with Grady Clinkscales. As chair of the Public Health Committee, we worked with numerous organizations that spread the word about medical developments.

Much of my involvement with the Medical Society was via its publications. I was invited by outstanding editors to contribute a wide variety of scribblings. They gave me support and encouragement, and I formed enduring friendships with some of them.

Enduring Friendships

Nick Davies was a dear friend and my own physician for a number of years. I smile as I think about our wide-ranging conversations during my periodic (every five years) visit to his office. Nick chaired the Board of Visiting Nurse, and his love of books extended far beyond medicine, so that he chaired the Fulton County Public Library. Nick was the epitome of a Renaissance physician, and someone we lost

far too early. Bob Lathan has shared my concerns about tobacco addiction and encouraged me to write a number of tobacco-related articles. Bob is another Renaissance man, running ultra marathons and writing medical and historical pieces. A distinguished radiologist, Boyd Eaton has written extensively about nutrition, particularly how diets of early man have much to teach us about proper food intake today. I enjoy his stimulating company almost every week. Marty Moran, a past president of MAA, has published histories of medicine in Atlanta and at Grady Memorial Hospital and is the go-to person about medical history in Atlanta. He is active in many civic endeavors and leads a book club of physicians, managing to lasso outstanding speakers about medical history and current medical issues.

The Atlanta Coalition Against Tobacco (ACT) was founded by Levering Neely around 1985. After Neely's untimely death, Bob Lathan and I became cochairs of ACT, which initially focused much of its energy on getting tobacco out of hospitals. MAA was crucial to ACT in the 1980s and 1990s, with meetings held at the Academy of Medicine and members of MAA active in the organization.

Publications

I was pleased to respond to requests to write articles on psychiatric ethics, mental health legislation and changes in psychiatric practice. Sydney Isenberg edited an April Fools issue, and I wrote about my mindboggling experiences as a member of the Fulton County Grand Jury, "I was a spy for the MAA on the Grand Jury."

I've been concerned about tobacco addiction for most of my professional life, and that interest has been reflected in my affiliation with the MAA. When the Surgeon General released the first report on tobacco in 1964, I raised the question as to how the MAA should respond. At that time, the meetings at the Academy of Medicine were smoke-filled—as were most meetings back then—and the question prompted a good bit of hand-wringing. However, over time, that attitude changed. Both the Bulletin of the MAA and the Journal of the Medical Association of Georgia welcomed contributions from myself and others about the need to address tobacco addiction. One of my tongue-in-cheek pieces was titled "The Debt American Society (Especially Medicine) Owes to Tobacco" (Atlanta Medicine, Winter 1995). The article noted that both medical practices and the funeral industry would lose millions of customers without cigarettes. Tobacco was deeply imbedded in our culture, and one of our MAA presidents farmed tobacco. To his credit, he subsequently sold that farm.

The Future

My longstanding interest in eradicating tobacco use is part of what I see as my fundamental role as a physician: to help those in my care take better care of themselves. This includes making wise choices throughout life. Finding myself at the golden age of 84, I am all the more cognizant of our role in empowering people to deal with illness and to make decisions about end-of-life care.

I suggest that each physician come up with one concept that will be helpful to the practice of medicine. My own single idea is the strong need to have all of our patients (regardless of age or state of health) have up-to-date living wills and/or durable power of attorney. Frequently, I see people who have not prepared and have disastrous consequences when a family member is taken to the hospital, in extremis, without having such a document. Even though their accompanying family members "know" their loved ones' wishes, physicians—possibly fearing legal consequences—go to drastic means to keep hearts and lungs beating.

On the downward slope of life's bell curve, I have experienced what it could have been like if my dear wife of more than 54 years and I had not had such provisions when she became ill. Patients are frightened by the fear that even discussing the need for end-of-life arrangements means that there is a "death panel," and that they or their loved ones will have their lives snuffed out. All of us practicing medicine know that this is not true, but …

All of us will confront this dilemma repeatedly. I see people who are referred to me because they have terminal illnesses and need some help and support, in addition to having long-term patients who develop incurable illnesses. We will all sleep much more soundly when we have taken this step ourselves and help our patients take it.

Hopefully, paraphrasing Robert Frost, we all have miles to go. ■

The Last Word?

Paul McHugh and colleagues are on a crusade to radically rethink the manual that has come to define psychiatry.

By Mat Edelson, Illustration by Nigel Buchanan

PHOTO BY RICHARD CHISOLM

It is a book both revered and mocked by those within the profession—a 943-page diagnostic tome that was never intended to be a bible, yet nonetheless has been elevated to Final Word status by the majority of the nation's practicing psychiatrists. It is not apocalyptic to state that the future status of the profession, its perceived capacity to help versus harm, may well rest on the book's next chapter…

So perhaps it's only appropriate that, with the Fifth Edition of the *Diagnostic and Statistical Manual of Mental Disorders* (a.k.a. DSM) on the verge of descending from the mountain top, a former DSM acolyte-turned-heretic is leading his disciples away from the dogma, and toward what he envisions as a promised land where mental illness and its sufferers will be seen and treated in a healing new light.

To understand Paul McHugh's love/hate relationship with the DSM is to understand the history of the book itself. Actually, it was more of a short synopsis in its first two incarnations, circa 1952 and 1968—nascent attempts to categorize and nomenclate the expressions of mental distress. But by the early-70s, it was becoming clear that psychiatrists, depending upon their particular schooling and inclinations, couldn't agree on diagnoses; their infighting was reminiscent of the Islamic parable of the Six Blind Men and the Elephant, who, depending upon what part of the creature they touched, concluded that the animal definitely was either a wall, spear, snake, rope, fan, or a tree.

There was nothing amusing about the diagnostic inconsistencies then facing psychiatry. A landmark study in 1971 showed that, when

evaluating patients with identical symptoms, American psychiatrists generally concluded the patients had schizophrenia, while British psychiatrists leaned toward a diagnosis of major depression. Two years later, a study in *Science* went a step farther; researcher David Rosenhan sent volunteer "pseudo-patients" claiming audio hallucinations into a dozen psychiatric hospitals across the U.S., where they were all admitted, some for weeks, with a schizophrenia diagnosis. The hospital's diagnostic criteria never ferreted out the fakers among their general schizophrenic population, leading Rosenhan to conclude, ominously, "It is clear that we cannot distinguish the sane from the insane in psychiatric hospitals."

" We're saying, after a generation of description, you're going to bring out a new edition and the only thing you're going to tell us is you've discovered a few other diagnoses? You don't need a new field guide, if that's the best you're going to do. The time has come to move toward explanation."

—Paul McHugh

Similarly, depending upon whether one landed upon the doorstep of a Freudian, Jungian, behaviorist, or neurobiologically-oriented psychiatrist, one could be diagnosed with a myriad of mental conditions requiring a plethora of different treatments. This lack of agreement on diagnosis— "reliability" in medical parlance—was rapidly becoming an embarrassment to practicing psychiatrists.

"The field was riven by ideological factions," recalls McHugh, who directed the department from 1975 to 2001 and is now University Distinguished Service Professor of Psychiatry. "We had to come up with a classification system, to get the psychiatrists to all agree on what disorders looked like so they could at least call them the same thing."

Enter DSM III. Released in 1980 by the American Psychiatric Association (APA), it was staggering in scope: The work of hundreds of psychiatrists yielded symptoms for 265 diagnoses—for illness ranging from borderline personality disorder to catatonic type schizophrenia. Yet hardly any of the diagnoses had established scientific "validity," i.e., a verifiable base set of causes, notes McHugh. This initially greatly concerned him.

"I told [DSM-III editor] Bob Spitzer, 'Gee, Bob, I don't know; you're starting off by naming stuff whose nature you don't know,'" recalls McHugh. "And he said, 'Nope, Paul, this is the way to do it.' And for the first 10 years after, I thought, 'he's right!'"

McHugh, who was always fascinated by methods—he calls them "perspectives"—for helping to determine causation for mental illness, hopped on the DSM III train because of its implied promise: If psychiatrists, regardless of training and practicing philosophy, could agree on which symptoms led to the same diagnosis, then researchers would have a standardized field of patients to study, and begin to uncover the base causes of different mental illnesses. This was vital, for while different methods of psychological therapy had long been studied, the root causes of what made people mentally ill in the first place, and how best to choose between medications, therapy, and perhaps social services for treatment options, had received far less attention.

DSM III was supposed to fill this research Q and A void, but that's not what happened in the wake of its launch; psychiatric research still lagged as few diagnoses proved easy to pin to a single biological cause. Furthermore, the intentionally atheoretical underpinnings of DSM III meant that "by rule, the APA's editors wanted to stay away from thinking about causes," says Hopkins psychiatrist Kostas Lyketsos.

Meanwhile, the simplified "checklist" system of DSM III—which, critics say, tried to quickly nail down a symptom/diagnosis match using leading questions, without deeply investigating the patient's bio/psycho/social history—was radically transforming psychiatry. As an example, McHugh mentions grief. In the wake of DSM III, it became classified as major depression, "so instead of [doctors] talking with the person about the meaning of their loss, they just started popping pills into them. They lost touch with the humanity of this most basic human emotion."

Still, the checklist concept was proving irresistible: Within a decade the APA found itself with a multimillion dollar bestseller on its hands, as both psychiatrists and physicians outside the field became fascinated by this elaborate diagnostic menu.

"DSM III was meant as a tentative guide to diagnosis. Instead, it was treated like a bible," says McHugh contemporary Allen Frances, who was editor of the 1994 DSM IV before becoming one of the fiercest public critics of the direction the latest DSM edition is taking. "People never took seriously DSM I and II. But the [symptom] sets of DSM III became the subject of cocktail party conversation, they became the subject of research, they became the way insurance companies paid for treatment. It decided who was sick and who wasn't. It became the vehicle for determining disability benefits and who would get school services. And

it was very important in the courtroom. But each time the DSM was used beyond its capacity, the use distorted itself and the place it was being used. It was meant to help psychiatry retain its credibility, but no one realized there'd be this vast overshoot."

By the time DSM-IV rolled around in 1994, Paul McHugh believed that his field was in trouble. The DSM had led everyone to believe they could practice psychiatry: Consider that, with the help of big pharma's "if you have these symptoms, ask your doctor" ads, nearly 80 percent of all psychiatric meds were being prescribed by internists and family practitioners—some in the course of a seven-minute HMO visit. Hardly time to deeply evaluate a diagnosis, let alone get to the cause of the problem.

And it was that explosion of new diagnoses that most concerned McHugh. DSM IV contained nearly 300 diagnoses — three times more than DSM I. "In the early '90s, things dawned on me. "These diagnostic categories that the experts said existed were expanding way out of size. [Patients] only express [themselves] emotionally in so many ways; ultimately doctors began to put lots of people in the anxiety category and the major depressive category, and they were all getting the same kind of treatments," says McHugh. He also believed the DSM was allowing faddish diagnoses to get in without scientific rigor.

"DSM [inclusion] gave cover to certain kinds of major assumptions, such as the 'recovered memory' and 'multiple personality' syndromes. As soon as you said in the DSM that multiple personality exists, then people could build up treatment programs based on the fact that you repressed memories of sexual abuse as an infant. And they went wild on that," says McHugh, whose 2008 book *Try To Remember* recounted his and other psychiatrists' mostly successful efforts to discredit the existence of both conditions.

The price of devotion was becoming too high for McHugh; the harm to families victimized by accusations of false memories of abuse, the infliction of stigmatizing diagnostic labels on seemingly "normal" people, the medicalization of kids to the point where 2-year-olds were being diagnosed and medicated for depression … this was a catechism McHugh could no longer embrace.

Especially because he had already found a better way.

In the May 17 issue of the *New England Journal of Medicine*, McHugh and Hopkins colleague Philip Slavney laid their concerns over the coming DSM revision on the line in an essay titled "Mental Illness— Comprehensive Evaluation or Checklist?" Lead author McHugh didn't mince words: "Identifying a disorder by its symptoms does not translate into understanding it. Clinicians need some heuristic concept of its nature, grasped in terms of cause or mechanism, to render it intelligible and to justify their actions in practice and research."

Leading members of the APA, well aware of the criticism of the DSM levied by McHugh and others, argue the latest version will be able, thanks to electronic publishing, to respond to and potentially correct areas of diagnostic concern within the tome. "I don't like the term 'bible,' says David Kupfer, who is lead editor for the current revisions. "A bible is written once, and we can write commentary on it, but we can't change it. I think it's important to convey the fact that this DSM is going to be a living document. We're calling it DSM 5.0; we see a 5.1, 5.2, and a 5.3, not rewriting the whole thing, but where there is new information, and good thresholds met to change criteria, we want to be able to do that and not have it wait in the queue for 20 years."

McHugh, who maintains a cordial relationship with Kupfer, respectfully disagrees on waiting to implement change. His solution—or at least a suggestion of where DSM 5 should head immediately—is a direction that ironically harkens back to psychiatry's roots at Hopkins of nearly a century ago. That's when Adolf Meyer established the first comprehensive methods for evaluating a patient's life—the origins of the bio-psycho-social model.

That was supposed to be DSM's 21st-century model as well. But even the APA's then president Steve Sharfstein admitted in 2005 that his field had turned into "a bio-bio-bio model" dominated by "a pill and an appointment."

For McHugh, such an approach is anathema to the way he's taught the psychiatric arts to thousands of Hopkins medical students over the past 40 years. While it's impossible for students to ignore the DSM—at the very least, it guides insurance reimbursements that sustain medical practices—McHugh says the DSM is best seen by students as a general field guide to psychiatry, much in the same way amateur bird watchers might look at an Audubon guide to separate robins from starlings.

But to really figure out what makes starlings or people tick—or at least get them flying toward their own personal True North again—McHugh and Slavney's teachings have balanced the DSM's black-and-white influence with their version of modern day Meyerism, which they've written about in *The Perspectives of Psychiatry*. First published in 1986 (a second edition came out in 1998), the book urges psychiatrists to invoke four perspectives with each patient to get to the heart of their condition. The book is considered the foundation of Hopkins clinical training, and its influence has reverberated across the field.

"It is a book for the ages," says Margaret Chisolm, who directs psychiatric education at Bayview and was schooled in McHugh's methodology. They call it the

recipe for applying the bio-psycho-social model." Duke's Allen Frances has an equally humanistic view of McHugh's perspectives: "Hippocrates [says] it's far more important to understand the person who has the disease than the disease the person has. Paul's [perspectives] are following in those footsteps," says Frances.

If it were up to McHugh, the perspectives would become a new organizational structure for both the DSM and the field at large. They include categorizing diagnoses by:

- Brain Diseases, such as schizophrenia
- Personality Dimensions, such as obsessive-compulsive disorder
- Motivated Behaviors, such as alcohol addiction and anorexia
- Life Encounters, including grief and post-traumatic stress disorder

To the layperson, such perspectives appear at first glance to be both subtle and contradictory. Neuro-psychiatrists might suggest that all mental illness is caused by brain disease. Similarly, in a sort of chicken-and-egg conundrum, does someone with anorexia not eat because they are obsessive-compulsive, or does the desire to not eat become obsessive over time?

To McHugh, this is where the monochromatic current viewpoint of the DSM has to yield to the investigation, reflection, and consideration of numerous causal factors that can be brought forth by applying the perspectives to each psychiatric patient. Instead of a rush to diagnosis, the emphasis becomes about understanding, insight, and appropriate treatment.

Each perspective is brought to bear, like applying rotating gel lights of different colors to the same stage. Subtle? Yes. Field changing? Perhaps. It's worth noting that, in a journal noted for vigorous debate, there was no rebuttal from the APA or others to the McHugh/Slavney call-to-arms. If anything, some of the country's top psychiatrists are embracing his message.

"I think Paul's perspectives nails it," says University of Iowa psychiatrist Arnold Andersen, an eating disorders authority who spent 15 years at Hopkins working with McHugh. They address the issue by recognizing that different modes of reasoning are needed to appreciate the real-life, categorical differences between different types of psychological distress.

"Take alcohol abuse," continues Andersen. "It's a behavior with different sources. There isn't any one treatment until you trace back the origin. The little old lady who has sherry before her Canasta game to calm a benign hand tremor is very different from the 13-year-old who just loves alcohol and has no side effects [that's almost always genetic] and from the person who uses alcohol to cope with

a high-stress situation. To categorize those three on a single checklist implies the job is done.

"By contrast, Paul's approach is the soundest I know. The perspectives have a methodological approach; when he finishes with a global assessment [of a patient], you have a comprehensive guideline on how to begin with treatment. If DSM 5 would put their different disorders into his categories, you could begin to reason in a far more sound way."

"I have eight pages on Paul's system," says Harvard psychologist Jerome Kagan, referring to his own book, *Psychology's Ghosts: Thee Crisis in the Profession and the Way Back* (2012). To Kagan's thinking, while McHugh's first three categories can all lead back to biological roots, "Family four was his brilliant idea; that any of the symptoms in families two [personality dimensions] or three [motivated behaviors], can have mainly environmental causes."

"Consider," Kagan says by way of example, "that the best predictor, right now, in any part of the world, of whether you're going to have anxiety, depression, impulsive aggression, gambling, or drug abuse is the social class in which you grew up." By solely using DSM, social status might never be discussed on the way to, say, a diagnosis of depression with resulting treatment being anti-depressive drugs. However, using McHugh's approach that considers environment, the diagnostician might uncover that the

onset of the patient's depression coincided with his being laid-off six months previously, and part of the long term therapy might include engaging social workers to help the patient find employment.

McHugh also notes the perspectival approach could be used by family practitioners to help them better evaluate which conditions can be handled comfortably in an internist's office—especially given their longtime familiarity with most patients—and which should be referred out to psychiatrists, who in many cases could work with the internists to help diagnose and best manage care.

McHugh said he wrote the *NEJM* essay because, after more than a generation of teaching the perspectives he wanted to give them a public airing, especially in light of the development of DSM 5, which has been in the study group phase since 2004 and is set to be released next year. Given that, as he notes, the APA will "make millions in royalties" from the publication of DSM 5, it would be a "failure of leadership" if the book is identical in scope to the previous two that focused exclusively on descriptions of illness. "Every discipline has a right to go through a descriptive phase. We're not blaming anybody for that," says McHugh. "But you begin to criticize [leadership] when they say they can't move out of the descriptive phase. We're saying, after a generation of description, you're going to bring out a new edition and the only thing you're going to tell us is you've discovered a few other diagnoses? You don't need a new field guide, if that's the best you're going to do. The time has come to move toward explanation."

For as much as the DSM is being debated for its impact on patients, far less chatter surrounds the effect it has on medical students and residents at institutions where it is treated as The Book. McHugh strongly believes that such "training to the test"' has the effect of driving would-be psychiatric residents into other fields.

The textbook education using just the DSM does such an injustice to the field," says second-year Hopkins psychiatric resident Rachna Hundal. Her own medical school psych rotation in Philadelphia, she says, "was just about DSM. We were taught based upon DSM definitions. Our exams were DSM definitions. That education did not draw anyone into the field."

Even with a serendipitous mentor or attending physician who can see beyond the DSM and excite a student about psychiatry, many young doctors arrive at Hopkins after medical school—or even residencies—completely dependent upon the manual.

Kotsas Lyketsos, chairman of psychiatry at Johns Hopkins Bayview, worries that this can draw the wrong people to the field. The DSM gives the appearance that psychiatry is easy, so people who are interested in basic research would be happy to come through psychiatry, learn the checklist, get the imprimatur of being a psychiatrist [with no intent of engaging clinical practice], and not really learn what it's really like to think through a problem facing a patient."

What Lyketsos and colleague Margaret Chisolm are doing is taking McHugh's perspectives one important step further—to a place that they hope will attract more medical students to psychiatry. McHugh's textbook on the subject is considered a masterwork, notes Chisolm, but it's not easily digestible for students relatively new to the game. The joy has always been in listening to the entertaining McHugh speak, she says. This oration was the most accessible way to pass along his insights about the perspectives to students. It fell upon Lyketsos and Chisolm to set the sermons in stone, or as Lyketsos jokes, given his Grecian upbringing, "we had Homer; what we needed was the *Iliad*."

Their new book, *Systematic Psychiatric Evaluation*, seeks for the first time to put rules to McHugh's perspectives and give diagnosticians more confidence in their global assessment and treatment of patients. "Rule number one is, you want to take a complete history, and there are certain elements that go into that. You want to ask general questions that are not directing the answers," says Lyketsos. "Remember, in DSM you can't do that; in DSM you're directly asking questions that say 'do you have this symptom or that symptom?' So if you were strictly applying just DSM, you could not ask open-ended questions."

In the end, what Lyketsos, Chisolm, and McHugh are looking for in future psychiatrists is—well, there's no other word for it—perspective. It's not about throwing out the DSM. "It drives treatment authorization, so you need as a practitioner to learn enough about it to use it, just as long as it doesn't drive patient care," says Lyketsos. Instead it's about emphasizing the "perspectival approach" to best guarantee that every appropriate treatment option can be explored.

Will the approach ultimately find its way into DSM 5? Probably not, given the publication's deadline of 2013. But by going public with his critique of the DSM process, McHugh is no longer a lone voice in the wilderness.

"Paul is a man of conscience and courage," says Frances, who criticized DSM 5 because of his concerns that proposed expanded new diagnoses could, as he wrote in a *New York Times* op-ed in May, "define as mentally ill tens of millions of people now considered normal."

"Paul is part of the inspiration of me [writing publicly] about this stuff," says Frances. "It's not really part of my personality to be a crusader, but he's an example that you can't just sit on the sidelines."

Not while there's work still to be done. ■

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MAG House of Delegates Report

The 158th Medical Association of Georgia House of Delegates was held October 20th – 21st in Savannah GA. The MAA had its largest delegation in recent years in attendance with 55 members making the trip to Savannah to represent Atlanta area physicians at MAG's annual policy meeting. 44 resolutions were submitted for policy consideration this year with covering issues from all areas of medicine. A special committee was formed to hear resolutions related to health care reform.

This year's house heard respectful debate from various points of view and saw policy adopted that included input from physicians from various specialties and practice models. It was exciting to see physicians joining together to advocate for patients and physicians. This debate is at the heart of organized medicine.

The MAA would like to congratulate MAA Past President William E. Silver, M.D. who was elected President-elect for the Medical Association of Georgia and MAA Past President John S. Harvey, M.D. who was elected for another term as speaker of the house for the Medical Association of Georgia

The MAA encourages members to get involved and become the physician leaders in our state. Plan to attend next year's House of Delegates at Lake Lanier with our delegation.

A special reference committee heard resolutions relating to Health Care Reform. Thirteen resolutions were submitted to create MAG policy on Healthcare reform moving forward. A complete report on the HOD will be available in MAG's next journal.

Reference Committee HC Resolutions

601 - Accepting Medicaid Payments Under the Patient Protection and Affordable Care Act (PPACA)

602 - CMS Innovation Center

603 - Comparative Effectiveness Research

604 - Dissolution or Meaningful Change of Independent Payment Advisory Board (IPAB) (revised, as of 10.02.12)

605 - Expansion of Medicaid Eligibility

606 - Fair Payment to Hospitals for Outcomes

607 - Georgia Health Insurance Exchanges

608 - Medicaid Expansion

609 - Reduce Fault Tort Reform

610 - State Health Insurance Exchange Reimbursement Rates

611 - Support for the Medicaid Expansion Under the Patient Protection and Affordable Care Act (PPACA)

612 - MAG to Support Legislation to Adopt Clinical Algorithms

613 - Relax Criteria for Attainment of Meaningful Use

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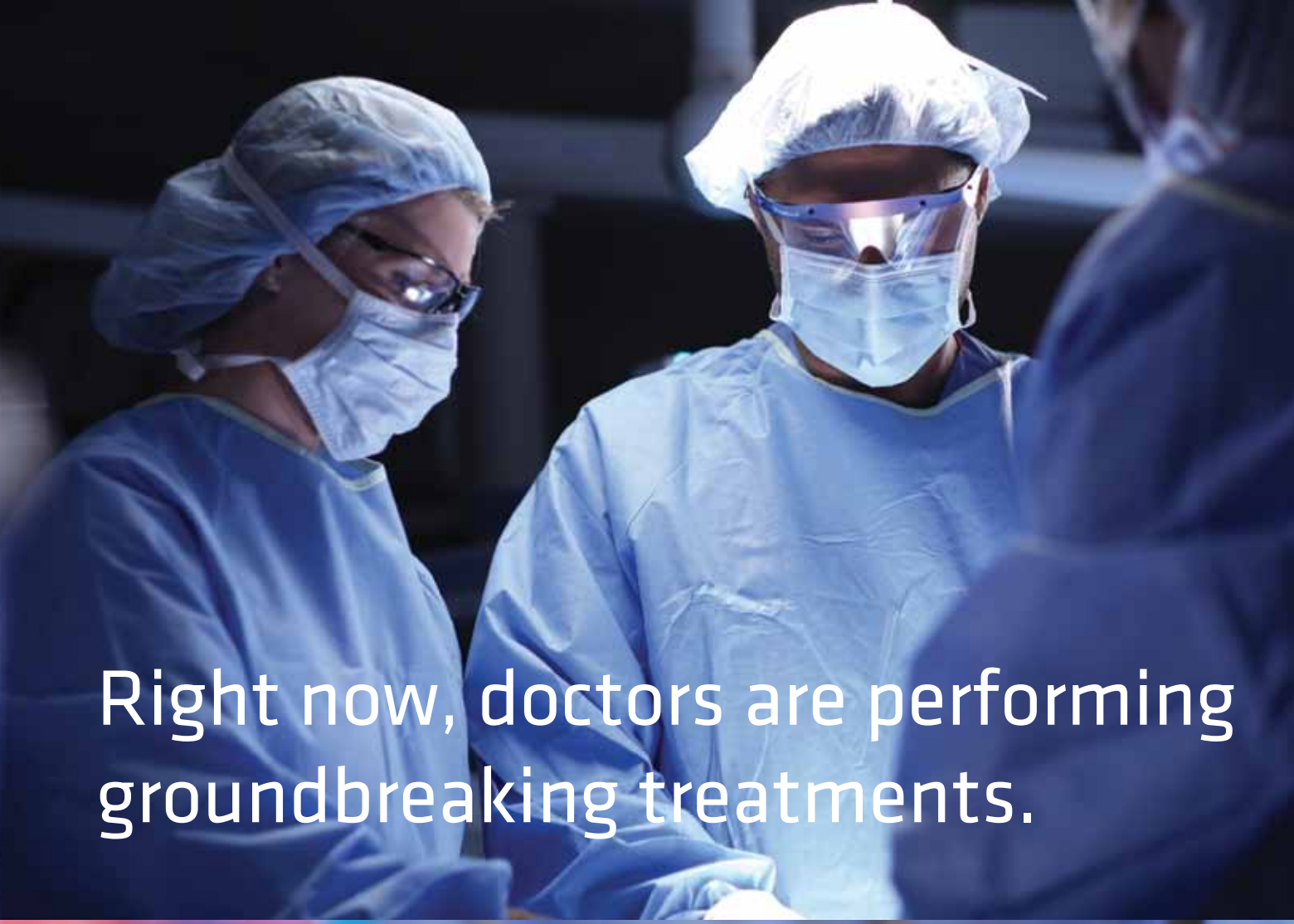

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