

Improving the Connection between Medical and Psychiatric Care: A Case Study

By Samuel T. Wilkinson

Essay winner of the 2012 Samuel Novey Prize in Psychological Medicine, Johns Hopkins School of Medicine

“Get out of here! You are not allowed in here!” The patient screamed at the attending psychiatrist, restrained to her bed at both wrists and ankles. Her body was emaciated, her eyes blood shot. She was clearly manic, and had rarely stopped talking for over three weeks. Averaging three hours of sleep per night for almost a month, it was extraordinary that she had not yet succumbed to a state of stuporous exhaustion.

Alice¹ was a unique patient. Presenting with a combination of delirium and new-onset mania in her 60's, she had underlying medical illness that contributed to her deranged mental state. Suffering from chronic obstructive pulmonary disease due to alpha-1-antitrypsin deficiency, she had been on a lung-transplant list for over a year. To her family's horror, she had to relinquish her place on the transplant list because of the intense and intractable nature of her psychiatric illness. She required three months—spaced out over two hospitalizations—on our psychiatric floor in order to overcome both her mania and delirium. Evidence that her illness was as complex medically as psychiatrically, she spent a month in the ICU for severe, life-threatening respiratory distress in between her psychiatric hospitalizations.

Alice had been a difficult patient. She required 24-hour restraint for three weeks because she threatened violence towards those who were trying to help her. She hurled racial slurs at the medical assistants who were assigned to her for constant observation to ensure her safety. She was belligerent towards the team of psychiatrists who saw her twice a day and who were trying desperately to help her. Even her husband, her companion of 47 years and father to her five children, was subject to her denigrating insults. It was difficult for him to see his wife, who he described as warm, caring, and compassionate, transformed by her illness into someone he did not recognize.

Alice's case demonstrates several important inter-related points regarding the connection between medical and psychiatric illness. First, there is a critical need for excellent communication between psychiatry and other branches of medicine. Second, psychiatrists must be competent medical doctors. Third, non-psychiatric physicians must be familiar with the course, treatment, and prognosis of psychiatric disease.

Fostering Open Communication

Because of the frequent intersection of medical and mental illness, there is a great need for open communication between psychiatry and other branches of medicine. Due to the unique combination of her medical and psychiatric illnesses, Alice was the most challenging patient I have encountered in my medical education. Her dangerously high carbon dioxide blood level that hovered around 70mmHg was evidence of the precarious state of her respiratory disease. This complexity of medical and psychiatric disease required a delicate balance of care; her condition was only successfully treated with good communication between the primary team comprised of psychiatrists and the consulting internal medicine physicians.

In its current state, psychiatry is a relatively isolated specialty, one in which communication with other fields of medicine is historically lacking. One reason for this is that in psychiatry, the etiology of most syndromes is not well understood. In this sense, the field is fundamentally different than all other branches of medicine, where, generally speaking, the basic pathogenesis of most illnesses is more or less known. In other words, in most medical diseases, a stream of basic understanding can be traced from molecules to cells to pathology at the level of organs. In contrast, there are very few psychiatric syndromes with known etiologies. As a result, psychiatrists do not have the advantages of lab tests, X-rays, or tissue biopsies to confirm the diagnoses. At best, they use these tests to exclude a medical illness as the cause of a psychiatric disturbance.

In sickle cell anemia, for instance, it is well known that a single genetic defect in a red blood cell protein causes a large portion of a patient's blood cells to be faulty. These faulty blood cells have a tendency to 'sickle,' or deform themselves in such a way as to inhibit blood flow in small vessels and cause widespread inflammation. The result is that the patient experiences debilitating pain and can suffer from a number of grave complications, including stroke, pneumonia, osteomyelitis, and sometimes fatal respiratory distress. While some details of sickle cell anemia are still not well understood, a basic knowledge of its pathophysiology has allowed doctors and scientists to develop and implement rational treatments. In contrast, psychiatry, with very few exceptions, has achieved no such understanding that links molecular mechanisms to clinical syndromes.

Exceptions to the rule, where the neuropathology and etiological causes of psychiatric syndromes are understood include delirium, aphasia, and Korsakoff syndrome. Of these, delirium is the most common and well known. A clinical diagnosis, it is defined as the impairment of consciousness, or the characteristic of mental status that ranges from fully awake to comatose. Delirium can be caused by any number of insults to the brain, including infection, electrolyte imbalance, hypoxia, hypercarbia, or uremia. In general, its causes exert a toxic effect on the brain, producing the clinical symptoms of delirium. The presence of delirium can be confirmed by a slowing of brain waves as recorded by electroencephalogram (EEG). In Alice's case, it was likely a combination of factors—a drug-drug interaction from her many medications, a high blood level of carbon dioxide, an infection, and an electrolyte imbalance—that precipitated and perpetuated her delirium. In contrast, Alice's second psychiatric disturbance—mania—is less often caused by recognizable 'organic' etiologies. (Although in Alice's case, her mania likely had an underlying organic cause, an exception to the rule.)

In short, psychiatry does not have the advantage that most medical specialties enjoy in understanding the basic etiologies of their respective diseases. Whereas medical doctors use blood tests, X-rays, and biopsies to confirm their diagnoses and guide their treatment plans, psychiatrists can use these tests only to exclude medical causes of psychiatric disturbances. The psychiatrist, instead, relies on a battery of clinical instruments and surveys, such as the Folstein Mini-Mental, the Beck Depression Inventory, the Hamilton Rating Scale for Depression, and the Conners Scale for ADHD—instruments with which most non-psychiatrists are unfamiliar. This can contribute to the lack of communication and understanding between psychiatry and other medical specialties.

At an academic institution, there are several steps that can be taken to allay this problem. One possibility is to sponsor interdepartmental grand rounds where topics spanning psychiatry and other medical fields are discussed. Delirium, psychiatric manifestations of multiple sclerosis, or psychotropic polypharmacy would be excellent topics for such a forum. Other ways to improve interdepartmental communication would be to foster a culture and adopt policies that allow patients with active medical problems to be cared for on a psychiatric floor. At some academic institutions, patients are not be eligible for admission to a psychiatry floor if they have minor medical problems, such as a fever, an elevated white blood cell count, or an IV line. This practice serves to hinder open communication between psychiatry and medicine by mandating the transfer of any patient with medical needs off a psychiatry floor and onto a medicine floor. When this happens, the psychiatrist relinquishes responsibility of the primary care of the patient and forfeits the opportunity to forge open communication between psychiatry and other medical specialties. Establishing a policy and culture wherein psychiatrists feel comfortable and are allowed to care for patients with medical illness will help resolve this problem.

Psychiatrists as Competent Medical Doctors

A second point learned from Alice's case is that psychiatrists must be competent medical doctors. Alice's hospital course and treatment plan were facilitated by psychiatrists who—with appropriate consultation from internal medicine specialists—were comfortable enough with her medical illness to care for her on a psychiatric floor. In many hospitals, Alice would have been treated primarily as a medical patient on a medical floor and she would have been seen for ten minutes per day by a psychiatric

consult team (who would not have had the advantage of a 24-hour report on her behavior from a highly specialized psychiatric nursing team). This suboptimal setting would have unduly prolonged Alice's hospital course and would have made her treatment plan and the resolution of her illnesses much more difficult.

Currently, training requirements in the United States mandate that psychiatric residents receive only four months of training in internal medicine. This training is almost always completed in solitary blocks of two or four consecutive months. Many institutions allow their residents to fulfill part of this requirement in an outpatient setting. This practice is suboptimal for trainees who spend only two to three months in any outpatient setting because it limits longitudinal perspective. In such a brief time in an outpatient setting, residents will only see any given patient once (two times at most). This reduces the essential learning that takes place from seeing the genesis, evolution, and treatment of a medical disease from start to finish. The end result is that graduates of many psychiatric residency programs are less experienced and knowledgeable in the treatment of medical disease and how medical disease interacts with psychiatric illness. To improve the competence of psychiatrists in treating medical illness, the current psychiatry residency requirement of four months of internal medicine training should be lengthened to six months. Additionally, any time spent in an outpatient setting should be spaced out in order to maximize longitudinal learning. For example, a one month block in an internal medicine walk-in clinic should be distributed to equal one day per week for 20 weeks. These changes would increase the psychiatrist-in-training's competence in internal medicine, allowing him to care for medically and psychiatrically complicated patients, such as Alice. Furthermore, such changes would also facilitate open communication between psychiatry and other fields in medicine, as discussed above.

Non-Psychiatric Physicians' Familiarity with Psychiatric Disease

A third principle gleaned from Alice's case is the importance that non-psychiatrists understand the basic course, treatment, and prognosis of psychiatric illness. During Alice's second psychiatric hospitalization, her deteriorating respiratory status required that she be transferred to the ICU for a more acute level of care. On the first day of her brief stay in the ICU, a meeting was held with the intensivists and Alice's family members. During this meeting, the decision was made for Alice's resuscitation status to become Do Not Resuscitate/Do Not Intubate (DNR/DNI). In other words, if she were to go into severe respiratory distress (a very plausible scenario given her tenuous respiratory status), no attempt would be made to save her life via means of cardiopulmonary resuscitation or mechanical intubation. Such a grave decision is often made in the ICU but is usually done when a patient has an illness such as Alzheimer's disease, intractable cancer, or severe neurologic impairment—all incurable and mostly untreatable conditions. These conditions which prompt the decision to classify a patient as DNR/DNI are often terminal, and in almost all cases make the continuation of life more difficult and painful for both the patient and the family members. Usually, before classifying a patient as DNR/DNI, it is important to know with a reasonable degree of certainty that the condition which renders life so difficult and painful is untreatable or incurable and will not spontaneously improve.

The decision to classify Alice as DNR/DNI was based on the following logic. Due to her alpha-1-antitrypsin disease and end-stage COPD, she very much needed a lung transplant as definitive treatment. Her severe psychiatric illness caused her to forfeit her place on the lung-transplant list. Because her psychiatric state was not likely to improve, she would not be able to resume a place on the transplant list, and thus her status should be DNR/DNI. In retrospect, this decision was flawed.

Alice's complex combination of psychiatric illnesses made it difficult to know the prognosis of her psychiatric state. Accurately predicting a poor prognosis was not possible. Furthermore, when considered separately, the components which comprised her psychiatric status—mania and delirium—are both very treatable conditions in the majority of cases. Thus her psychiatric illness was in a realistic way potentially treatable. Moreover, at the point in her course when the decision was made for her status to be

DNR/DNI, her delirium had mostly resolved and her condition was mainly characterized by mania, making the possibility of a good psychiatric outcome even more likely.

Additionally, Alice's family was explicit in articulating to both the intensivists and to the psychiatry team their desire to continue to investigate and aggressively treat her psychiatric illness. They also expressed a strong desire—should her psychiatric illness resolve—that she resume a place on the lung-transplant list as soon as possible. All these points argue against the decision of classifying Alice as DNR/DNI. Yet the decision was made, likely because of (1) a lack of communication between the intensivists and the family; and (2) a poor understanding on the part of the intensivists regarding the prognosis of her psychiatric illness and hence possible future candidacy for lung transplantation.

As evidenced in Alice's case, it is critical that non-psychiatrist doctors be familiar with the course, treatment, and prognosis of psychiatric illness. Had the intensivists recognized that her psychiatric prognosis, especially when considered as separate components of delirium and mania, was not grim, there would not have been a premature decision to classify her as DNR/DNI. While it may be unreasonable to expect non-psychiatrists to know the psychiatric prognosis of a patient as complex as Alice, the aforementioned situation only reinforces the importance of improving communication between psychiatry and other medical specialties.

Alice's unique and complex case exemplified several important inter-related points regarding the connection between medical and psychiatric illness. First, there is a critical need for excellent communication between psychiatry and other branches of medicine. Second, psychiatrists must be competent medical doctors. Third, non-psychiatric physicians must be familiar with the course, treatment, and prognosis of psychiatric disease.

Fortunately, Alice's prolonged psychiatric disturbance eventually resolved with treatment. Shortly after returning to the psychiatry floor from the ICU, her agitation diminished, her incessant and often incoherent speech subsided, and her grandiosity disappeared. To her husband's delight, she began to revert to her normal self. Because her mental status stabilized, she was able to resume a place on the lung transplant list. Four months after her discharge from the psychiatric floor, she received her lung transplant. At the time of this writing, her husband reports that she is in stable physical and mental health.

¹ Alice's name and identifying details have been changed to protect her privacy.