

17 Beyond Diagnosis

Compliance, Suicide, Violence

All clinicians need to keep in mind three issues that are important for evaluation but transcend the boundaries of diagnosis: compliance, suicide, and violence.

Compliance

When I was a student, *noncompliance* meant that the patient didn't follow the clinician's directions. Now an ethos of cooperation—partnership between patient and care provider—has changed how we view this important subject, which some clinicians now call *adherence*.

Of course, there are degrees of noncompliance/nonadherence. One patient might just disregard a recommended exercise program; another might "forget" many doses of Antabuse, endangering sobriety. In between are myriad opportunities for confusion and error.

Research in this area lags, but still we know a fair amount from controlled studies, though much of it is pretty predictable. For example, nonadherence is greater among outpatients than inpatients. It increases with more time in treatment, a more complicated treatment regimen, and more side effects; you can reduce it with careful supervision, education about the nature of the disease, and a supportive environment. Patients who are satisfied with the course of treatment are much more likely to be adherent than are unhappy ones. Indeed, nonadherence per se may not be the only reason—or may not be the reason at all—why treatment is not working; other factors may need to be considered (see the sidebar "Why Doesn't Treatment Work?").

The effects of nonadherence run from mundane to major. Of course, no treatment can be effective if it isn't utilized, and for some patients, not taking the prescribed treatment (say, a course of cognitive-behavioral therapy) may only mean that depression continues without relief. More serious

Why Doesn't Treatment Work?

The question "Why doesn't treatment work?" has a number of answers, each of which is probably right some of the time.

- *Wrong treatment.* Some patients with depression respond to SSRIs, others to cognitive-behavioral therapy. Still others—for example, those with atypical depression—may require a monoamine oxidase inhibitor.
 - *Insufficient time.* Often patients despair of treatment that simply hasn't yet had enough time to work. This is famously true of psychotherapy, as well as most medications.
 - *Wrong dosage.* Usually this applies to drug treatment, and usually it means that too little of the medication has been prescribed. Some drugs have a "therapeutic window" of effect, which means that either too little or too much can prevent optimal response.
 - *Interference from other treatments.* Here's another problem with medication: The use of one can decrease the effectiveness of another.
 - *Side effects.* Very often, unwanted effects (another medication issue) cause such grief that patients reduce doses or drop out of treatment altogether.
 - *Other adherence issues.* The patient doesn't do the exercises, attend day care, practice the homework assignments for cognitive-behavioral therapy, or take medications as prescribed.
 - *Use of substances.* In many ways, the effects of street drugs or alcohol can complicate treatment and its assessment.
 - *Wrong diagnosis.* This may be the most common, though least heralded, factor of all those that contribute to the apparent lack of treatment effectiveness. It is also one of the easiest to rectify.
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consequences could include repeated episodes of illness and multiple hospitalizations.

When she was in the depressed phase of her bipolar I disorder, Belinda was a model patient who always recovered quickly. But when manic, she would neglect her medication and end up hospitalized over 1,000 miles away, where she grew up. With her fourth or fifth episode, I was called to her house one evening to find her in her front yard, spraying her living room furniture with the garden hose.

Still other patients may become estranged from family and friends.

Maude had been a champion swimmer, who often won medals and one year came close to qualifying for the U.S. Olympics team. But at 23 she developed schizophrenia, and forever afterward she claimed that her antipsychotics made it difficult to perform in the water. Time and again, she would stop taking her medication and become psychotic. With each hospitalization she refused medication, necessitating a court hearing to determine whether she should be medicated against her will. More than once, the judge was sympathetic to her pleas and discharged her from care. When I last spoke with her, she was in a nursing care facility, so psychotic that she couldn't even feed herself. Eventually her husband divorced her and took the children to live with him.

Sometimes the results are dire, as shown in two more brief reports:

Severe recurrent depression caused Jolene to retire from her job with the post office when she was 44. About every 2 years, she became severely melancholic, couldn't sleep, lost weight, and refused to answer the telephone when her brother called to ask how she was doing. In her despondence she would develop suicidal ideas, but with every episode, she waited so long before calling for help that she couldn't be managed at home and had to be hospitalized. Each time, she stayed in the hospital only long enough to receive four electroconvulsive treatments, then signed out against advice. "I stopped because I felt better" was her usual rationale. She then failed to follow up with outpatient visits or treatment. This pattern went on for more than 20 years. After the last time I saw Jolene, I heard nothing more for about 2 years, until a relative called to say that she had hanged herself.

In December 2005, a distraught Rigoberto Alpizar ran from his plane, which was about to take off from Miami, and onto the jetway. After allegedly yelling something about a bomb, he reached into his carry-on bag as he refused to surrender to the air marshals. They shot him dead. His wife told another passenger that he had a bipolar disorder and had not taken his medication. No bomb was found, and no link to terrorism was ever suggested.

Obviously, identifying adherence issues is important for clinicians and patients alike. Here are some clues and resources you can use to assess the risk of nonadherence in your patients.

- *Ask the patient.* At every visit, I routinely ask each patient to describe each medication and its schedule of use. I frequently learn that the regimen is different from what I have recommended. Routine questioning offers a

chance to discuss the issue without sounding critical. Differences from my expectations are easily discussed as a misunderstanding or as the patient's response to side effects; the usual solution is a successful compromise. Similar procedures could apply to diet, schedules of exercise, cognitive-behavioral homework, and more.

- *Ask relatives.* Collateral information from those who know the patient well may turn up problems with adherence.

- *Note lack of improvement.* Nonadherence is a likely factor when patients do not experience the expected response to treatment.

- *Are there side effects?* With drug regimens, *lack* of expected side effects should tip you off that your patient isn't getting enough medication—perhaps none at all.

- *Check environmental factors.* Is there a support system? Does this patient's peer group pride itself on refusing drugs or other treatment modalities?

- *Monitor caregiver factors.* How fully have you educated your patient about the need for treatment? How often are appointments scheduled? (Monthly or more often will help ensure adherence.) Does the patient perceive your relationship as strongly positive and helpful? Does the patient understand the theoretical reasons behind the treatment approach?

- *Watch for telltale symptoms.* Nonadherence can result from depression (the patient may have an apathetic response to treatment recommendations), euphoria (the patient may feel "too well to be sick"), delusions (the patient may be suspicious of your motives), poor insight (the patient may be unable to understand that an illness requires treatment), or anger (the patient may be acting out).

- *Observe red flags.* Adherence issues are especially relevant to mania, schizophrenia, dementia, personality disorder, and substance use. Patients with both substance use and another major mental disorder are especially vulnerable.

Suicide

The low base rate of suicide (about 1% of the general population) and the inexact nature of the science make it hard to predict which individuals will attempt suicide and which will succeed. We have to rely on the seemingly numberless studies that try to pinpoint characteristics of suicide risk.

Jay had retired after 30 years of honorable service in the Marine Corps. For a time he'd worked in his brother's machine shop, but now he mostly

just sat at home. A couple of years earlier, his wife had died. They'd been childless, and he had never been a particularly social person. Now, in his late 60s, he lived alone on his military pension and Social Security.

No one had heard much from Jay until he was brought to the emergency department after he attempted suicide by carbon monoxide poisoning. He had been discovered unconscious in his garage when a neighbor returned home unexpectedly at lunchtime and heard the purring of an engine. After several touch-and-go hours in intensive care, he recovered enough to speak with a mental health consultant, who learned that he had been drinking heavily to combat a severe melancholia.

Jay was sallow and gaunt. His clothes hung on his 6-foot frame—clearly, he had lost 20 pounds or more. He said that when he awakened about 3 or 4 each morning, he would lie there and brood about the death of a friend with whom he served in Vietnam. "I could have picked up that grenade and heaved it, but I just jumped behind some sandbags." He had lost his interest in hunting, but he still kept two rifles and a pistol locked in a cabinet. He had smoked all his adult life; a doctor had recently told him that a spot on his lung was "suspicious," and that he needed to come in for more tests. Not a religious man, he said that if he learned he had cancer, he wouldn't have it treated, though his father had died a horrible, lingering death from lung cancer. Jay would either move to Oregon and request physician-assisted suicide, or "just do the job myself, in the comfort of my own living room."

From the available information, Jay's clinician felt that there was an extremely high risk of further suicide attempts and placed him on a one-to-one suicide watch. That evening about 10, Jay went into the toilet and closed the door. Five minutes later, the aide attending him called out, and the staff broke down the door. They found him, nearly lifeless, hanging from a loop of bath towel and cut him down.

There are two basic sets of risk factors for suicide: those that pertain to mental illness, and those of a personal or social nature. I've put them into a couple of lists for easy study.

Mental Disorders and Suicide

Like Jay, the vast majority of those who attempt or complete suicide have a diagnosable mental illness. Although suicide and suicide attempts are not tied to any one diagnosis, each is associated with suicide behaviors.

- *Mood disorders.* Major depression and bipolar disorders account for about half of all suicides, mostly because patients haven't been treated ade-

quately for depression. Risk of suicide increases with more severe depression and with the presence of melancholic features (loss of pleasure in usual activities, feeling worse in the mornings, insomnia typified by awakening too early in the morning, loss of appetite or weight, excessive guilt, and a quality of mood that is more profound than typical grief). Recent studies have reported that in either depression or bipolar disorders, treatment with antidepressants or lithium decreases suicide risk—a lot.

- *Schizophrenia*. About 10% of patients with schizophrenia die by suicide, usually in the first few years of illness. Risk is higher in those with paranoia or depressive symptoms, and lower in those with negative symptoms (flat affect, impoverished speech, inability to initiate action). In a person who has made previous attempts, command auditory hallucinations increase risk for another.

- *Substance misuse*. Patients with any type of substance dependence have a risk of suicide 2 to 3 times that of the general population (in those with heroin dependence, it is at least 14 times greater). In alcoholism, loss of a close relationship through divorce, separation, death, or interpersonal friction is a common precipitant; risk increases further still if drinking has been recent and heavy.

- *Personality disorder*. The risk of suicide is especially great in antisocial and borderline personality disorders.

- *Others*. Illnesses as different as PTSD and ADHD may also confer an increased risk for suicide. There is even a risk with panic disorder, especially if major depressive disorder or substance use is also involved. Patients with somatic symptom disorder often attempt suicide; although there are few data, I believe that these people also carry an increased risk for completed suicide. And please remember that having more than one mental disorder greatly increases the risk of attempts and completed suicide.

Individual Factors in Suicide

For many years, numerous social and personal characteristics have been known to increase the risk of suicide:

- *Male gender*. Men have four times the risk of women for *completed* suicide, whereas women are three times as likely to *attempt* suicide.

- *Advancing age*. Suicide rates rise throughout the lifespan to peak in the over-85 group.

- *Race*. Whites are far more likely to commit suicide than are people of other races.

- *Employment.* Unemployed and retired persons, and those with long absences from work, may suffer from lower self-esteem and reduced access to support networks—both of which may increase their risk.

- *Marital status.* Being single or divorced (divorced is worse) is a risk factor; married people are less likely to commit suicide.

- *Religion.* The risk for Protestants is higher than that for Catholics and Jews. Risk for Muslims is unclear.

- *Family history.* Suicide in a relative increases individual risk, even beyond the presence of mental disorder.

- *Living alone.* Isolation often breeds despair.

- *Gun ownership or access to lethal means.* And don't forget medications that can be lethal in overdose.

- *Physical disease.* The burden of obstructive lung disease, cancer, epilepsy, chronic pain, and a host of other debilitating conditions predisposes patients to suicide; multiple illnesses greatly increase the risk.

- *Feelings of hopelessness.* An unrelieved gloomy view of the future has been identified as especially predictive of future suicide.

- *Recent mental hospitalization.* The first few days after discharge are the most dangerous.

- *Financial difficulty.* The image of stock market investors leaping from windows during the Great Depression of the 1930s was no myth: The national suicide rate increased by 20%.

- *Heavy gambling losses.* This factor may be mediated by depression, not gambling disorder per se.

- *Talking about suicide.* The saying "Those who talk about it don't do it" is exactly the opposite of fact: Most people who kill themselves have communicated their intent, often to a care provider.

- *Suicide of others.* The death by suicide of a friend, a relative, or even a total stranger can increase the risk—especially in adolescents, for whom the pull of group behavior is especially powerful.

- *Prior suicide attempt.* This is one of the strongest predictors we have. After an attempted suicide, risk for completion persists up to four decades later. In a 2003 study by Beautrais, 9% of those who made a medically serious suicide attempt had died within 5 years, 59% of these by suicide. When evaluating an attempt, it is important to consider both medical and psychological seriousness. A medically serious attempt is one that causes unconsciousness, significant loss of blood, or disruption of parts of the body beneath the skin (tendons and arteries are examples). Psychologically serious attempts are those in which the patient expresses regret at surviving, has made efforts to avoid discovery, or states a determination to

make another attempt. An attempt that entails either type of seriousness should put you especially on guard.

A number of scales have been devised to measure the degree of suicidal intent and the seriousness of a prior attempt. The "References and Suggested Reading" section at the end of the book lists a website that provides information about such scales.

Violence

Mental health clinicians famously fail to predict violent acts accurately—even within the next few hours or days, let alone further in the future. Over the years, lore has accumulated about factors that supposedly relate to violence. Some of this lore is accurate; some is not. Consider two scenarios:

Brenda, who was a few months past her 21st birthday, drank and used amphetamines. In fact, she cooked methamphetamine in a lab she'd helped her boyfriend construct in his grandmother's basement. From age 11 Brenda had repeatedly run away from home, in part to escape the beatings her stepfather had inflicted for years. Though she was smart, her inattentiveness yielded abysmal grades in school, and she dropped out when she was 15. Since then, she'd been in and out of juvenile hall. At 16, after consuming alcohol and "other stuff" (she wasn't sure what) at a rave, she stabbed and nearly killed another girl. Although Brenda was released from custody when she turned 21, her parole officer noted that she'd recently resumed drinking. Moreover, she had threatened several times to "finish the job" on the girl she stabbed years ago.

Brent, also 21, fell ill during his junior year at university. Always a steady, earnest student, both Brent and his family were surprised at how quickly his grades tumbled once the voices he now heard began telling him he was the Devil. "Academically, he just seemed to wither away," said his aunt, with whom he lived while attending school several hundred miles from where he grew up. After the first few weeks of the fall term, he gradually stopped going to class. He neglected his appearance and refused to go home for Christmas. By the end of April, he wouldn't even leave the house. When questioned, Brent said that he had come to realize that he was the Antichrist, and through him the world would be destroyed. His aunt told the clinician that her hus-

band kept a pistol in an unlocked desk drawer; she didn't know, but she thought it might be loaded.

Many clinicians would probably assess Brent's history of psychosis and the fact that he was a young male with apocalyptic delusions as factors rendering him likely to commit a violent offense. However, over the years, traditional clinical methods have proven unreliable in assessing violence potential. A large part of the difficulty lies in the fact that studies of violence are often based on general population samples, whereas we clinicians want to know how likely *our patient* is to commit an act that will harm another person. To that end, in recent years researchers have developed actuarial models that rely less on clinical information and judgment, and more on data from records and demographics. Some of the findings may surprise you.

- *Diagnosis.* Traditionally, violence is associated with a number of diagnoses—schizophrenia, mania, sociopathy, conduct disorder (in children and adolescents), intermittent explosive disorder, and substance use disorders (especially on days a person actually uses drugs or alcohol). However, the overwhelming majority of mental patients do not perpetrate violence. In fact, a major mental disorder such as bipolar I disorder or Brent's schizophrenia carries a lower risk of violence than does personality disorder (see below). A number of physical brain diseases can also lead to violence—head injuries, seizure disorders, Alzheimer's and other dementias, infections, cancer and other mass lesions, toxicity (including drug and alcohol intoxication), and metabolic conditions. Always, the comorbid diagnosis of substance misuse is an important predictor of violence.

- *Gender.* Men are traditionally regarded as committing the major share of violence. However, among mental patients, women like Brenda are about as likely as men to perpetrate violence, though their victims may be less likely to require medical attention. Women's violence is especially likely to occur in the home.

- *Prior violence.* A history of violent behavior is a traditionally strong predictor. Remarkably, assessment of violence isn't usually a problem; patients are often quite willing to admit to prior offenses. Brenda's prior assault and conviction clearly demonstrated her potential.

- *Abuse.* Childhood physical (but not sexual) abuse history is positively associated with later violence.

- *Antisocial personality disorder.* The risk of violence is greatly increased in patients who carry this diagnosis. Although more information

would be needed to be sure, Brenda's history should alert us to the possibility of conduct disorder and antisocial personality disorder.

- *Hallucinations.* Command hallucinations that order the person to commit violence increase the risk; other hallucinations are not related. Delusions, such as Brent's ideas about being the Antichrist, do *not* predict violence.

- *Anger and thoughts/fantasies of violence.* Ideas of violence beget violent behavior.

- *Age.* The time of violence, like the time of love and procreation, is youth. No surprises here.

In short, the actuarial model described by Gardner and colleagues predicts that violent mental patients will tend to be those who are hostile, are young, misuse drugs, and have a history of previous violent behavior. And it would be Brenda, not Brent, who represented the greater risk of the two cases described above. Numerous studies report that discharged mental patients are likely to perpetrate violence only if they use substances. Unfortunately, they are more likely than the general public to misuse substances. When mental patients do reoffend, it usually occurs a relatively short time after discharge from a hospital.

Finally, consider the sobering observation that some of our most notorious violent patients might have slipped past the best of our current predictors: Prosenjit Poddar (who murdered Tatiana Tarasoff, eventually leading to the recognition of a duty to protect known as the *Tarasoff principle*); Mark David Chapman (who killed John Lennon); and John Hinckley, Jr. (who attempted to assassinate Ronald Reagan). Each of these individuals had had intense fantasies, but no prior history of violence. Even with the best in current research and instruments, we can deliver only predictions, not promises.