

► **Interventional Psychiatry Makes New Strides**

The two legs of treatment that mental health care has long relied on—medication and psychotherapy—prove insufficient for the large percentage of patients with treatment-resistant mental illness. This includes primarily the tens of millions who suffer from treatment-resistant depression. But with newer and improved tools, such as transcranial magnetic stimulation (TMS), and vastly refined electroconvulsive therapy (ECT), psychiatry is more directly correcting the physical basis of these behavioral health conditions.

“These approaches are not only safe and effective, but they can help refractory patients avoid the systemic effects of conventional drug therapies,” said Tyler Veterano, DO, medical director of interventional psychiatry at Virtua.

TMS: Ease of Treatment, Strong Results

Gaining broader use, TMS is delivered on an outpatient basis. Imaging techniques have proven that depolarization of neurons resets and stimulates brain activity. After initial mapping and dose calculation, most Virtua patients receive TMS as intermittent theta-burst stimulation (iTBS), which shortens delivery time to just a few minutes. Patients are awake, and they resume normal activity afterward.

The therapy targets the medial and lateral prefrontal cortex, a brain region critically involved in cognitive control, including balancing emotional, reward, and deliberative processes. Virtua uses the Brainsway TMS system, which employs a Hesel coil (a special winding of the electromagnetic coil configuration) for diffuse, deep TMS stimulation. Acute treatment is five days a week for several weeks, usually followed by fewer treatments up to 12 weeks. Many people notice significant improvement within a few weeks, and results may last for months or longer.

The FDA has cleared TMS for treatment-resistant unipolar depression (as well as for anxiety associated with it), OCD, and smoking. Patients appreciate increased energy levels, better sleep quality, and improved focus and concentration.

ECT: Dependable for Severe Cases

For more-severe, psychotic cases (including bipolar and schizo-related disorders), Virtua Mount Holly Hospital has provided ECT for more than 20 years. Recognized by the APA, AMA, and NIMH as the most effective option for these individuals, ECT is now delivered with improved devices and protocols, adding sensitivity and balancing efficacy for better, more-consistent results. The therapy produces substantial improvement in about 80% of patients.

Evolving Future of Psychiatry

Virtua patients with difficult-to-treat mental illness undergo a comprehensive consult to look at all options, with the interventional techniques permitting the team to accelerate any patient to the right treatment level. Virtua plans to add additional interventions in the future.

Though interventional, TMS and ECT are noninvasive. They increase neurotransmitter activity. Virtua treats only adults, but these therapies apply to all ages, including teens. Side effects are short lasting and/or readily addressed. Most patients have reimbursement coverage and continue psychotherapy and/or medication concurrently.



Many patients with treatment-resistant depression respond to deep transcranial stimulation, and many achieve remission with this therapy.

For more information, call 609-914-6550 or email InterventionalPsych@virtua.org.

Case Illustrates Safety, Effectiveness of ECT

Three years ago, patient B. came to Virtua Behavioral Health suffering from major depression. A resident of Ocean County in his late 50s, B. is a medical professional. His mood disorder was preventing him from working and interfering with most other aspects of his life.

Thorough evaluation confirmed his history of treatment failure with medications and other noninterventional means of interdiction in his depression. With the significance of his symptoms, the Virtua team recommended him for electroconvulsive therapy (ECT).

Commuting to Virtua Mount Holly Hospital accompanied by a person to drive him home after treatment, B. went through medical clearance and then began a course of three ECT treatments per week over a four-week period, during which time he discontinued work. During each session, B. received a muscle relaxant to prevent movement from brief seizure and was under general anesthesia for about 10 minutes, with each visit lasting two to three hours total. With B.'s marked response, the team was able to titrate his ECT frequency to twice per week and then once per week.

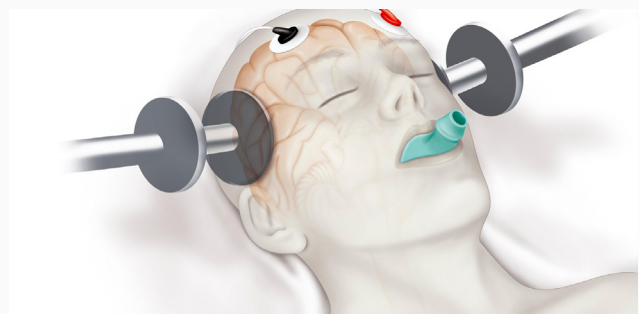
"If ECT is discontinued after initial success, a significant number of patients will relapse within a few months," explained Virtua psychiatrist Tyler Veterano, DO, who also notes that the literature has confirmed that ECT does not damage brain tissue and that studies have thus debunked that concern. **"Misconceptions have been widespread about ECT, but this therapy is actually neuronal proliferative and even contributes to patient life expectancy,"** he added.

B. moved to a monthly, six-week, three-month, and finally every-six-months schedule of ECT maintenance treatments as he regained a high level of functionality and quality of life.

"We don't want patients tethered to this service," said Dr. Veterano. "We strive to get them better and keep them that way with as few treatments as possible."

The ECT team works hard to help patients become self-regulating and self-monitoring in terms of their need for further treatments over the longer term. B., for example, was planning an important overseas trip, at which point he requested and was recommended for a short, acute, repeat series of six prophylactic ECT sessions. The treatments allowed him to travel successfully.

"If symptoms return at some point in the future, we can get patients back in for treatment," said Dr. Veterano. "Our goal is to help them reclaim their lives again and empower them to monitor themselves and their need for more therapy."



Fundamentally advanced from original electroconvulsive shock therapy in delivery, safety, and effectiveness, today's outpatient ECT nevertheless requires that treatment take place within an acute-care medical center.