

INTERDISCIPLINARY INTERACTIONS IN NEUROLOGICAL AND PSYCHIATRIC EDUCATION AT THE MEDICAL STUDENT AND RESIDENT LEVEL

John A. Young, MD

West Virginia University School of Medicine
Morgantown, WV

Objective:

Explore ideas as to how interdisciplinary interactions between neurology and psychiatry can be used to enhance education for medical students and residents.

1. Discuss some ways that neurology and psychiatry can be related in the curriculum to enhance the education of medical students both at the basic science and clerkship levels
2. Discuss ways that neurology and psychiatry can be related in the education of residents in both fields
3. Discuss dual training in neurology and psychiatry

Medical Student Education:

Preclinical Years:

When one examines the area of medical student education, there are many opportunities available to integrate the disciplines of neurology and psychiatry, starting at the earliest days of medical school. With the recognition of the importance of developing an integrated curriculum, there have been a growing number of medical schools that have developed an integrated neurobiology and behavioral science course. In this type of course, the topics of neuroanatomy, physiology, pharmacology, pathology and psychology are taught as a whole and the interrelationships are made readily apparent to the medical students. In addition to integrating the lecture series, PBL sessions can be developed to further explore the complex interrelationships between the neuropathology and psychopathology.

Clinical Years:

At most institutions, psychiatry is a required clerkship and is typically a third year experience in traditional medical school curricula. A neurology experience is more variable and may not even be a required clinical experience in some medical schools. I can speak best here as to my own personal experience as the clerkship director of the neurology and psychiatry clerkships at WVU. Here, the neurology and psychiatry clerkships are combined in an 8 week block; however, neurology has been allocated 2 weeks and psychiatry 6 weeks. Within the current structure of the third year of medical school, there are six 8 week blocks and combining psychiatry and neurology made sense.

What are benefits of combining the clerkships?

Overlap in learning about the anatomy, physiology and especially pharmacology of the nervous systems makes direct connections between neurology and psychiatry readily apparent. For example, students may more readily be able to assess the relationship between Parkinson's disease and drug induced Parkinsonism, both

neurochemically and clinically. In epilepsy clinics, students can more readily learn distinctions between the presentation and underlying mechanisms between seizures and pseudoseizures. The neuropathology of dementia can be translated into the cognitive and behavioral elements that can be very distressing to caregivers. While learning about the nervous system, the student may obtain a greater appreciation of the neuropathology of schizophrenia and its translation into clinical presentations: psychosis in the acute phases and amotivation in chronic phases.

From the administrative aspect of a clerkship director, the arrangement opens up more time slots to cover key concepts, especially for neurology. I have 2 formal didactic timeslots for neurology each week for the 8 week block: 1 for a formal medical student lecture and 1 for neurology grand rounds. I can cover some overlap topics, such as dementia, delirium, neuropsychological assessment, chronic pain, and sleep disorders in the psychiatry lecture series. In addition, from the standpoint of the lectures rotations, they are repeated every 8 weeks rather than every 2 weeks.

What are potential problems?

Most medical schools separate the departments administratively, so the organization of the experience still involves 2 separate departments with different faculty, residents, support staff, etc. The NBME doesn't offer an integrated exam, so our students still have to take 2 separate shelf exams at the end of the clerkships.

Residency Education:

When teaching residents, there are differences in training emphasis that make it difficult to combine neurology and psychiatry residents together. Speaking from my experience with neurology and psychiatry residents, I need to separate out my emphasis on the cases. However, we are all seeing the same patients and my ultimate goal is integrating how the residents view the patients. Psychiatry residents will work with me as a required rotation 2-3 months in their PGY 1 and 2. Neurology residents work with me as a recommended elective in their PGY 3 or 4.

Psychiatry residents are required to complete 2 months of neurology for the boards. Neurology residents do not have a psychiatry requirement. As a rule, it has been my experience that the fact that the written boards will ask questions of the other specialty is more anxiety provoking to psychiatry residents than to neurology residents. Therefore psychiatry residents tend to read and study neurology more than neurology residents read and study psychiatry.

In my own practice, I work with residents in both the inpatient and outpatient settings. I have an inpatient psychiatry service that is identified as an "intensive care unit" meaning a separate unit where admission implies they are psychotic or very confused. The most common diagnoses on the unit are Schizophrenia, Bipolar Disorder, Major Depression with Psychotic Features, Dementia. With psychiatry residents, a lot of my focus is on the assessment, perhaps as much so as the treatment. Thorough neurological exams need to be done and there is a lot of discussion about the need for ordering ancillary tests (Brain imaging, EEG, neuropsychological testing, etc) that may aid in diagnosis. With neurology residents I focus more on the psychiatric diagnosis using DSM-IV and getting

them familiar with the use of psychotropic medications. Another one of the roles I perform in the psychiatric hospital is doing the neurology consults. Once again, with the neurology residents I feel it is important for them to work primarily on becoming familiar with the psychiatric diagnoses and treatments. I also have them spend a day with the ECT service so they can become more familiar with ECT. One of the more common consults I receive has to deal with the issue of performing ECT on patients receiving antiepileptic medication for an underlying seizure disorder. In addition to the inpatient service, I run or assist with outpatient clinics that have an obvious emphasis on neurology-psychiatry interactions. With both psychiatry and neurology residents, it is the obvious interrelation between the specialties that I want to make sure they appreciate.

Neuropsychiatry Clinic – Head injury, Developmental Delay, Autistic Disorders, Adult ADHD

Memory Disorders Clinic – Dementia and other cognitive disorders

Sleep Disorders Clinic

Thought Disorders Clinic – Schizophrenia

Epilepsy Clinic

Movement Disorders Clinic – Parkinson's, Huntington's, Tourette's

The key point here is taking advantage of programs and clinics that readily expose residents to the interrelationships of the disciplines that will be helpful in their own clinical practices. Another advantage of specialty clinics is that they concentrate patients to increase likelihood of exposure to rare disorders.

Dual Training in Neurology and Psychiatry:

Residents completing the six year combined program will be board eligible in both specialties. PGY 1 is an "internship" year with emphasis on requirements for neurology board eligibility. PGY 2 – 5 are years when the resident learns the basics of neurology and psychiatry. During this time they complete the core requirements of each individual residency. They maintain separate clinics in neurology and psychiatry. PGY 6 is an integrated year. At WVU, outpatient clinic in the final year focuses on the resident's interest that emphasizes the relationship of neurology and psychiatry. In addition, they function as a senior resident on the inpatient service.

Recommended electives include rotations with the neuropsychology service and the sleep laboratory.

Summary:

Opportunities which integrate neurology and psychiatry are readily available and it makes sense to seek ways to incorporate these opportunities into the education of medical students and residents. An appreciation of this close interaction not only enhances learning at all levels of medical training but can only serve to enhance patient care.