

What is a Neuropsychiatrist?

Essentially, for the first half of the 20th century, psychiatry was divided into two basic camps. There were those that looked upon mental illnesses in a reductionist fashion seeing these illnesses as part of the medical illness spectrum, and practiced in a medically oriented fashion (unfortunately with little success using modalities such as insulin shock and ice water baths), and those that were an outgrowth of the psychoanalytic movement focusing primarily on the many variations of psychotherapy including psychoanalysis and insight oriented psychotherapy. Sigmund Freud himself, though being the pioneer of psychoanalysis and a prime mover in the segment of psychiatry that focuses on the psychotherapies was himself a neurologist.

Since the 1950s with the advent of the first antidepressants and the common use of antipsychotics such as chlorpromazine, psychiatry as a whole took a turn towards a more medical orientation. As the somatic therapies (medications) grew and multiplied not only in class and efficacy, there was needed from every a psychiatrist a firm knowledge in general medicine. The time of training for psychiatry increased from the internship year and two residency years to adding one year to the formal residency years. Knowledge was especially required in the areas of pharmacodynamics and pharmacokinetics, or essentially how medications work; what causes side effects; and how the medications the average psychiatrist might prescribe will affect the liver metabolism of other medications that a patient might be taking.

Whether throughout the 21st century there will continue to be separate types of psychiatrists is unknown. This may be primarily because virtually all psychiatry involves the use of somatic treatments and the integration of good medical practice into the treatment of the illnesses that have been primarily relegated to the psychiatrist, those being the Schizophrenia Spectrum Disorders, the Mood Disorders, the Anxiety Disorders, and the Obsessive-Compulsive Disorders. Yet, as the field begins to stretch into areas such as Memory Disorders and the behavioral ramifications of disorders of other bodily systems, a boundary again arises creating another separation in practice typology between the General Psychiatrist and what is referred to today as the Neuropsychiatrist or the Cognitive/Behavioral Neurologist. To ultimately conceptualize what Neuropsychiatry or Cognitive/Behavioral Neurology is in the 21st century, one needs to focus on the neurologic structure, chemistry, and other abnormalities involved in the brain of the traditional psychiatric illnesses, but find within one's practice scope any and all behavioral manifestations from any other illness process as well.

In order to remember the types of illness processes that the Neuropsychiatrist needs to be aware of in the diagnostic process, I have been taught the mnemonic AEIOU TIPS.

Remembering what this mnemonic stands for will keep the 21st century neuroscientist in good stead. In identifying each of these illness processes and categories, the practitioner needs to be able to perform not only a physical exam with a high degree of expertise, but must also be aware of how to evaluate or work up, if you will, a patient suffering from these disorders. He must know how to treat the disorders if appropriate

within the specialty, or get consultations, but at least to be able to treat the behavioral manifestations.

A: Stands for **Accidents**, which would include most specifically closed head injuries and traumatic brain injury. Individuals who have suffered brain injuries suffer from psychiatric syndromes that may appear no different than the idiopathic (those illnesses without a known cause e.g. major depression) type of psychiatric illnesses that a psychiatrist commonly treats. This can include Psychosis, Depression, Obsessive-Compulsive behavior, irritability, profound personality changes, aggression, and Memory Dysfunction. In the area of diagnosing and treating head injuries, the Neuropsychiatrist needs to be proficient in the utilization of a full higher cortical function battery added on to the physical exam, which gives a greater understanding of any deficits involving the dominant, nondominant, frontal and prefrontal regions of the brain as well as the cerebellum and motor tracts. It will also become essential to know the prognostic signs of the injury (e.g. skull fracture, location of bleeding).

E: Stands for **Endocrine**. It is common for general psychiatrists to get thyroid function assays of their depressed patients after the start or prior to the start of antidepressant medications. Other endocrine abnormalities can result in psychiatric manifestations. Those include abnormalities of the pituitary and the Hypothalamic-pituitary -axis, the adrenals, Diabetes, and Hyper- or Hypogonadism.

I: Stands for **Infection**. This can include Meningitis, Encephalitis, and very commonly in the elderly, Pneumonias and/or Urinary Tract Infections. In addition, HIV disease and opportunistic infections need to be considered under this category as well.

O: Stands for **Oxygenation**. Pulmonary dysfunction results in problems with memory and agitation. This is more common in Hypercarbia than with Hypoxia, though does occur with both. This is seen more commonly in end-stage lung disease, such as end-stage COPD.

U: Stands for **Uremia** and other **metabolic diseases**. Besides kidney disease, liver disease can cause significant mental status changes as well as changes in the metabolism of medications that a patient takes, and medication interactions as well. Other considerations are less well known metabolic diseases such as Metachromatic Leukodystrophy, Wilson's Disease (abnormalities in copper metabolism), as well as the vitamin deficiency syndromes.

T: Stands for **Tumors**. The Neuropsychiatrist should be familiar and comfortable reading CT scans and MRI scans as the internist would read a chest X-ray or the orthopedist reads an X-ray of a potential fracture (not to the level of the radiologist but well enough to initiate treatment. This transitions into;

I: Infarcts and Strokes. Infarcts and Strokes, like head injuries, can cause a variety of syndromes that can appear almost identical to the idiopathic syndromes treated by the General Psychiatrist. Both Mania and Depression are frequently seen in injuries to the

frontal lobes with a spectrum of abnormal behaviors that spans from aphasias to agnosias

P: Stands for **Parkinsonism** and the other movement disorders, such as Huntington's Disease, Hallervorden-Spatz Disease, Multiple Sclerosis and ataxias.

S: Stands for **Seizures**. This would include seizure disorders from simple motor seizures to complex partial seizures, which result in a variety of both ictal and interictal behavioral manifestations.

This by no means is the complete role and knowledge of the Cognitive Behavioral Neurologist or Neuropsychiatrist, as illnesses such as autoimmune diseases and dementias have been left out, knowing this mnemonic and what needs to be added on to it, as well as the maintenance of the physician's diagnostic and treatment skills separates the Neuropsychiatrist from the General Psychiatrist. It is hoped by many of us that as causality becomes apparent in illnesses such as mood disorders and Schizophrenia, that the practitioners outside the Neuropsychiatric loop become one and the same, essentially changing Psychiatry to the Neurology of Behavior and Cognition as the primary specialty.