PSYCHOPHARMACOLOGY:
A COMPREHENSIVE REVIEW
PART II

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Abstract

While pharmacotherapy has emerged as the most commonly used psychiatric management, psychiatric education uncovers a salient neglect of clinical psychopharmacology. A comprehensive review of the fundamentals of psychopharmacology as well as valuable concepts that attempt to integrate psychopharmacological topics with clinical psychopathology and psychiatric theory in general are discussed in addition to practical information on the targeted therapy, benefits, side effects, drug-drug interactions and suggested doses of psychotropic drugs.
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This educational activity is credited for 6.5 hours; Pharmacology content 6.5 hours. Nurses may only claim credit commensurate with the credit awarded for completion of this course activity.

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Statement of Need

Psychopharmacology includes many complex areas of learning. Health professionals need to continuously learn drug actions, adverse effects and legal issues surrounding treatments for mental illness.

Course Purpose

To provide nursing professionals with knowledge in the area of psychopharmacology and to care for the mentally ill.

Learning Objectives

1. Describe the ways to work collaboratively with people diagnosed with borderline personality disorder, using medication as a tool.
2. Discuss special considerations of psychotropic drugs for special populations (i.e., elderly or pediatric patients).
3. Identify safety and ethical issues of prescribing psychotropic drugs.
4. Identify how to effectively communicate with patients and other healthcare professionals about medication types, dosage, drug interactions, and side effects.
5. Discuss ethical and legal considerations in providing information about medications to clients.

Target Audience

Advanced Practice Registered Nurses, Registered Nurses, Licensed Practical Nurses, and Associates
Course Author & Director Disclosures
Jassin M. Jouria, MD, William S. Cook, PhD, Douglas Lawrence,
Susan DePasquale, CGRN, MSN, FPMHNP-BC – all have no disclosures

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Please take time to complete the self-assessment Knowledge Questions before reading the article. Opportunity to complete a self-assessment of knowledge learned will be provided at the end of the course
1. **Main challenges in the provision of appropriate mental health care to geriatric patients in the US are:**
   a. Psychiatric symptoms mimic many conditions that are part of the normal aging process
   b. Limited number of specialized psychiatrists trained to handle geriatric patients
   c. Increased likelihood of existing comorbidities
   d. All of the above

2. **True or False. Lithium exposure in pregnancy may be associated with a small increase in congenital cardiac malformations.**
   a. True
   b. False

3. **According to a 2011 NCHS report, adolescents and adults using antidepressants in the U.S have:**
   a. climbed to a staggering 10% in the last three decades
   b. risen to more than 10%
   c. exceeded 50% taking the medication for 6 months minimum
   d. none of the above

4. **Informed consent is both a legal and medical standard with three important components that include:**
   a. the ability to process information logically
   b. the capacity to make decisions based on a set of given information
   c. voluntary action in the absence of coercive factors
   d. all of the above
5. **In the Patient Protection and Affordable Care Act (PPACA):**
   a. the price of outpatient mental health treatments reduced to 35% in 2013 and 20% in 2014
   b. include fixed amounts despite service provided
   c. costs between 20%–40% of the Medicare-approved amount
   d. answers a and c above

6. **True or False.** Christopher Amenson, a psychologist, created guidelines to help foster productive approaches to coping and living with mentally ill family members.
   a. True
   b. False

7. **The Americans with Disabilities Act prohibits employers from discriminating against qualified individuals with disabilities in the following:**
   a. job applications and hiring
   b. job assignments
   c. promotion and discharge
   d. all of the above

8. **Group therapists are legally required to inform clients of the following information prior starting sessions:**
   a. Potential bias of the therapist
   b. Patient’s rights within the therapeutic group
   c. Criminal records of patient’s participating
   d. Answers a and c above
9. **Multiple studies have pointed out the effectiveness of social skills training for patients with mental illness, such as:**
   
a. the effects were maintained over time even in the absence of sustained training
b. the benefits lead to full clinical recovery
c. benefit women more than men
d. none of the above

10. **True or False. Multiple studies have shown that the vast majority of mentally ill individuals are violent.**
    
a. True
b. False
Introduction

Psychopharmacology Part I raised the National Alliance on Mental Illness (NAMI) definition of mental illness as “a medical condition that disrupts a person's thinking, feeling, mood, ability to relate to others and daily functioning. Just as diabetes is a disorder of the pancreas, mental illnesses are medical conditions that often result in a diminished capacity for coping with the ordinary demands of life.”

Various terms and categories of mental illness were introduced as well as current treatment options. Part II of this series delves further into the special populations and consideration of adjustment to treat plans based on gender, age and socio-cultural considerations.

Psychopharmacology And Special Populations

Geriatric Considerations

An estimated 5.6 million to 8 million Americans over the age of 65 years have mental health or substance-use disorders. According to the Institute of Medicine (IOM), these numbers will continue to climb up to 14.4 million by 2030. To add to this dilemma is the decreasing number of geriatric psychiatrists working in this field. The American Geriatrics Society estimates that there are fewer than 1800 geriatric psychiatrists in the U.S. today and that by 2030 there will only be about 1650 left. These numbers mean that there will be less than 1 per 6000 older adults with mental health and substance-use disorders.

The IOM's 2012 workforce report on this topic, called In Whose Hands?, confirms this shortage and states that the country simply cannot train sufficient number of train doctors specializing in geriatric medicine to meet the vacant positions. This report is backed by the
fact that more than half the vacant fellowship positions in geriatric medicine or psychiatry remain unoccupied each year. Moreover, a separate survey by the American Psychological Association (APA) found that only 4.2% of practicing psychologists have specialized training in treating older adults.\textsuperscript{112}

The shortcomings of the U.S. health care system put the mentally ill geriatric population at greater risk of disabilities, poorer treatment outcomes and higher rates of hospitalization and emergency visits than those with physical illnesses alone.\textsuperscript{113} The following are the four main challenges in the provision of appropriate mental health care to geriatric patients:

a. Physiological changes to the body systems  
b. Presentation of psychiatric symptoms mimic many conditions that are part of the normal aging process (anxiety and, poor sleep, memory and concentration)  
c. As mentioned above, there’s limited number of specialized psychiatrists trained to handle geriatric patients  
d. Increased likelihood of existing comorbidities

As discussed previous sections, there are physiologic changes to consider in the psychopharmacologic treatment of older adults. The pharmacokinetics of drugs including its renal and hepatic clearance, and protein binding are markedly different and at times unpredictable, adversely affecting its pharmacodynamics and therapeutic outcomes.\textsuperscript{114}
The kidneys are major routes of excretion for many non-lipid soluble drugs. One notable example is lithium, a popular mood stabilizer. It is almost completely renally excreted, a process strongly influenced by sodium and water excretion. One important clinical implication of this type of elimination is its low therapeutic index, a marker for increased likelihood of toxicity. Renal dysfunction, use of NSAIDs, antidepressants and diuretics, are conditions that impair lithium excretion and increase the risk of toxicity. Older adults especially are at risk because many of them take maintenance medications concomitantly for their arthritis (NSAIDs), hypertension and heart conditions (diuretics).

**Physiologic changes to the kidneys in older adults**

<table>
<thead>
<tr>
<th>Renal changes</th>
<th>Pharmacokinetic implications</th>
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<tbody>
<tr>
<td>Decrease in kidney size</td>
<td>Reduced elimination</td>
</tr>
<tr>
<td>Decrease in renal blood flow</td>
<td>Increased accumulation and toxicity</td>
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<tr>
<td>Decrease in functioning neurons</td>
<td>Increased / decreased absorption of other drugs *</td>
</tr>
<tr>
<td>Decreased renal tubular secretion</td>
<td></td>
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<tr>
<td>Decreased glomerular filtration rate</td>
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*Polypharmacy considerations: 25% of patients over the age of 70 take more than 5 drugs everyday.

Additionally, older patients with preexisting neurologic impairments such as dementia and Parkinson’s disease, and endocrine disorders such as hypothyroidism and testicular failure, are at a greater risk for acute lithium neurotoxicity. There have been several reports that indicate persistent cerebellar and basal ganglia dysfunction after
treatment with these special population groups. These dysfunctions can manifest as neuromuscular excitability, irregular coarse tremors, fascicular twitching, rigid motor agitation, muscle weakness, ataxia, sluggishness, delirium, nausea, vomiting, and diarrhea. It is worth noting that some of these signs and symptoms occur in patients with Parkinson’s disease, which makes them easy to miss to the untrained eye. Therefore, careful plasma lithium level monitoring is necessary.

The liver is the most common site of drug metabolism (biotransformation). Thus, the aging liver adversely affects drugs that undergo extensive hepatic first pass effect. Many psychoactive drugs used in the treatment of various mental disorders are lipid soluble and thus, not freely excreted in urine. Instead, they are eliminated through the liver where they are excreted in the bile and transported to the intestine. The SSRI, fluoxetine, is one such example. In the liver, it undergoes demethylation to form norfluoxetine, an active metabolite. A cirrhotic liver will delay its hepatic clearance, increasing the likelihood of toxicity.

Physiologic changes to the liver in older adults

<table>
<thead>
<tr>
<th>Hepatic changes</th>
<th>Pharmacokinetic implications</th>
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<tr>
<td>Decrease in liver blood flow</td>
<td>Reduced metabolic clearance</td>
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<tr>
<td>Decrease in liver size</td>
<td>Increased accumulation and toxicity</td>
</tr>
<tr>
<td>Decrease in liver mass</td>
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Another pharmacokinetic consideration to take into account is the distribution of drugs via protein (albumin) binding. Like renal clearance, the amount of protein in the body is governed by a number
of conditions. Generally, older adults are more likely to suffer from hypoalbuminemia due to any of the two main conditions:

1. Malnutrition:
   - Lack of protein in the diet

2. Increased excretion of albumin resulting from:
   - Renal (kidney) dysfunction
   - Liver disease such as cirrhosis or hepatitis
   - Heart disease: leads to congestive heart failure, or pericarditis
   - Gastrointestinal disorders: reduces protein absorption
   - Cancer such as sarcoma or amyloidosis
   - Medication side effects
   - Infections such as tuberculosis

The body can only use non-protein bound drugs. Therefore, clinicians will do well to consider the comorbidities of geriatric patients prior to prescribing psychoactive drugs.

Decreases in protein-binding results in an increase in circulating free drug fractional amounts; and, hence, its effects. An example of a highly protein bound (>90%) drug is phenytoin. Its use in the setting of hypoalbuminemia in an elderly patient requires dosage adjustment and cautious titration after administration of the initial dose. Usually, a total daily dose of 3 mg/kg is appropriate in this case. Due to the poor correlation of the total drug level with clinical response and risk of adverse effects, an appropriate therapeutic range may be 5–15
mcg/mL rather than the 10–20 mcg/mL recommended for young adults.\textsuperscript{119} Also, if phenytoin is administered concurrently with diazepam, the latter displaces the former from plasma proteins, resulting in an increased plasma concentration of free phenytoin and an increased likelihood of unwanted effects.\textsuperscript{119}

Other considerations to keep in mind when dealing with mentally predisposed geriatric patients are adherence to therapy, medication errors, and safety and efficacy problems. Clinicians and pharmacists need to make it easy for the patient. They need to go the extra mile with this population group using certain measures such as:

- Ease of administration
- Possible dose reduction
- Avoidance or reduce medications that produce visual and motor impairment

\textit{Pregnancy}

There are two types of women that fall into this population group; women who were already on psychoactive drugs when they fell pregnant and the ones who started the medication during pregnancy. A good reference is the Harvard women’s health website at http://www.womensmentalhealth.org/.

Contrary to popular belief, the hormonal changes do not naturally protect women from mental disturbances during pregnancy. Studies in the last few years have dispelled this myth and confirm that up to 20% of women suffer from stress, mood and anxiety during gestational and postpartum periods. These difficult diagnoses pose tricky challenges to the mother, baby and the clinician during the entire delicate transition.
The management approach requires a balance between keeping the disorder under control and maintaining the health of the mother and the growing fetus.

For women already on psychoactive medications, there are 3 general guidelines that are usually followed, which are listed below.

1. Cessation of pharmacotherapy:
   This is a common approach given that it minimizes fetal exposure to psychoactive drugs during its most vulnerable period of development (1st trimester). But it is not always the best approach because psychiatric instability is not a benign condition; it poses a risk to the fetus too. There have been reports of higher rates and risk of relapse in women with bipolar disorder who discontinued their mood stabilizers than those who maintained treatment (37.0%). Optimally, the clinician should present the risks and benefits of this approach to the patient so the latter can share the responsibility of making well-informed decisions regarding the treatment.\(^{120}\)

2. If the risks posed by the first option outweigh the benefits, drugs that have long history of relative safe use in pregnant women should be used. The FDA Pregnancy Category Designations introduced in 1975 can be used in this instance though it is important to be aware of its limitations. For one, the category designations often lacked sufficient human data. Second, there is no clear differentiation between categories C and D.\(^{120}\)

   A systematic review on the use of first and second generation antipsychotics during early and late pregnancy found that the latter was more likely associated with gestational metabolic
complications and higher than normal birth weight of babies compared with the former. Another study reports that the drug-induced weight gain and visceral-fat accumulation of second generation antipsychotics in non-pregnant women also applies to their pregnant counterparts, exposing them to higher risks of gestational diabetes, hypertension and pre-eclampsia.\textsuperscript{122,123}

The teratogenic risk of amisulpride, ziprasidone, and sertindole is considered unknown due to insufficient human data. Clozapine, another second generation antipsychotic, is known to cause agranulocytosis in both pregnant and non-pregnant populations. The risk of infection to the baby and mother is therefore increased, meritng careful monitoring of WBC counts for the next 6 months after initiation of therapy. In contrast, the first generation antipsychotics, haloperidol and chlorpromazine, are associated with fetal malformations (mostly limb defects) and spontaneous abortions, respectively.\textsuperscript{121}

Lithium is generally avoided in pregnancy. It is associated with high risk (13-fold) of heart malformation when used during the 1\textsuperscript{st} trimester of pregnancy. When used in the 3\textsuperscript{rd} trimester of pregnancy, it may cause lethargy and listlessness in babies accompanied by irregular suck and startle responses. Additionally, it may cause congenital hyperthyroidism and poor oxygenation resulting in the appearance of “blue babies”. When used in the second trimester, lithium is safe. It is contraindicated in breastfeeding women since it enters the breast milk and causes unwanted side effects on babies.\textsuperscript{124}
The guideline, *Use of Psychiatric Medications During Pregnancy and Lactation*, published by the American College of Obstetricians and Gynecologists (ACOG) in 2008, issues the following recommendations and conclusions based on good and consistent scientific evidence (Level A):\(^{125}\)

- Lithium exposure in pregnancy may be associated with a small increase in congenital cardiac malformations, with a risk ratio of 1.2 to 7.7.

- Valproate exposure in pregnancy is associated with an increased risk of fetal anomalies, including neural tube defects, fetal valproate syndrome, and long term adverse neurocognitive effects. It should be avoided in pregnancy, if possible, especially during the first trimester.

- Carbamazepine exposure in pregnancy is associated with fetal carbamazepine syndrome. It should be avoided in pregnancy, if possible, especially during the first trimester.

- Maternal benzodiazepine use shortly before delivery is associated with floppy infant syndrome.

On the other hand, there are 5-30% of women who reportedly suffer from depression at the onset and during perinatal period. Untreated depression leads to substance and alcohol abuse, and poor pregnancy outcomes such as inadequate prenatal care, low birth weight and, retarded fetal growth. Depression is also associated with premature birth. These data highlights the need for careful analysis and
reevaluation of the risk-benefit ratio of initiating and maintaining use of psychoactive drugs during pregnancy.¹²⁰

A higher risk for persistent pulmonary hypertension (PPHn) in the newborn has been linked to the use of SSRIs like fluoxetine during the last trimester of pregnancy. Persistent pulmonary hypertension of the newborn is a cardiovascular condition usually seen within 12 hours of delivery. When this happens, the infant’s pulmonary vascular resistance does not decrease as normally expected and blood is shunted away from the lungs. This diversion results in an insufficiently oxygenated blood that causes respiratory distress in the infant, which may require assisted ventilation. PPHM occurs in approximately 2 in 1000 births.¹²⁷

Anxiety disorders can also be triggered or worsened by pregnancy. Panic disorder, obsessive-compulsive disorder, and generalized anxiety disorder appear to be as common as depression. Fluoxetine is the most prescribed and thoroughly researched antidepressant in the United States. There is a large pool of data collected from over 2500 cases that indicates no increase in risk of major congenital malformation in infants exposed to this drug. Studies of other SSRI antidepressants show the same results, though these have not been backed by such large data. Older antidepressants such as MAOIs are generally not recommended during pregnancy because of their extensive dietary restriction requirements that can compromise the mother’s nutritional status, induce hypertension, and adversely react with terbutaline, a drug used to suppress premature labor.¹²⁶
**Pediatric**

Children are not untouched by mental illness. According to cumulative research data, 1 in 5 children and adolescents in the United States suffer from a behavioral or emotional disorder. ADHD, pediatric conduct disorder, depression, bipolar disorder, oppositional defiant disorder, mood disorders, obsessive-compulsive disorders, mixed manias, social phobia, anxiety, sleep disorders, borderline disorders, assorted “spectrum” disorders, irritability, aggression, pervasive development disorders, personality disorders, and there are others discussed in the pediatric psychiatry literature. The field of pediatric psychopharmacology is a rapidly growing area of care, and an indispensable part of pediatric psychiatric treatment.\(^{128}\)

Perhaps the greatest concern in the psychopharmacologic treatment of pediatric patients lies in the fact that there’s a huge potential for over diagnosis and overtreatment without adequate clinical data supporting the efficacy and safety of psychotropic agents in this particular population.\(^{129}\)

Below are the three main challenges in the provision of appropriate psychopharmacologic treatment to pediatric patients:\(^{130}\)

1. Inadequate medication response:
   The lack of efficacy is one of the two most commonly cited reasons for nonadherence to pharmacotherapy.

2. Significant adverse drug reactions:
   The second most commonly cited reason for noncompliance is the crippling side effects, disabling the child to function normally at school and among his peers. This is an important area of
management wherein clinicians need to tread carefully because children may very well develop a negative view towards medication that may have proved helpful. Since many adult psychiatric disorders have an onset at an early age, a past error in psychopharmacologic treatment choices can spur a lifetime of consequences for the patient, the family and the present clinician.

3. Lack of specialized child and adolescent psychiatrists:¹³¹ In the face of ongoing shortages of specialized child and adolescent psychiatrists, the responsibility of providing psychopharmacologic treatment often falls on adult psychiatrists, family physicians, and pediatricians.

*Atypical antipsychotics*

In 2007, risperidone received FDA approval for the treatment of schizophrenia in adolescents age 13 to 17 and single therapy in short-term treatment of manic or mixed episodes of bipolar I disorder in children and adolescents age 10 to 17. A study made recently suggests that this drug elevates prolactin levels in children age 7-17 treated with it. The implication of this finding is especially important for those children entering puberty as they may develop more than normal increase in breast size and galactorrhea.¹³²

*Antidepressants*

A rise in the research, current expert guidelines and consensus statements that back the efficacy of SSRIs and the tricyclic antidepressant (TCA), clomipramine, in the treatment of obsessive compulsive disorder (OCD) in psychiatric pediatric patients.
The use of sertraline, paroxetine and fluoxetine in pediatric patients show that they exhibit similar pharmacokinetic profiles as in adults. Although the half life of these drugs do tend to be shorter because of the more rapid metabolism and hepatic blood flow in children, the dosing schedules remain the same, i.e., fluoxetine and sertraline are given once a day and fluvoxamine twice a day when doses are above 100/mg day total. The slight difference in pharmacokinetic data does not have clinical significance in the overall pharmacodynamics of the drug.\textsuperscript{133}

A study found that a quarter of pediatric subjects treated with SSRIs and clomipramine exhibit agitation that could potentially cause mania and hypomania. The paradoxical effects warrant further investigation and careful monitoring since these drugs may very well induce the onset of another potentially serious mental illness, bipolar disorder.\textsuperscript{133}

Paroxetine has a short half-life and may cause withdrawal symptoms after as few as 6-8 weeks of treatment. Therefore, the FDA has recommended clinicians who prescribe it to closely monitor patients, with at least a weekly face to face follow up during the first 4 weeks of therapy and specific visit intervals thereafter.\textsuperscript{134}

It is the clinician’s responsibility to inform parents and patients about adverse effects, the dose, the timing of therapeutic effect, and the danger of overdose of the administered antidepressants, especially TCAs, prior to initiation of psychopharmacologic treatment. With TCAs, clinicians need to determine the exact dosage for patients because these drugs are known to cause fatal overdose at therapeutic dosages.
On the other hand, parents need to take an active role in the drugs’ storage and administration, especially parents of younger children or children with suicidal tendencies.\textsuperscript{135}

The TCAs have been surpassed by the SSRIs when it comes to safety. As such, they are no longer the first line of drug for pediatric depression. Moreover, they require a baseline electrocardiogram (ECG), resting blood pressure, pulse, and weight monitoring prior to initiation of treatment. SSRIs have no such laboratory test prerequisites in healthy individuals.\textsuperscript{135} The risk of QT-prolongation is rare but nevertheless present in patients with risk factors for arrhythmias. These patients are best managed by another antidepressant.

\textit{Stimulants}

More than 80\% of stimulant medications use in the world occurs in the US. A study conducted in 2008 attributes this huge number to cultural influence on the identification and management of psychiatric disorders than any other field in medicine.\textsuperscript{136}

At the heart of ADHD management is psychopharmacology, which consists of stimulants, norepinephrine reuptake inhibitors, alpha-2 agonists and antidepressants. Stimulants like amphetamine and methylphenidate rank the best evidenced-based medications for improving attention dysfunction in children and adolescents.

The past 50 years have seen the development of various methylphenidate (MPH) formulations, ranging from sustained tablet (long acting) release to patches. A systematic review and meta-analysis conducted by Punja et al. found that long-acting MPH
formulation have a little effect on the severity of inattention and overactivity, and hyperactivity and impulsivity, according to parent reports, whereas the short-acting formulation was preferred according to teacher reports for hyperactivity.\textsuperscript{137} Despite the long history of effectiveness, MPH type of medications comes with side effects that can discourage patients from following through with recommended drug regimen.

\textbf{Stimulant medications and their notable side effects.}\textsuperscript{138}

<table>
<thead>
<tr>
<th>Medication</th>
<th>Side effects</th>
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<tbody>
<tr>
<td>Methylphenidate (MPH)</td>
<td>Addiction, insomnia, decreased appetite, agitation, headache, heart palpitations, loss of weight, dizziness, growth suppression.</td>
</tr>
<tr>
<td>Magnesium pemoline</td>
<td>Hepatic failure</td>
</tr>
<tr>
<td>Dextroamphetamine</td>
<td>Depression, dysuria, bladder pain</td>
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</table>

A community based study conducted by the Department of Pediatrics, School of Medicine at Yale found that MPH have growth suppression factors, with children taking the drug at doses 10-80 mg/day exhibiting significant height differences when compared to untreated biological siblings at the same age.\textsuperscript{139}

Another ADHD medication, atomoxetine, also carries an FDA warning. Studies show that children and adolescents with ADHD who take atomoxetine are more likely to harbor suicidal thoughts than who do not take it. Magnesium pemoline is associated with hepatic failure and comes with the FDA Black Box Warning. It is not considered the first
line drug for ADHD and when a clinician does plan to start a patient on it, a written informed consent should be obtained prior to initiation of therapy.\textsuperscript{140}

**Limitations And Inadequacies**

Psychopharmacology, with its advances in theories and practice, still comes up short to actually addressing the root cause of mental illness. The SSRIs is a good example. Even after decades of research, the serotonin and norepinephrine hypothesis as the cause of depression is still largely controversial. This will be discussed in depth in the section, ethical dilemma, but suffice to state for now that the financial stakes are high on these hypotheses.

**Cure Versus Control**

In the context of mental illness, psychopharmacologic interventions are only modest palliative care measures. In other words, it’s all about control of symptoms to improve the quality of life. Psychiatry, the mother tree of psychopharmacology, is largely governed by the mission to protect public health, to the extent of creating a forceful barrier against those who pose a danger to it. The asylums and rehabilitation facilities are evidence of this endeavor. On the other hand, because public safety is the driving directive of this field, the patients that are governed by it sometimes take secondary importance.

Psychoactive drugs alter antisocial behavioral tendencies, allowing mentally ill individuals to function in society. But this seemingly positive benefit comes with a price; the altered behavior makes the
families and public feel safer while the patient may not necessarily feel better. For instance, schizophrenia is managed with neuroleptic medications that target its destructive symptoms such as hallucinations, delusions and thought disorders at doses that cause significant debilitating side effects such as sedation, lethargy, emotional blunting, impotence, Parkinsonism, and agitation. As a result, many patients not only skip these drugs but the entire psychiatric treatment plan altogether. Indeed, a lot of patients require legal-coercion in order to take their prescribed drugs and they are not entirely to blame. The bottom line is optimal public safety does not always equate to patient’s well being, nor are they always compatible. Either one has to give in to the other.

Since the patients are the ultimate expert in their own subjective psychiatric health, it makes sense that they take a more active role in their psychopharmacologic therapy. This type of approach is not new; the patient controlled analgesia (PCA) is proof of that. A lot of clinicians are wary of this type of approach, and their fears are warranted. Psychoactive drugs are known to cause psychological and physical dependence, which are potential risks that sometimes outweigh the benefits, resulting in under-dosing and needless suffering. The idea of enhancing psychological well being to augment suffering in the name of palliative psychopharmacological treatment is still a highly debated topic to this day.

Not all psychiatric patients respond to psychoactive drugs the same way. This is why there is a need for an established plan that includes regular and frequent consultations throughout the course of treatment (usually lifetime). The pharmacotherapy tenet, “start low, go slow”,


needs to be followed especially for these medications. But more than this, the challenge to the clinicians lies in the fact that it takes considerable amount of time to find the right drug for each patient and even longer to find the minimum effective dose that balances the risks and benefits.\textsuperscript{141}

**Toxicity Levels**

According to a report published by the National Center for Health Statistics (NCHS) in 2011, the number of adolescents and adults that use antidepressants in the U.S. climbed to a staggering 400\% in the last three decades. What’s more, more than 60\% of them have taken it for 2 years or longer, with 14\% having taken the medication for 10 years or more. But perhaps the most chilling part of this report is that less than one-third of them and less than one-half of those taking multiple antidepressants have seen a psychiatrist in the past year.\textsuperscript{142}

Perhaps the class of antidepressants that concerns clinicians the most is SSRIs because although they have lesser incidence of toxicity, they are the most widely prescribed in the U.S. Serotonin toxicity, a common adverse effect of this class, encompasses a wide range of signs and symptoms affecting the neuromuscular, autonomic, cardiovascular, nervous and gastrointestinal systems, where the highest concentrations of serotonin receptors are found. In its most severe form, it is known as serotonin syndrome and its most frequent cause is the co-administration of SSRIs with MAOIs.\textsuperscript{143,146}

The drug interaction can occur after as little as 2 doses have been administered. It may then trigger a series of acute symptoms such as agitation, gastrointestinal disturbances, and tremor that worsen
rapidly. Patients who experience milder forms may not recognize these as manifestations of toxicity and thus, not seek treatment. Aside from drug interactions, serotonin syndrome can also occur due to excessive dosage for suicide purposes, although this rarely happens.¹⁴⁶

The mechanisms and their precipitating factors that cause an abnormal increase in serotonin levels are:¹⁴⁴

- Direct stimulation of 5HT-receptor: buspirone, triptans, lithium, carbamazepine, peyote

- Direct release of 5HT from presynaptic storage: amphetamines, MDMA, cocaine, reserpine, levodopa, monoamine oxidase inhibitors, opioids such as codeine and pentazocine

- Greater availability of 5HT precursors - L-tryptophan from tyramine containing foods

- Reduced reuptake of 5HT: SSRIs, trazodone, nefazodone, venlafaxine, tricyclic antidepressants, dextromethorphan, meperidine, St. John's wort, amphetamines, carbamazepine, methadone, linezolid

- Reduced metabolism of 5HT: Monoamine oxidase inhibitors, St. John's wort

- Presence of comorbid conditions such as serotonin-secreting tumors
Citalopram has the highest fatality rate among all SSRIs (145). It exerts a dose-dependent QT prolongation resulting in the revision of the drug’s prescribing information to include it in 2011. It is contraindicated in individuals with congenital long QT syndrome, with the recommended daily dose not exceeding 40 mg.144

Tricyclic antidepressants (TCAs), though not the first line drugs for depression, are still used in some patients. The pharmacologic mechanisms that cause TCAs toxicity are:147
- Norepinephrine and serotonin reuptake inhibition at nerve terminals
- Anticholinergic activity
- Inhibition of alpha-adrenergic receptors
- Blockade of cardiac sodium channels in the myocardium

Among the TCAs, amitriptyline toxicity has the highest number of fatalities.148 Patients exhibit major cardiac toxicity symptoms when drug concentration and that of its metabolite, nortriptyline, exceed 300 ng/mL. This is most apparent with QRS widening that leads to ventricular tachycardia and asystole. Because their relative plasma levels are highly variable, toxicity can also occur at lower concentrations.149

Monoamine oxidase inhibitors (MAOIs) are older antidepressants with well-documented dietary-induced toxicity. They are last resort drugs in the treatment of resistant depression, usually reserved for cases where patients do not respond to SSRIs. They have high oral absorption with peak plasma concentrations occurring within 2-3 hours of ingestion. They inhibit the degradation of catecholamines
norepinephrine, dopamine, and serotonin, resulting in symptoms that reflect excessive excitable neurotransmitters such as hypertension, tachycardia, tremors, seizures and hyperthermia.\textsuperscript{150}

MAOI toxicity is the result of three main events:\textsuperscript{150}

- **Intentional poisoning:**
  Uncommon but happens nonetheless. Symptoms appear late, up to 32 hours after ingestion.

- **Drug-food interaction:**
  This is the famous “tyramine reaction” which results in fatal hypertensive emergencies. It has a rapid onset, usually within 15-90 minutes after ingestion.

- **Drug-drug interaction:** It occurs when co-administered with serotonin reuptake inhibitors and several analgesics. Essentially, any drug that releases catecholamines can trigger hypertensive crisis in individuals also using MAOIs.

### Significant interactions with MAOIs

<table>
<thead>
<tr>
<th>Drug-food interactions</th>
<th>Drug-drug interactions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cheese</td>
<td>Meperidine</td>
</tr>
<tr>
<td>Smoked meat</td>
<td>Dextromethorphan</td>
</tr>
<tr>
<td>Sauerkraut</td>
<td>Fluoxetine and other SSRIs</td>
</tr>
<tr>
<td>Ginseng</td>
<td>Linezolid</td>
</tr>
<tr>
<td>Beer</td>
<td>Buspirone</td>
</tr>
<tr>
<td>Red wine</td>
<td>Amphetamines</td>
</tr>
</tbody>
</table>
Depressants are favorite drugs of choice to overdose on, particularly, barbiturates. However, newer classes such as benzodiazepines, which also happen to be the most commonly prescribed depressant in the US, are now the first line drugs for anxiety. These drugs have better safety profiles owing to their relatively high therapeutic index, but when taken concurrently with alcohol can lead to severe CNS depression. Symptoms of depressant overdose include sluggishness, drowsiness, reduced mental faculties, and in severe cases, respiratory depression and coma.

Reports in the recent years pointed to the possible increased likelihood of propylene glycol toxicity in neurocritical patients treated with high dose barbiturates. Propylene glycol is a pharmaceutical vehicle in the IV formulations of phenobarbital and pentobarbital. Its accumulation in the body to toxic levels may trigger the very seizures that the barbiturates intended to treat.¹⁵¹

Barbiturates, in certain countries where euthanasia is legal, are used in combination with muscle relaxants for physician-assisted suicide (PAS). Depressants should not be taken when operating machineries or driving.¹⁵²

Lithium poisoning is another concern with psychopharmacologic treatment. Due to its therapeutic dose (300-2700 mg/day) often overlapping with its toxic dose, the drug is known to cause frequent toxicity among its users, especially those with renal insufficiency and on diuretics. Lithium clearance is predominantly based on the
glomerular filtration rate (GFR). Diuretics increase the reabsorption of lithium at the proximal tubule, the site where carbonic anhydrase inhibitors (i.e., acetazolamide) exhibit their effect.¹⁵³

**Patient Consent**

The patient’s mental capacity is largely influenced by the severity of diagnosed disorder and plays a crucial role in determining the patient’s ability to give an autonomous and informed consent for psychiatric therapy, including the initiation of psychopharmacologic medications. Essentially, informed consent is both a legal and medical standard that is made up of three important components:¹⁵⁴

1. Ability to process information logically
2. Capacity to make decisions based on a set of given information
3. Voluntary action in the absence of coercive factors

Decisional capacity in psychiatric patients has been studied extensively in the last decade using the MacArthur Competence Assessment Tool for Treatment (MacCAT-T). These studies found that decisional incapacity is common only in 20–30% of chronic psychiatric patients with acute and cognitive disorders, although this differs from state to state. Additionally, it has also identified several strong predictors.¹⁵⁴

**Predictors for decisional incapacity**

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive symptoms</td>
<td>Hallucinations</td>
</tr>
<tr>
<td></td>
<td>Delusions</td>
</tr>
</tbody>
</table>
### Negative symptoms

- Social withdrawal
- Apathy

### Severity of symptoms

- The more severe the depression, the greater the likelihood of incapacity

### Involuntary admission

### Treatment refusal

Incapacity was noted mostly in patients with organic mental disorders such as dementia, psychosis and delirium. The remainder majority is actually capable of making treatment decisions. These include patients with personality and adjustment disorders.

Despite these predictors, the decision-making capacity of patients is not dependent on diagnostic categories of mental disorders; rather, it is the functional abilities such as understanding and practical reasoning that are the crucial elements in the assessment of decisional capacity. Informed consent, based on appreciation, understanding and reasoning of the treatment proposed, varies across different diagnostic categories:155

**Schizophrenia**

Studies show that schizophrenic patients’ appreciation, understanding and reasoning adversely affect MacCAT-T scores. In particular, they show, if at all, limited insight into their illness.

**Mood disorders**

Mania is a significant risk factor for incapacity, while mild to moderate depression has little effect on the decisional capacity of patients.
Mental retardation
Adults with mild mental retardation experience significant loss of appreciation and reasoning abilities, deeming them most of the time incapable of making informed decisions regarding their treatment.

Substance abuse disorder
Patients with this disorder are judged to have the full mental capacity to make autonomous treatment decisions, unless they also suffer from dementia or other issues due to substance abuse.

Anorexia nervosa
Since patients with this disorder experience distorted body image or denial of the consequences of abnormally low body weight, they generally show a loss of appreciation to the treatment proposed.

Primarily the clinician, prior to the start of treatment, psychopharmacological or otherwise, obtains informed consent. Obtaining informed consent follows a two-step process:\(^55\)

1. Ensure that the patient has been given all information relevant to the treatment proposed – the risk, benefits, and prognosis both with and without treatment, alternative treatments and their risk and benefits.

2. Ensure a voluntary choice free from coercion

Legal Considerations
The clinician must be aware of the state laws governing the involuntary treatment of psychiatric patients, especially its limitations.
As discussed in the previous sections, public safety is a powerful persuasion in eliciting legal action when compared to the wellbeing or even preservation of individual rights of the mentally ill individuals.

For example, in Rhode Island, the state can impose involuntary treatment of the mentally ill based on two legal premises: 156

1. *Parens patriae*, meaning “parent of the country,” gives the state sovereign authority to intervene and act on behalf of the mentally ill when they become mentally or physically incapable of caring for themselves.
2. Police power gives the state the authority to intervene on behalf of the public when its safety is threatened. Interventional actions include isolation and confinement of dangerous individuals. It applies to criminals, persons with contagious diseases and the mentally ill.

The question now becomes, can states make involuntarily hospitalized patients take their psychotropic medications? The answer is both *yes* and *no*. The majority of US states respect personal decisions of patients, whether to initiate a treatment or forego it. This is true, even for many mentally ill individuals. However, when found legally incompetent by law the refusal of medications may be overridden by a court order. Many states appoint legal guardians to consent for these patients. A few states recognize the right of voluntary patients to refuse psychotropic medications. The reasons for refusal may be due to any of the following reasons: 156
   1. Delusional thinking (less likely)
2. Previous intolerable side effect to the medication in question
   (more likely)

The second reason underscores the need for clinicians to explain the recommended psychopharmacologic treatments, including the benefits, adverse effects, and risks to their patients. The clinicians also need to explore fully the reasons behind the patient’s refusal. They may also opt to switch the patient to an alternate medication of the same class or another medication with more favorable side effects.\textsuperscript{156}

A second and third question follows the first one: Can involuntarily hospitalized patients be given emergency medications? How do these differ from involuntary medications? Emergency medications are ordered when imminent danger to self or others is present. An example includes the use of short acting benzodiazepines and neuroleptics in restrained, dehydrated and delirious manic patient who continues to physically resist and bang his or her head against the bed frame. These emergency medications must be ordered acutely and their clinical need reassessed frequently (every few hours). They are only used when needed and no longer than a few days at the most.\textsuperscript{156}

Involuntary medications are those that need to be regularly taken by patients as per court’s order. As such, they are time-limited and their extension requires a clinical reevaluation of the patient, overall response to therapy and present endangerment to public safety. The criteria for involuntary medications vary across states, but commonly include the following:\textsuperscript{156}

1. Incompetence to participate in decisions about treatment
2. Poor prognosis leading to dangerous behavior to self or others without the medications
3. History of noncompliance

Once these criteria are met, the clinician can then apply for the administration of involuntary medications with an accompanying affidavit supporting them. Another ethical issue that emerged during the 1980s is the covert administration of psychotropic drugs during emergencies. Today, 25 states have included psychiatric advance directives (PADs) in the state legislatures to protect the autonomy of mentally ill patients during their periods of mental incapacity. PADs enable these patients to uphold their right to exercise choice and control over their own treatment during episodes when they are mentally incapable of making the decision.

**Safety**

Most psychoactive medications are either illicit or controlled drugs because of their propensity to cause dependence among its users. Drug dependence is implicated in four medical events:

1. **Withdrawal and physical dependence**
   Physical dependence is characterized by the normal physiological adaptation of the body to the presence of a chronically administered drug. A drug dependent person needs to keep using the drug in order to prevent a withdrawal syndrome. Withdrawal syndrome results from abrupt discontinuation or dosage reduction, which has consequences ranging from mild to severely unpleasant and life-threatening complications.

2. **Tolerance**
A physiological state marked by a substantial decrease in drug sensitivity due to its chronic administration.

3. Psychological dependence
Psychological dependence refers to the intense and compulsive craving for the chronically administered drug. It is created when the “high” fades and the user administers another dose for an additional “fix”. While physical dependence will go away in days or weeks after drug use, psychological dependence can continue for years. This is the hallmark of “addiction”.

4. Overdose
Overdose is the administration of an excessively large and lethal dose of a drug (more than the therapeutic dose), leading to possible life-threatening complications.

Statistics On Teen Abuse

The 2008 Monitoring The Future (MTF) survey indicates use of illicit (street) drugs among teens has decreased in the US. However, more teens misuse prescription and OTC medications than any other illicit substance, except marijuana. A survey of 8th, 10th and 12th graders in public and private schools found in 2011 found that 2.1% of these teens reported that they had abused Ritalin and 4.1% reported that they had abused Adderall in the past year. In fact, the psychotropic medications, Adderall, Xanax and Valium are among the top 5 prescription drugs abused by teens, behind only the opioids, OxyContin and Vicodin.\(^{157}\) According to the CDC, there was a 91% in drug poisoning deaths among teens between the ages of 15-19 from 2000 to 2009 due to prescription drug overdose.

Commonly prescribed and abused psychoactive drugs.
<table>
<thead>
<tr>
<th><strong>Commonly abused psychoactive drugs</strong></th>
<th><strong>Symptoms of overdose</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Stimulants (amphetamine, phentermine, benzphetamine, methylphenidate)</td>
<td>Agitation, increased body temperature, seizures, hallucinations, death</td>
</tr>
<tr>
<td>Depressants / sleeping pills (barbiturates, benzodiazepines)</td>
<td>Respiratory arrest, clammy skin, dilated pupils, rapid pulse rate, coma, death</td>
</tr>
<tr>
<td>OTC dextromethorphan from cough syrup</td>
<td>Paralysis, loss of memory</td>
</tr>
<tr>
<td>Narcotics (codeine, methadone)</td>
<td>Respiratory depression, pinpoint pupils</td>
</tr>
</tbody>
</table>

**Causes of drug dependence**

The exact causes of illicit drug use is unclear, however, the genetic make up and innate psychoactive properties of the drug combined with peer pressure, emotional upheavals, anxiety, depression, and environmental stressors are all thought to play a role.

Among adolescents, peer pressure is a large contributing factor to drug abuse with 50 percent of those who become addicted eventually suffering from mental disorders such as depression, attention deficit disorder (ADD), and post-traumatic stress disorder (PTSD). Family behavior and habits also play a role in adolescent drug abuse. Children with parents who are drug abusers themselves are more likely to experiment with drugs and develop an addiction when they become adults.
Generally, there are 5 factors that are attributed to the development of drug dependence:158

- Existing mental illness such as depression, bipolar disorder, anxiety disorders, and schizophrenia
- Accessibility to illicit drugs
- Low self-confidence and poor family and social relationships
- Stressful lifestyle
- Cultural acceptance of drug use

Curiosity, an inherent human trait, is known to be a precipitating factor for both discoveries and disasters. Drug dependence proceeds through several stages from experimental use to downright addiction. Age is a determining factor in the speed at which a person moves through the stages. Generally, the younger the person is, the faster he is likely to move quickly through the stages. The first table below lists the stages leading to drug dependence; and, the second table, the common psychoactive drugs and corresponding street names.159

### Stages leading to drug dependence

<table>
<thead>
<tr>
<th>Stages</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental use</td>
<td>Introduction by peers for recreational use</td>
</tr>
<tr>
<td>Regular use</td>
<td>Develop physical dependence, marked tolerance to drug; seek higher and frequent doses</td>
</tr>
<tr>
<td>Daily preoccupation</td>
<td>Deal drugs to support habit, social withdrawal, use of other drugs</td>
</tr>
</tbody>
</table>
Addiction

Psychological dependence, loss of control over drug use, legal and financial problems, denial of existing drug problem

Street names of psychoactive drugs

<table>
<thead>
<tr>
<th>Psychoactive drugs</th>
<th>Street names</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amobarbital</td>
<td>Yellow jackets</td>
</tr>
<tr>
<td>Butalbital</td>
<td>Blue devils</td>
</tr>
<tr>
<td>Secobarbital</td>
<td>Seconal</td>
</tr>
<tr>
<td>Phenobarbital</td>
<td>Downers, goofballs</td>
</tr>
<tr>
<td>Diazepam</td>
<td>Roofies, Vallies, blues</td>
</tr>
<tr>
<td>Amyl nitrate capsules</td>
<td>Poppers, snappers</td>
</tr>
<tr>
<td>Marijuana</td>
<td>Roach, weed, MJ, Mary Jane, grass</td>
</tr>
<tr>
<td>Amphetamine</td>
<td>Speed, crystal</td>
</tr>
<tr>
<td>Methadone</td>
<td>Dollies</td>
</tr>
<tr>
<td>Nitrous oxide</td>
<td>Laughing gas</td>
</tr>
<tr>
<td>Butyl nitrate</td>
<td>Locker room</td>
</tr>
</tbody>
</table>

Drug tests and screening
Illicit drug use can be detected using urine samples to test for the presence of the drug’s metabolites.

- **Marijuana:**
  The drug is detected in urine for 48-72 hours after single use and up to 12 weeks after chronic use.

- **Barbiturates:**
  Two of the most commonly detected tranquilizers are butalbital and phenobarbital. Butalbital is prescribed for migraine while phenobarbital is primarily prescribed for seizure disorders. Their period of detection varies between the short acting to long acting drugs of this class, but generally, they are detected 2-10 after last use.

- **Benzodiazepines:**
  Benzodiazepines such as diazepam and alprazolam are found up to 7 days after the last chronic use, depending on its half-life.

**Treatment of Drug Abuse**

The first step in the treatment for drug abuse or dependence is its recognition as a problem. Recent research has found that addicts will less likely “deny” their drug abuse as a problem when confronted with empathy and respect. Treatment, much like the process that resulted in full-blown drug addiction, occurs in a series of stages:158

1. Cessation of drug use either gradually or abruptly. Since abrupt cessation can lead to severe withdrawal symptoms, professional detoxification in a controlled environment is encouraged along with peer support, and abstinence. Detoxification or “weaning
“Tapering off” sometimes require the administration of a drug with similar effects to reduce the side effects and risks of withdrawal. Depending on the severity of the dependence and health status of the patient, detoxification can be done on inpatient or outpatient basis.

2. Emergency treatment for acute toxicity due to overdose. Patients who overdosed usually present in the ED unconscious and on respiratory arrest. Antidotes are often used in these cases to bring down the toxic levels of the offending substance.

3. Behavior modification through counseling. Many rehabilitation facilities have long after-care plans in place (when the user is released from the medical facility) for both the patient and the family.

4. Psychosocial support after overcoming addiction. The treatment of drug addiction does not stop when the patient leaves the clinic facility. Friends and family are needed to help the person establish some level of normalcy after a long period of social withdrawal.

**Ethical Issues**

Psychopharmacology does not, in itself, cure mental illness any more than aspirin cures an infection. Pharmaceutical companies are powerful players in the field of psychopharmacology. They protect and continue to advocate past hypotheses based on monoamine deficiency that initially influenced the widespread use and acceptance of psychoactive
drugs more than 50 years ago. A lot has happened since then, but these hypotheses (serotonin and norepinephrine hypotheses) are actively used to justify and promote expensive psychoactive medications. In fact, these companies exert great influence on the prescribing habits of clinicians, sometimes more than patient history and evidence-based studies. What’s more, these hypotheses are wrought with limitations and dubious integrity.\textsuperscript{160}

\textit{Selective serotonin reuptake inhibitors}

SSRIs treat depression by inhibiting the breakdown or reuptake of serotonin from the synapse, thus keeping the serotonin bound to the postsynaptic receptor and active for a longer period. The selectivity of SSRIs is misleading because the drug affects other neurotransmitters, not just serotonin. For instance, fluoxetine and paroxetine, also indirectly affect the activity of another neurotransmitter, norepinephrine. The indirect effect is clearly seen in the aggression tendencies of patients prescribed with these drugs.

The neurochemical mechanisms of the brain are poorly understood let alone the specific effects of serotonin in the brains of depressed individuals. Consistent evidence-based research has not been established yet, even after all these years. Although there is little doubt that SSRIs do act on the serotonin system, what is still questionable is the role of serotonin deficiency in depression. Even one of the leading scientists of initial serotonin research, George Ashcroft, did not pursue further studies on the idea of lowered serotonin levels being the cause of depression in the 1970s. Ashcroft pointed out that, “what we believed was that 5-Hydroxyindoleacetic acid (5-HIAA) levels
were probably a measure of functional activity of the systems and not a cause. It could just as well have been that people with depression had low activity in their system and that 5-HIAA was mirroring that and then when they got better it didn't necessarily go up.”

SSRIs improve depressive moods by targeting the serotonin system but as Ashcroft implied, clearly there are factors other than neurochemical balance at play in the etiology, course and outcome of depression. The serotonin hypotheses clearly advanced the psychopharmacological treatment aspect of depression but the way that pharmaceutical companies have held onto it, despite its insufficient and inconsistent evidence, to make a solid marketing case to the public is also clearly unethical and most often, unchallenged. The therapeutic significance of SSRIs in depression is akin to aspirin in pain and fever. Just like aspirin that does not treat the cause of fever (i.e., infection); SSRIs do not treat the root cause of depression, and they merely elevate serotonin levels. It merely demonstrates a causal relationship between the symptom (depression) and serotonin levels. Symptomatic control of the disease is not treatment of the disease itself. Another problem with the serotonin hypotheses is that there are other agents such as reserpine that cause depletion of serotonin levels in the brain; yet do not cause depression.

Perhaps, the blame is not entirely on the pharmaceutical companies alone. The Food and Drug Authority (FDA) has played a hand in it too. They only require two positive clinical trials to demonstrate that an investigational antidepressant is better than placebo in order to approve it. Now all pharmaceutical companies need to do is conduct
numerous studies until they come up with at least two that show positive results. This takes on the appearance of the FDA setting a minimum standard for the pharmaceutical companies; and, in so many words stating: *show us two evidences that make it better than nothing and we’ll give you the green light.*

Many of the clinical trials concerning the effectiveness of SSRIs that were approved by the FDA show time and again that they do not offer a clinically significant advantage over placebo in the treatment of depression. According to recent global data on antidepressant studies, there is a less than 10% difference in the effect of FDA approved antidepressants versus placebo.\(^\text{162}\) And as for the small number of studies that did provide positive results, they catch the public’s eye through numerous publications in well-respected and peer-reviewed journals and FDA databases. But the remainder majority that provided negative and less than promising results were obscured and never mentioned. Sometimes, these trials are stopped even before they could be completed because of the alarming side effects found, which do not make it to the journals either.\(^\text{163}\)

Manipulation of the release of clinical data on antidepressants makes them less of a threat than the mental disorder that they were studied to treat. The hidden dangers are ugly and when do they become known, are often blamed on the underlying disorder rather than caused by the drug treatment. A good example is the increased risk of suicidal tendencies in patients on SSRIs. Because SSRIs were initially developed to study the serotonin levels of suicide victims, this particular finding is a tough pill to swallow by the very same
companies who spearheaded the studies. After all, these drugs were studied to treat depressed individuals who were at risk of harming themselves and others. To protect the company’s interests, they’ve assigned the blame on the disorder, a practice known as “defending the molecule”. Other scientists are catching up on this practice and have released studies that undermine it such as those that emerged in the early 1990s showing healthy and non-depressed volunteers increased likelihood to develop suicidal thoughts after treatment with SSRIs for other indications.\textsuperscript{164,165}

Another ethical dilemma to be considered in the administration of psychopharmacological treatment is the unethical manipulation of the mentally ill. Despite their refusal to treatment, the law sometimes forces them to sign up for one anyway. As mentioned in the previous section, such an action is the result of the law acting on behalf of the public’s best interests at the expense of the patient’s personal freedom.

**Patient Advocacy**

Unlike antihypertensive treatments with a well-defined and measurable outcome, psychopharmacologic treatments are hard to measure let alone quantify in a patient’s chart. There’s simply so much subjective data to sort out and make sense of. There isn’t a consistent measuring tool that tells both clinicians and patients that full mental stability has been regained that is in keeping with practice guidelines. Even mental illness is a poorly understood disorder. Moreover, treatment costs money, even with Medicare in place. These facts plus the risks that the treatment present to the well being of the patient are serious considerations that must be weighed in by the patient themselves before committing to it.
**Medicare**

The government has several insurance health policies in place to share the burden of healthcare costs of its citizens. Medicare provides insurance coverage for the mentally ill when they are hospitalized (Medicare Part A) or receive services in the facility but not confined in it (Medicare Part B). Prescription medications are also covered by Medicare under Medicare Part D. Additionally, the government gives patients the choice of an additional coverage called the Medicare Supplement Insurance (Medigap) policy to fill in the void that the first two policies leave. These policies, though helpful, still leave a substantial hole in the complete treatment of the mentally ill.¹⁶⁶

*In-patient care*

Medicare Part A measures the patient’s use of hospital services (*i.e.*, psychiatric and skilled nursing facilities) in benefit periods. A benefit period begins the day the patient is admitted as in an inpatient facility and ends after 60 consecutive days of non-treatment from the same facility. Should the patient be hospitalized again after 60 days, a new benefit period begins, and must pay a new deductible for any new services rendered. Patients have the advantage of multiple benefit periods when admitted to a psychiatric hospital with a limit of 190 days.¹⁶⁶

For each benefit period as a hospital inpatient, the following fees applied in 2012:¹⁶⁶

- $1,156 deductible per benefit period
- $0 for the first 60 days of each benefit period
- $289 per day for days 61–90 of each benefit period
$578 per “lifetime reserve day” after day 90 of each benefit period (up to a maximum of 60 days over the patient’s lifetime)

An inpatient will be partially covered by Medicare Part B for mental health services (80% of the Medicare-approved amount) provided by doctors and other health care professionals while confined.

**Outpatient care**

Medicare Part B covers outpatient mental health services, including those from clinics, providers’ or therapists’ offices, and hospital’s outpatient department. In some cases, it covers partial hospitalization costs and allows for a more intense treatment than what the primary provider’s office can provide and patient confinement during the day (no overnight stay).

As of 2010, it covers the following services, with possible deductibles and copayments:

- Individual and group psychotherapy with doctors and other licensed professionals
- Family counseling
- Tests to evaluate the effectiveness of treatment and services given
- Psychiatric evaluation
- Medication management
- Occupational therapy as part of mental health treatment
- Non-self administered prescription drugs (i.e., injectables)
- Individual patient training and education
- Diagnostic tests
- Partial hospitalization may be covered

The deductibles pertain to the amount the patient must pay for health care or prescriptions before Medicare, prescription drug plans, or other insurance begins to pay. Copayment pertains to the amount the patient may be required to pay as share of the costs for medical service or supply, like a doctor’s visit, hospital outpatient visit, or prescription rendered and received. It is a set amount rather than a percentage of the total bill.

Additionally, Medicare Part B fully covers several preventive measures to mental illness (upon agreement of assignment by the therapist or doctor) such as:166

- A one-time “Welcome to Medicare” preventive visit which includes a review of potential risk factors for depression. It is covered within the first 12 months of Medicare Part B issuance.

- A yearly “Wellness” visit. Medicare covers a yearly “Wellness” visit once every 12 months (if the patient had Part B for longer than 12 months).

- A yearly depression screening. Medicare covers one depression screening per year. The screening must be done in a primary care doctor’s office or primary care clinic that can provide follow-up treatment and referrals.

After payment of the yearly Medicare Part B deductible, how much each patient pays for mental health services will depend on the purpose of the visit to the therapist or doctor:166
• Diagnosis: For visits with the intent to diagnose a mental disorder, patients pay 20% of the Medicare-approved amount.
• Treatment: For outpatient treatment of a diagnosed mental disorder (i.e., psychotherapy), patients paid 40% of the Medicare-approved amount in 2012.

According to the Patient Protection and Affordable Care Act (PPACA), commonly called Obamacare that was passed in 2010, the price of outpatient mental health treatments will be reduced to 35% in 2013 and 20% in 2014. However, if these services are rendered in a hospital outpatient clinic or outpatient department, an additional copayment or coinsurance amount may need to be paid to the hospital. This amount will vary depending on the service provided; somewhere between 20%–40% of the Medicare-approved amount.

Prescription coverage
Medicare Part D is offered by various insurance companies, both private and government, approved by Medicare. Patients who are subscribed to the policy, Medicare Prescription Drug Plan, have access to its formulary. A formulary is a list of drugs that the Medicare plans cover. Medicare drug plans do not cover all drugs, but they’re required by law to cover all or almost all anti-depressant, anticonvulsant, and antipsychotic medications. Nonetheless, before enrolling into a treatment, patients need to ask their doctors and plan providers which drugs are covered by the Medicare plan.166

In certain cases wherein a doctor needs to prescribe a drug that’s not covered by the formulary of the patient’s Medicare plan; both the patient and the doctor have the right to request a coverage
determination to possibly accommodate the intended prescription. Coverage determination is the first decision made by the Medicare drug plan (not the pharmacy) provider about the drug benefits that the patient is entitled to such as:166

- Whether a particular drug is covered
- Whether the patient have met all the requirements for getting a requested drug
- How much the patient is required to pay for a drug
- Whether to make an exception to a plan rule when requested

The situations that warrant coverage determination are:166

- When a drug deemed necessary by the doctor isn’t covered
- When a drug deemed necessary by the doctor is covered but at a higher cost
- When a drug deemed necessary by the doctor needs prior authorization before it can be given
- When a drug is not covered by the existing Medicare plan of the patient because the plan provider have not deemed it necessary for that patient

If the drug plan does not provide a prompt decision and the requestors (patient or doctor) can show substantial proof that the delay would affect the patient’s health, the plan’s failure to act is considered to be a coverage determination. On the other hand, if the decision made by the provider is not agreeable to the needs of the patient, the requestors can file an appeal.

Coverage determination allows for exception requests; formulation exception and tiering exception. The requestors can file a request for
formulary exception to cover a drug that’s not on its drug list or to waive a coverage rule. A tiering exception allows for charging a lower amount for a drug that’s on a drug plan’s non-preferred drug tier. The doctor or other prescriber must send a supporting statement (compelling medical reasons) justifying the need for such an exception.

Every person with Medicare is entitled to certain rights and protection. To learn more about these, visit www.medicare.gov/publications to view the booklet “Medicare Rights and Protections”, or call 1-800-MEDICARE. There are various federal and state sponsored programs in place for mentally ill individuals with limited resources and income to allow them access to treatment.

*Extra Help*
Extra Help is a Medicare program to helps pay for Medicare prescription drug costs. Generally, qualification is based on certain income amounts. Even if patients don’t automatically qualify for Extra Help, they can still apply. For more information, patients should be advised to:

- Visit www.socialsecurity.gov or visit www.socialsecurity.gov/i1020 for online applications.
- Call Social Security at 1-800-772-1213. TTY users should call 1-800-325-0778 for phone and paper applications.
- Visit or call the State Medical Assistance (Medicaid) office. Visit www.medicare.gov/contacts, or call 1-800-MEDICARE (1-800-
633-4227) to get the phone number. TTY users should call 1-877-486-2048.

State Pharmacy Assistance Programs (SPAPS)
Many states have SPAPs in place to help certain patient groups pay for prescription drugs based on their financial need, age, or medical condition.

For more information, patients should be advised to:
- Call the State Health Insurance Assistance Program (SHIP) or,
- Visit www.medicare.gov/contacts, or call 1-800-MEDICARE (1-800-633-4227) to get the phone number of a particular SPAPS office. TTY users should call 1-877-486-2048.

Medicare Savings Programs
Patients with difficulty paying for deductibles and coinsurance as part of their Medicare costs can receive state assistance in the form of Medicare Savings Programs. For more information, patients should be advised to:
- Call or visit State Medical Assistance (Medicaid) office, and ask for information on Medicare Savings Programs. To get the phone number for a specific state, visit www.medicare.gov/contacts, or call 1-800-MEDICARE.
- Visit www.medicare.gov/publications to view the brochure “Get Help With Your Medicare Costs: Getting Started.”
- Contact the State Health Insurance Assistance Program (SHIP). Visit www.medicare.gov/contacts, or call 1-800-MEDICARE to get the phone number.
**Medicaid**

Medicaid or Medical Assistance also provides health coverage to certain people who have limited income and resources. Each state has its own set of criteria for eligibility that must be met. Other factors such as age and co-existing physical disabilities also count. For more information, patients should be advised to:

- Call the State Medical Assistance (Medicaid) office. Visit www.medicare.gov/contacts, or call 1-800-MEDICARE (1-800-633-4227) to get the phone number. TTY users should call 1-877-486-2048.
- Learn about the Medicaid program by visiting www.medicare.gov/publications to view or print the brochure, “Medicaid: Getting Started.”

**Homeless**

Approximately 200,000 of the severely mentally ill population in the US are homeless. Homelessness limits a person’s access to appropriate health care and employment opportunities. In children and adolescents, this experience translates to school absences. The homeless have higher rates of hospitalizations for physical illnesses, mental illness, and substance abuse than any other population groups.\(^{167}\) The housing needs of the severely mentally ill homeless are categorized into two groups:

1. Decent, affordable housing
2. Supportive assistance

The first category applies to all citizens. According to the Johns Hopkins article, *The Severely Mentally Ill Homeless: Housing Needs*
and Housing Policy, there are numerous studies that point to the risk of homelessness being an immediate consequence of discharge from hospitals. This finding implies that housing arrangements and continued support should be given to the treated individuals as they rejoin the community. The need for supportive assistance by the severely mentally ill patient requires new approaches to housing policy to be based on three factors:  

1. The continuity of symptoms, behaviors, and functional disabilities even after discharge from a mental hospital and placement into a housing setting;  

2. The varying impairments and symptoms of mental illness and the volatility of episodes between “controlled” phase and the active phase of illness;  

3. The availability and stable supply of appropriate mental health services.  

The main public sector sources of funding for supportive housing for the severely mentally ill persons include:  

- State supplements to the Supplemental Security Income (SSI) program  
- Two optional programs under Medicaid (Targeted Case Management, and Rehabilitative Services)  
- Social Services Block Grant  
- HUD Section 811 program (formerly Section 202/8)  
- McKinney Act, including the Projects for Assistance in Transition from Homelessness (PATH) program and the Shelter Plus Care program
Majority of those programs can only afford a fraction of the capital necessary to develop and operate a supportive housing setting. On their own, they are insufficient stand-alone sources of funding for housing costs. The limited budgets of these programs affect the depth of funding assistance and numbers that can be assisted. For example, Medicaid, is a useful source of funds for case management, but is not indicated primarily to pay for housing costs alone. Another example are the SSI payments for special residential settings that can only go as far as cover operational costs but not necessarily bankroll new housing developments nor pay for any large capital costs.

**Addictions**

As reiterated in the previous sections, patients need to be informed of their rights when receiving psychopharmacological treatment. As required by law, clinicians and their guardians, if any, must disclose all treatment information to the patient and obtain his consent prior to its initiation.

On the other hand, patients need to keep themselves aware of their rights by visiting or contacting various patient advocacy groups in their state. Patient advocacy organizations such as New York’s Office of Alcoholism and Substance Abuse Services (OASAS) protect the rights of mentally ill patients, especially alcoholic and drug addicts, while receiving treatments. The organization operates in accordance with Mental Hygiene Law and Regulations as well as other applicable state and federal laws. According to its website, patients have the right to:°169
• Be informed of the program’s rules and regulations.
• Receive considerate and respectful care.
• Receive services without regard to race, color, ethnicity, religion, sex, sexual orientation or source of payment.
• Receive confidential treatment. Except for a medical emergency, court order, child abuse or crimes committed on program premises, a program generally cannot release information about the treatment without written consent.
• Be fully informed of the treatment plan and participate in its development. This includes setting goals and measuring progress with the counselor.
• Refuse treatment and be told what effect this could have on the health or status in the program.
• Discontinue treatment at any time.
• Obtain, in writing, an explanation of the reason(s) for the discharge from treatment and information about the program’s appeal process. And, if necessary, receive help obtaining treatment at another program.
• Avoid inappropriate personal involvement with counselors, staff or other patients. Patients have the right to be free from sexual harassment and sexual misconduct.

On the other hand, according to the website, patients also have the responsibility to:169
• Act responsibly and cooperate with the staff from the program.
• Treat the staff and other patients with courtesy and respect.
• Respect the right of other patients to receive confidential treatment.
• Participate in the development and completion of the treatment plan, which includes becoming involved in productive activities, such as work or school and not using drugs.
• Pay for treatment on a timely basis.
• Talk with a counselor about problems that affect the treatment progress and recovery.
• Offer suggestions on improving program operations.
• Talk with a counselor before ending treatment; don’t just stop or leave.
• Ask questions about any part of the treatment that wasn’t understood.

COMMUNICATION

Family Understanding, Acceptance and Collaborative Efforts

The impact of mental illness is not lost on the families. When it first strikes, the first reaction of those closest to the patient may be to deny the existence of such illness. Signs of denial include but not limited to:¹⁷⁰

• Wanting to put the painful episodes behind right away

• Believing that the symptoms will not recur in the future after treatment of an acute episode

• Looking for stressors and problems and removing the patient from its presence. For example, some families relocate their mentally ill patient from their present environment into a new one in the hopes that a “fresh start” will alleviate the illness
Families may also be ill equipped to understand the diseases. Without the proper information, they may not be optimistic about the patient’s future and chances of normalcy. It is crucial that families educate themselves to help them understand how the illness affects their loved ones and that with psychotropic medications, psychotherapy and treatment monitoring, mentally ill individuals actually have increased control over their symptoms and episodes and can function normally in a social environment.\(^\text{170}\)

Sometimes, even when all members of the family have understood the illness and their role in the recovery of their loved ones, the family is often reluctant to discuss the person with others because of fear of judgment. The families may also withdraw from social interactions at home for fear of triggering a symptomatic episode with the disruption and presence of visitors. The stigma associated with mental illness results in social withdrawal, not just by the patient but also by the families involved.

Mentally ill patients need a support system to cope with their illness, and the most logical choices to include are the family members, both blood relatives and patient-defined caretakers. In fact, clinicians must consider them as fellow collaborators in the long-term treatment of their patients. Evidence-based studies underscore the significance of family participation and working together in a collaborative endeavor. The main goal of family interventions is to reduce the risk of patient relapse along with other goals such as reduction of family burden and improvement of patient and family performance.\(^\text{171}\) Effective family interventional measures include:

- Education about the illness and its course
• Training and using problem-solving skills within the family
• Improving communications between family members and the patient
• Reducing stress among members by way of hobbies and social engagement away from home

These interventions when coupled with somatic treatments such as psychopharmacologic medications and behavioral therapy have been proven to reduce episodes of psychiatric disturbances. Studies have consistently found that patients who received family interventional measures for more than 9 months fared better (reduced relapse, better symptom control, medication and therapy adherence) than those who received it for less than that amount of time. The clinician needs to be open to the type and depth of family interventions, factoring in the patient’s needs and family preferences. A well-defined family psychoeducation approach is best implemented, whenever the resources allow it. Referrals and membership to family support groups and peer-based non-clinical programs such as the National Alliance for the Mentally Ill's Family-to-Family Education Program are also helpful.

Consultation With Peers

Cognitive Behavioral Therapy

Essentially, Cognitive Behavioral Therapy is a type of psychotherapy that makes patients more conscious and aware of their thoughts and behavior in order to be able to change them. The National Alliance on Mental Illness (NAMI) defines Cognitive Behavioral Therapy (CBT) as a form of psychotherapy that focuses on “examining the relationships between thoughts, feelings and behaviors. By exploring patterns of
thinking that lead to self-destructive actions and the beliefs that direct these thoughts, people with mental illness can modify their patterns of thinking to improve coping”.\textsuperscript{173} For example, a depressed patient may often express feelings that question self-worthlessness with statements such as “I am worthless” and believe it to be the definitive truth.

The role of the CBT therapist, in this case, is to challenge the patient’s version of the truth, present it as a hypothesis and proceed to test its validity by a series of “experiments” that undermine its rationality. Furthermore, CBT patients are given tasks or assignments. For example, a sociophobic may be asked to buy milk from the local grocery. Another example is patients being asked to write down their dysfunctional thoughts as they happen in a diary or journal, which is then reviewed by the therapist for patterns in their thinking that triggered them. CBT and psychodynamic therapy has three main differences, all of which are listed on the table below.\textsuperscript{173}

\begin{table}[h]
\begin{center}
\begin{tabular}{|c|c|c|}
\hline
\textbf{Features} & \textbf{CBT} & \textbf{Psychodynamic therapy} \\
\hline
Target mechanisms & It aims to relieve symptoms of distress by recognizing and replacing dysfunctional thoughts and patterns as they occur & It aims to relieve symptoms of distress by attempting to uncover its root causes such as childhood trauma \\
\hline
Period of therapy & Relatively brief (3-6 months) & Long term ( > 6 months) \\
\hline
Structure & Elements of homework and assignments for patients & Typically without homework and assignments \\
\hline
\end{tabular}
\end{center}
\caption{Differences between CBT and psychodynamic therapy}
\end{table}
<table>
<thead>
<tr>
<th>Patient participation</th>
<th>Therapist sets the agenda for each session based on mutually agreed objectives</th>
<th>Patients set the agenda of each session by talking about their thoughts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Role of therapist</td>
<td>Relationship with therapist is not part of the focus of the treatment</td>
<td>Relationship with therapist is an essential part of the focus of the treatment</td>
</tr>
</tbody>
</table>

As mentioned above, Cognitive Behavioral Therapy facilitates a structured consultation, enabling patients to actively practice the proposed solutions during therapy sessions. CBT’s Five Areas assessment model developed by the NHS provides a clearly defined summary of the problems and challenges that mentally ill patients face. These are listed as:75

- Life situation, relationships, practical problems and difficulties
- Altered thinking
- Altered feelings (also called moods or emotions)
- Altered physical feelings or symptoms in the body
- Altered behavior or activity levels.

According to the Canadian Counseling and Psychotherapy Association, the major techniques commonly employed by CBT are:174

- Relaxation training
- Presence of mind
- Systematic desensitization
- Assertiveness training
- Social skills training
Cognitive Behavioral psychotherapy is especially effective in the management of specific psychological disturbances such as depression, anxiety and mood disorders, certain phobias, post-traumatic stress disorder and insomnia.

Depression

Some studies have found that the effectiveness of CBT in treating depression comparable to antidepressant medications, yielding similar positive therapeutic outcomes, and may even be superior in the prevention of symptom relapse in certain individuals. But more importantly, studies have also shown that when these two treatment approaches are combined, they produce better outcomes than when each is employed alone.

The main element of CBT is the recognition of irrational self-destructive thoughts and replacing them with positive ones. One of the ways CBT therapists execute this is by encouraging patients to introduce positive activities into their daily schedules. The more pleasure they receive daily, the less likely that negative thoughts will intrude. Additionally, therapists encourage patients to develop regular sleep patterns as it improves symptoms of bipolar disorder and depression.

Anxiety and panic disorders

CBT is also useful in the treatment of anxiety and panic disorders. Patients with panic disorders may have irrational fears of being in
danger, voicing them out with statements such as “I am in danger of being suffocated” or “I’m going to die alone”. CBT therapists encourage such patients to test out these specific fears and develop realistic responses when these feelings (panic attacks) arise. An example is exposing them to these very fears in a safe and controlled therapeutic environment. Fears of contamination, death, illness, physical harm, etc. are identified and replaced to reduce the anxiety connected with them.

Phobias
The CBT approach used in anxiety and panic disorders is the same for patients with phobias. The therapists expose the patients to their specific fears and help them change their response to them.

Post-traumatic stress disorders (PTSD)
CBT has been used in the management of posttraumatic stress disorders in adults and children for many years. Several expert consensuses find trauma-focused CBT to be effective in PTSD that is precipitated by various life events.

CBT for PTSD in adults:

- Terrorism:

  CBT has been found to be effective for PTSD in the survivors of the 9/11 terrorist attack on the World Trade Center, the 2005 London bombings, and the 1998 bomb explosion in Omagh, Northern Ireland.
• War trauma:
  Soldiers exposed to combat while on a tour of duty are at high risk for PTSD. Combat veterans with severe and chronic PTSD can be managed with multidimensional CBT that includes greater social engagement and interpersonal functioning.

• Assault:
  CBT is effective in reducing the symptoms of PTSD in female victims of assaults such as childhood abuse, rape and sexual assaults. There is evidence that the benefits are long term and measurable at future follow-up assessments.

• Road traffic accidents:
  Motor vehicle accidents (MVAs) are commonly cited triggers of PTSD. CBT components such as imaginal reliving and facilitating of post-traumatic growth have been employed in MVA survivors with subsyndromal PTSD, which has resulted in psychological stabilization when assessed at subsequent follow-ups.

• Refugee status:
  Refugees with PTSD present with a wide range of symptoms resulting from prolonged and repeated exposure to traumatic events, displacement and acculturation. The latter presents a particular challenge to therapists since the culture and language of the refugees need to be incorporated into the CBT. Refugees who are resistant to medications have also benefitted from CBT.
• Disaster workers:

A CBT composed of brief-focused measures is effective in disaster workers who are exposed to shocking scenes and humanitarian suffering.

**CBT for PTSD in children and adolescents**

CBT has long been recommended as the first choice of treatment of PTSD in children and adolescents.

• Natural calamities:

After the 1999 earthquake in Athens, the implementation of short-term CBT in a group of children survivors with PTSD symptoms showed a significant reduction in overall symptoms across intrusion, avoidance, and arousal symptom clusters, as well as in depressive symptoms immediately after the intervention and better psychosocial functioning.

• Man-inflicted traumas:

Child abuse victims are supporters of the effectiveness of trauma-focused CBT. A study of Palestinian adolescent victims of armed conflict suggests that trauma-focused CBT addressing negative coping and fatalism may produce positive results.

• Sexual abuse:

Studies show that trauma-focused CBT for symptomatic children has been successful within the first 1–6 months after
experiencing sexual abuse. Compared with child-focused therapy, trauma-focused CBT has demonstrated significantly more improvement with regard to PTSD, depression, behavior problems, shame, and abuse-related attributions in sexually abused children.

Resistance to CBT and consequent dropouts are common in PTSD patients. Although CBT has been proven to be beneficial in reducing the recurrence and intensity of depression, stress and panic attacks, there are certain studies pointing to its limited usefulness in dealing with unidentified causes of psychological illnesses.

*Group therapy and counseling*

Group counseling is a form of psychotherapy that operates on the idea that an individual will be much more likely to identify and understand one’s maladaptive patterns and issues through sharing of thoughts and experiences with a group of people. Essentially, people learn more about themselves through interpersonal interactions. Group counseling sessions are supervised and facilitated by one or two group therapists. These sessions operate as a closed system. Much like CBT, the therapeutic environment upon which these sessions take place is controlled, seldom allowing the intrusion of external forces. The intense emotional charges and complex vulnerabilities uncovered by such sessions need to be protected in order to preserve the patient’s sense of safety and trust in the group. Group therapy can be divided into two groups.

- Psychoeducational group therapy:
This type of therapy aims to provide information about specific topics in order to educate patients.

- Process-oriented group therapy:
  This type of therapy seeks to provide patients the experience of being in a group and the vehicle to exercise interpersonal sharing in order to heal.

Listed below are some of the issues and dysfunctional patterns, which patients who take part in group counseling share:  
- Sense of isolation
- Shyness
- Excessive dependence in relationships
- Superficial relationships
- Frequent disagreements
- Anxiety in social settings
- Trust issues
- Low tolerance for criticisms
- Lack of self-confidence
- Fear of rejection
- Lack of intimacy in relationships

Topics commonly addressed in group therapies include:
- Substance abuse
- Depression
- Anxiety
- Post-traumatic stress
- Divorce
- Eating issues
- Domestic violence
- Sexual identity crisis
- Parenting issues

According to Irvin Yalom, an influential American existential psychiatrist, there are therapeutic principles (nine of which are used in group counseling and listed below) that explain the various counseling factors used to address those maladaptive issues and patterns listed above.\(^{175}\)

- Universality:
  The shared experiences among patients help clients’ triumph over pervasive sense of isolation and low self-esteem

- Altruism:
  The idea of helping others improves one’s own self-esteem and encourages better coping styles and interpersonal skills among patients.

- Instillation of hope:
  The idea of coping together inspires hope among those who are not optimistic about recovery.

- Cohesiveness:
  The sense of belonging to a group promotes validation and assurance of a functioning therapy and ultimately, successful recovery as a unit. The patients, feeling a sense of belonging to the group, value it and its endeavors, thus promoting its shared interest to help each member recover.
• Corrective recapitulation of the primary family experience:
The inevitable development of closeness among patients immediately instills a sense of more than just camaraderie but also a sense of familiarity that is akin to family.

• Self awareness:
The input of other patients gives patients a greater insight and diverse views into their own problems and issues.

• Catharsis:
The feelings of guilt and shame attached to deeply personal experiences are purged out through frequent interpersonal sharing.

• Imitative behavior:
The positive actions and behaviors of the senior patients and those with more advanced skills influence the others to copy them.

• Existential factors:
The recognition and acceptance of inherent limitations and inevitabilities of life such as death, aging and choices help promote personal growth.

Ethical considerations
Group therapists are legally required to inform clients of the following information prior to the start of sessions:

- Type of therapy
- Patient’s obligations to participate
- Patient’s rights within the therapeutic group
- Confidentiality issues
- Anonymity of other members

Patients are expected to keep the contents of the session confidential and the identity of fellow patients anonymous. Unless a patient has authorized release of information, both patients and therapists are not allowed to discuss another’s personal history with other patients or individuals outside the group therapy circle.

Requirements from the therapist:

- Obligated by law to inform the proper authorities if a patient has expressed intent to harm one’s self or others
- Responsible for keeping a professional environment devoid of discrimination and inappropriate behavior
- Responsible for upholding each patient’s rights
- Responsible for ensuring a collaborative and productive progression of sessions

 психологическая поддержка

Psychological support is the provision of psychosomatic aid to improve a patient’s ability to function under enormous stress levels in the context of a critical environment. The emotional support has been implicated in studies as a significant factor in speeding up the recovery process. Traditionally, members of one’s own family usually provided
psychological support. However, the last 50 years have seen the weakening of family ties and emerging community awareness that makes psychological support from outside the family circle an ideal prospect.

In cases of natural disasters, international aid workers are often deployed to the site to offer physical, medical and emotional aid to the victims. Below is a list of guiding principles, which should be considered during the implementation of psychological support to an unfamiliar culture.

- **Community-based approach:**
  The employment of local resources, provision of training and upgrading of local structures and institutions contributes to the success of this type of approach. It allows for locally taught volunteers to share their knowledge with fellow community members becoming instrumental in providing successful relief.  

- **Use of trained volunteers:**
  The training of local volunteers is an integral part of helping the community as a whole. They already have access to the community, and the confidence of the survivors. Their inside knowledge of the local culture enables for the easy facilitation of appropriate and adequate assistance to the affected population.

- **Empowerment:**
  After disaster strikes, the community members will be left helpless and reliant on external help, setting the ground for
bitterness at both the helpers and the situation. The passive recipient may look at acceptance of the external aid as a sign of weakness despite the motivation of the helpers stemming from human compassion, protest against injustice, love, or other equally well-meaning emotions. Psychological support in this instance should be targeted at empowering the victims so they can regain self-respect and autonomy. This can be achieved by encouraging community participation.

- **Community participation:**
  It allows for feelings of ownership and “being in control” to be fostered in the victims instead of being helpless passive recipients of help.

- **Care with terminology:**
  The wrongful use of certain words during stressful situations can lead to victims closing themselves off and erecting walls to guard their pride and what they believe are their best interests. Choosing words carefully and refraining from putting discriminatory labels on people and situations can help circumvent those self-protective measures.\(^{178}\)

- **Active involvement:**
  To prevent further victimization and promote self-empowerment, helpers should focus on measures that underscore competence rather than on symptoms and deficits of the community members. These measures should target the following:\(^{178}\)
    - The identification and strengthening of mechanisms that will contribute to better coping
- The active involvement of people in sorting out their problems
- The recognition of people’s skills and competence

Self-help measures and strategies adopted by the victims are crucial to their successful recovery.

- Early intervention:
  Early psychological support is a crucial preventive factor against severe depression and chronic distress. Ignoring emotional reactions can result in passive victims rather than active survivors, delaying the recovery process

- Viable intervention:
  Disasters precipitate short-term and long-term emotional challenges. The distress that people experience after a disaster may not become apparent immediately, continuing mentoring and follow-up is essential if the initial psychological support is to remain effective in the long term.

**Lifestyle Precautions**

Family members, no matter the age, living with a mentally sibling or parent are inadvertently affected by the symptomatic episodes that may or may not occur frequently. The decision to live with a mentally ill individual is based on several patient and family considerations that may present positive and problematic outcomes for both parties. The positive factors include but are not limited to:
- Reduced episodes of disruptive symptoms
- Accessibility to activities outside the home
- Contribution to family workings
- Skilled family training
- Minimal disruption of family function
- Bigger support network

The negative outcomes and factors of living at home may include any of the following:

- Difficulty in controlling the patient
- Less likelihood of social interaction
- Activity restrictions put in place
- Chaos and disruption of normal activities
- Family may have no social and psychological support
- Inability to support and direct patient

The National Alliance on Mental Illness (NAMI) has established several guidelines to help family members cope at home. One of these guidelines focuses on establishing clear communications with the affected member. The table below lists various possible symptoms and the suggested corresponding course of actions to take.179

Frequently encountered events/situations and their corresponding recommended course of actions
<table>
<thead>
<tr>
<th>Symptoms and actions of the affected member</th>
<th>Suggested course of action to take</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have trouble with reality</td>
<td>Be simple and truthful</td>
</tr>
<tr>
<td>Are fearful</td>
<td>Stay calm</td>
</tr>
<tr>
<td>Are insecure</td>
<td>Be accepting</td>
</tr>
<tr>
<td>Have trouble concentrating</td>
<td>Be brief, repeat</td>
</tr>
<tr>
<td>Are over stimulated</td>
<td>Limit input, don’t force discussions</td>
</tr>
<tr>
<td>Easily become agitated</td>
<td>Recognize agitation, allow escape</td>
</tr>
<tr>
<td>Have poor judgment</td>
<td>Not expect rational discussion</td>
</tr>
<tr>
<td>Have changing emotions</td>
<td>Disregard</td>
</tr>
<tr>
<td>Have changing plans</td>
<td>Keep to one plan</td>
</tr>
<tr>
<td>Have little empathy for you</td>
<td>Recognize as a symptom</td>
</tr>
<tr>
<td>Believe delusions</td>
<td>Ignore, don’t argue</td>
</tr>
<tr>
<td>Have low self-esteem</td>
<td>Stay positive</td>
</tr>
<tr>
<td>Are preoccupied</td>
<td>Get attention first</td>
</tr>
<tr>
<td>Are withdrawn</td>
<td>Initiate relevant discussion</td>
</tr>
</tbody>
</table>

Dr. Brian D. Eck, a licensed psychologist and professor created a guideline for creating a “low-stress home environment for a mentally ill person”. The contents of the guidelines are listed below:  

- Go slow:
Recovery and growth take time. Rest is important.

- **Keep It Cool:**
  Enthusiasm is normal. Disagreement is normal. Emotions are normal. Help your family members to keep thing in perspective and obtain some degree of balance.

- **Give People Space:**
  Private time and space are important for everyone. It's okay to offer or to refuse and offer.

- **Set Limits:**
  Everyone needs to know what the rules are. A few good rules that are consistently enforced will help keep things calm.

- **Ignore What You Cannot Change:**
  Let some things slide. Do not ignore violence.

- **Keep It Simple:**
  Say what you have to say clearly, calmly, and positively. When you address them, your family members will most likely respond only to the first couple sentences that you say to them at one time.

- **Follow Doctor's Orders:**
  Encourage your family members to take their medications as prescribed and only those that are prescribed. If you can, have them sign a release of information so that you and the doctor can discuss your family member's treatment program.

- **Carry On Business As Usual:**
Reestablish routines as quickly as possible when they are disrupted. Encourage your family members to stay in touch with their supportive friends and relatives.

- **No Street Drugs Or Alcohol:**
  Emphasize that illegal drugs and alcohol make symptoms worse. Help them find creative ways to avoid or limit the use of those substances in social situations.

- **Recognize Early Signs Of Relapse:**
  Note changes in your family member's symptoms and behaviors, especially those which usually occur just before a relapse. Help your family members to recognize these changes and to make contact with their doctor.

- **Solve Problems Step By Step:**
  Help your family members make changes gradually. Work on one thing at a time and be patient as they learn from the consequences of their behavior. Let them experience the non-dangerous consequences of their choices.

- **Establish Personal Measures Of Success:**
  Help your family members set realistic goals, and then chart these personal goals from week to week and month to month. Remember that success for your relative is in comparison to how they were personally doing last month, not how they were doing before they got ill, or how others their age are doing.

Christopher Amenson, a psychologist created a guideline in fostering helpful attitudes and environments and setting the tone to productive
approaches to coping and living with mentally ill family members. These are outlined below: 209

*Develops hope and expectations based on realistic information and prognosis.*

- Full acceptance
  - Mourn the loss, but not in the presence of the relative
  - Never discuss or lament the past or what the future could have been
  - Avoid comparisons to peers
- Demonstration of worth and dignity even in the face of certain limitations
  - Treat as an adult
  - Include in decisions
  - Ask to help do chores
- Allow freedom to pursue own goals
- Facilitate the achievement of goals
- Focus efforts everyday toward fulfilling those goals
- Help attain a unique version of fulfillment

*Foster a healing environment*

- Assign no blame
- Communicate clearly the appropriate and realistic expectations and limits to the patient
• Create an undemanding and structured environment
• Create a predictable routine
• Make way for a calm environment with limited stimulation
• Maintain consistent environment
• Engage the patient in non-stimulating activities
• Offer chances to fulfill major personal and competence requirements
• Give praise and encouragement
• Tutor and provide incentives on the acquired vocational and social skills
• Ensure that medication and treatment programs are adhered to
• Be ready to handle emergency attacks and worsening episodes to minimize commotion and prevent major relapse

*Maintaining a sense of normalcy for other family members living at home*

• Recognize the needs of family members and develop means to meet them
• Stay socially active
• Seek support from persons and families who understand
• Foster and promote skills and activities which promote overall health
• Streamline personal energy to making life better for every member
• Grant privacy and extend support for personal tastes and endeavors
Work Limitations

Due to poor understanding of mental illness and perpetuation of wrongful of information in the media, a chronic form of the disease is not just socially debilitating, it also often results in employment discrimination.¹⁸⁰

*How employers benefit from the employment of the mentally ill*

Contrary to popular belief, employing mentally individuals actually have their own merits. They offer traits and features that can be beneficial to the company such as:¹⁸⁰

- Creativity
- Imagination

Mentally ill individuals are among the most creative and imaginative members of the workforce. Numerous studies have pointed out that psychopharmacologic medications used by such individuals actually help them become more productive.

*Re-employment as part of the reintegration process*

Securing and keeping a significant employment is valuable to the mentally ill person. Daily work and the predictability it provides keep their minds preoccupied and engaged in productive endeavors, replacing the negative thoughts. Many psychologists agree that that employment is a vital tool in fostering mental wellness and warding off its reverse - mental illness.

Work offers five features that endorse mental wellness:

- Time frame
- Social contact
- Communal effort and common goals
- Personal identity through affiliation
- Routine activity

Essentially, employment is an important part of the long-term recovery process. As mentioned above, advances in psychopharmacology make it possible for those with chronic mental illness to make a valuable contribution to the workplace.

**Surviving the stigma**

Despite the advances in psychopharmacologic treatments of mental illness, there is a pervasive ignorance surrounding it. Listed below are some of the myths associated with it.¹⁸⁰

- **Myth #1: Mental illness and mental retardation are one and the same.**
  The Facts: Mental illness and mental retardation are completely different disorders when it comes to intellectual function. Mental retardation chiefly illustrates limited intellectual performance, while individuals with mental illness have varying intellectual capacities that are as diverse as the general population.

- **Myth #2: There is no cure or sure recovery from mental illness.**
  The Facts: While these mental illnesses are chronic, studies have found that with the appropriate treatment, the majority of sufferers attain genuine symptom control over time, allowing them to lead stable and productive lives. Additionally, sure recovery from mental illness is a subjective ideal; the
reintegration of sufferers into mainstream society especially in the employment area is a clearer and well-defined therapeutic outcome.

- **Myth #3: Mentally ill employees are mediocre workers.**
  The Facts: Mentally ill individuals may in fact be better compared to their co-workers without mental illness. Employers have reported them to be superior in punctuality and work attendance. Additionally, they are motivated and as productive as their coworkers without mental illness.

- **Myth #4: People with mental disabilities have low tolerance for stress related to the job.**
  The Facts: The response and perception of job-related stress vary among individuals, whether mentally ill or not. Also, optimal productivity is directly and proportionally related to the employees’ needs and working environment.

- **Myth #5: Mentally ill and mentally restored individuals are unpredictable, potentially violent, and dangerous.**
  The Facts: This is the one myth that has been perpetually portrayed by the media to the public about individuals with mental illness. The truth is, this might be true for certain uncontrolled psychotic individuals but is not necessarily true for all mentally ill people.

*The legalities of hiring mentally ill individuals*

During his first term in office, President George H.W. Bush signed into law *The Americans with Disabilities Act of 1990* (ADA). The ADA is a
A comprehensive civil rights law that forbids the discrimination against people with physical and mental disabilities in employment, public accommodations and commercial entities, public transportation, public telecommunications, and other miscellaneous provisions. Congress enacted the Title I of the Americans with Disabilities Act to help mentally ill individuals fight against the stigma and employment discrimination in the workplace.

Under Title I of the Act employers are prohibited from discriminating against qualified individuals with disabilities in activities pertaining to employment such as job applications, hiring, job assignments, fringe benefits, promotion and discharge. Employers may require medical entrance examinations after offering employment positions to all applicants, regardless of disability. The results should be held in safe keeping as a confidential medical record. Qualified individuals do not include those who are actively engaged in substance abuse and misuse. Substance abusers are not legally covered by the ADA. The ADA has overlapping responsibilities in both Equal Employment Opportunity Commission (EEOC) and Department of Justice (DOJ) for employment by state and local governments; all three government offices coordinate and support each other’s efforts to avoid duplication in investigative and enforcement activities.

Responding to discrimination

Mentally ill individuals who believe they have been discriminated against in terms of employment should contact the nearest located US EEOC offices. Basically, discrimination charges should be filed within 180 days of the alleged discrimination. However, if state and local authorities provide relief for discrimination on the basis of mental
disability, individuals may have up to 300 days to file charges. It is strongly advised to contact the EEOC immediately after the alleged discrimination to protect the individuals’ rights.

**Contact details**

For information and instructions on reaching the local EEOC office, patients should be advised to call:

- (800) 669-4000 (Voice)
- (800) 669-6820 (TDD)
- In the Washington, D.C. 202 Area Code, call 202-663-4900 (voice) or 202-663-4494 (TDD)

**Entitlements**

According to the EEOC website, discriminated individuals are entitled to one or more of the following remedies that will place that individual in the position had the discrimination not occurred such as:

1. Hiring
2. Promotion
3. Reinstatement
4. Back pay
5. Reasonable accommodation including reassignment
6. Attorneys fees

How the government benefits from the employment of the mentally ill

The cost of reemployment and reintegration of the mentally ill individuals is less than that of keeping them confined to hospitals and unemployed. A concrete example of this took place in Canada. The World Health Organization and the International Labor Organization
noted how 240 persons with mental illness fared over a 10-year period with the aid of formal work reintegration program. Surprisingly, these persons kept meaningful and earned a collective sum of $5 million, paid $1.3 million in income taxes, and saved the government an estimated $700,000 in welfare costs.\textsuperscript{182}

**Social interactions**

The social circumstances and membership to a group have deep impact on the patient’s adherence and response to treatment. These social circumstances include living arrangements, legal status, sexual orientation, and family resources.

**Psychosocial treatment**

Schizophrenic patients are often prescribed with psychosocial treatments in combination with psychopharmacological drugs and counseling. Studies have demonstrated that the patients who exhibited symptom control and normal functional abilities (stable) have had psychosocial treatment incorporated into their overall treatment plans. One of the debilitating consequences of schizophrenia is social function impairment characterized by difficulty creating and maintaining interpersonal relationships, abnormal function in social roles such as a student, parent, or worker, self-care skills, and reduced participation and pleasure in recreational activities. Other severe to moderate psychiatric disorders may experience similar social impairments too.

Similar to the development of tailored psychopharmacological interventions for each patient, the selection of psychosocial treatments
should also correspond to key factors in each patient’s life. Listed below are factors to consider in this endeavor:\textsuperscript{171}

- Social circumstances
- Patient’s social needs
- Patient’s clinical needs

\textit{Social stressors}

While social interactions have its benefits, a variety of psychosocial stressors can trigger the recurrence of symptoms in a mentally susceptible person. These stressors are listed below:\textsuperscript{170}

1. Stressful life events
   - Interpersonal loss
   - Long periods of separation (\textit{i.e.}, military deployment, job assignment)

2. Socio-cultural stress
   - Poverty
   - Homelessness
   - Disrupted social network
   - Distressful emotional climate (\textit{i.e.}, hostile coworkers and fellow members of a social group).

The knowledge and awareness of the listed stressors can help in its identification and prevention. In a social environment, psychosocial
Interventions include preventing the onset or accumulation of stressors and teaching the patient coping mechanisms to combat them.

As discussed throughout the course, psychosocial treatments overlap with some of the other psychiatric interventions, such as:

- Family interventions
- Supported employment
- Assertive community treatment
- Social skills training
- Cognitive behaviorally oriented psychotherapy

Since family interventions, supported employment, assertive community treatment and cognitive behavioral therapy have been discussed already; the primary focus of this section will be to discuss social skills training.

**Social skills training**

The fundamental principle of social skills training is that intricate interpersonal skills involve the smooth assimilation of a blend of simple behaviors and mannerisms.

**Simple behaviors with examples**

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<thead>
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<th>Simple behaviors</th>
<th>Examples</th>
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<tr>
<td>Mannerisms</td>
<td>Facial expression, eye contact</td>
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<tr>
<td>Paralinguistic features</td>
<td>Voice loudness and affect</td>
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<td>Verbal behavior</td>
<td>Appropriate language</td>
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<td>Interactive balance</td>
<td>Response latency, time spent talking</td>
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These specific skills can be systematically taught, and, through the process of shaping (i.e., rewarding successive approximations toward the target behavior), complex behavioral repertoires can be acquired.

Social skills training is conducted in groups with a universal format that includes the following steps:  

1. Rationale conception for learning the skill  
2. Grouping and discussion of each skill  
3. Skill demonstration using role play  
4. Client engagement and participation in the role play  
5. Acquisition of positive feedbacks from group members  
6. Appreciation of well executed efforts  
7. Provision of constructive criticisms of a subpar execution of a skill  
8. Client engagement in another role play  
9. Designation of homework to create opportunities for external practice  

Learning a particular social skill takes time, usually several sessions with one scenario at a time. In later group sessions, role-plays can focus on actual situations recently experienced by patients or scenarios that are most likely to occur in the future.

Benefits of social skills training
Multiple studies have pointed out that effectiveness of social skills training to patients with mental illness. Moreover, the same studies have pointed out that these effects were maintained over time even in the absence of sustained training. These benefits translate to better quality of life but not necessarily clinical recovery such as reduction of symptom relapses or re-institutionalization.

**Social networking**
Social networking among the general population is a popular means of communication and social interaction. The majority of young adults use some sort of social networking site.

A survey of persons with psychological issues, spearheaded by Gowen, *et al.*, of the Research and Training Center at Portland State University in Oregon, found that Facebook and Twitter are helpful in activity planning and provide opportunities for social interaction. Moreover, the survey also that majority of the respondents searched for other mentally ill individuals in order to extend help to them. Moreover, these sites provide patients the means to maintain long distance relationships, thus strengthen existing bonds. The results of the survey present risks too. Since individuals and not qualified professionals run these sites, the most blatant risk to patients is exposure to wrong information. Therapists need to educate their patients on the safe and useful sites to visit and the ones to avoid. The second disadvantage to social networking is the rampant cyber-bullying and uncensored violent content that may result in exacerbated feelings of isolation, depression, and anxiety.
With social skills in place, mentally ill individuals can learn to cope with their illness and prevent social exclusion or isolation. Social exclusion violates the values of human social equality and undermines social solidarity. Moreover, the psychosocial stressors mentioned above are both a cause and consequence of social exclusion.

The risk of violence in socializing with mentally ill individuals

According to the “Fact sheets about mental illness and violence” produced by the University of Washington’s School of Social Work, violence is the least of all worries when it comes to interacting with mentally ill individuals.185

Fact 1: The vast majority of people with mental illness are not violent. "Although studies suggest a link between mental illnesses and violence, the contribution of people with mental illnesses to overall rates of violence is small, and further, the magnitude of the relationship is greatly exaggerated in the minds of the general population".186 Institute of Medicine

"...the vast majority of people who are violent do not suffer from mental illnesses."187 American Psychiatric Association

Fact 2: The public is misinformed about the link between mental illness and violence.

A longitudinal study of American’s attitudes on mental health between 1950 and 1996 found, “the proportion of Americans who describe mental illness in terms consistent with violent or dangerous behavior nearly doubled.” Also, the vast majority of Americans believe that
persons with mental illnesses pose a threat for violence towards others and themselves.\textsuperscript{188}

Fact 3: Inaccurate beliefs about mental illness and violence lead to widespread stigma and discrimination:

The effects of stigma and discrimination are profound. The President’s New Freedom Commission on Mental Health found that, “Stigma leads others to avoid living, socializing, or working with, renting to, or employing people with mental disorders - especially severe disorders, such as schizophrenia. It leads to low self-esteem, isolation, and hopelessness. It deters the public from seeking and wanting to pay for care. Responding to stigma, people with mental health problems internalize public attitudes and become so embarrassed or ashamed that they often conceal symptoms and fail to seek treatment.\textsuperscript{189} New Freedom Commission

Fact 4: The link between mental illness and violence is promoted by the entertainment and news media.

"Characters in prime time television portrayed as having a mental illness are depicted as the most dangerous of all demographic groups: 60 percent were shown to be involved in crime or violence."\textsuperscript{190} Mental Health America

Summary

Mental disorders, despite various attempts at understanding them throughout human history, remain a poorly defined group of illnesses. There is a large area of research that has not yet been uncovered. As a result, experts in the field, psychiatrists, therapists, clinicians and
other healthcare professionals, are left with the daunting task of relying on what medical literature and training has taught them about symptomatic control. Since the root causes are unknown, trying to treat symptoms of mental illness is very challenging. Three aspects of treatment predominantly guide mental health professionals: alleviate the symptoms and establish some degree of normalcy, protect the safety of the patient and the public, and improve the patient’s overall quality of life.

Various interventions, both clinical and nonclinical, have been introduced in the last fifty years. Freud’s groundbreaking research in psychology put forward the use of somatic treatments in mental illness. The acceptance of somatic treatment introduced to the world the use of psychotropic medications to correct biochemical disturbances in the brain, which was Freud’s proposed pathology of mental illness. Research in recent decades brought to light many of the adverse effects of these older medications, prompting pharmaceutical companies to develop novel therapeutic agents that are safer, though not necessarily more efficacious. There has been a growing trend of “medicalization” of almost, if not all, known mental disturbances. The DSM-V added many new criteria to guide clinicians to diagnose abnormal and normal human psychological responses.

Psychopharmacologic interventions have undoubtedly made the lives improve of those who are mentally ill. The presence of individuals with mental illness in society is not just tolerated but increasingly accepted. However, like many medical advances, the rise in public awareness of mental illness is also associated with several pitfalls. Namely, studies have failed to demonstrate the efficacy of medical treatments as being
superior to placebos, ethical issues regarding specific treatments, and their propensity to cause fatal adverse effects (i.e., suicide tendencies and cerebrovascular events).

Currently, mental illness is dealt with by numerous measures, not just by psychopharmacological therapy. Counseling, family interventions, group therapy, social training, and government and nonprofit organization sponsored programs have made mental illness a very manageable lifelong disorder. These measures combined with federal and state legislations have allowed the mentally ill to blend into society, function in a social environment, and to contribute meaningfully as part of the collective whole to its overall endeavors.

Please take time to help the NURSECE4LESS.COM course planners evaluate nursing knowledge needs met following completion of this course by completing the self-assessment Knowledge Questions after reading the article. Correct Answers, page 95.

1. Main challenges in the provision of appropriate mental health care to geriatric patients in the US are:
   a. Psychiatric symptoms mimic many conditions that are part of the normal aging process
   b. Limited number of specialized psychiatrists trained to handle geriatric patients
   c. Increased likelihood of existing comorbidities
   d. All of the above

2. True or False. Lithium exposure in pregnancy may be associated with a small increase in congenital cardiac malformations.
   a. True
   b. False
3. According to a 2011 NCHS report, adolescents and adults using antidepressants in the U.S have:
   a. climbed to a staggering 10% in the last three decades
   b. risen to more than 10%
   c. exceeded 50% taking the medication for 6 months minimum
   d. none of the above

4. Informed consent is both a legal and medical standard with three important components that include:
   a. the ability to process information logically
   b. the capacity to make decisions based on a set of given information
   c. voluntary action in the absence of coercive factors
   d. all of the above

5. In the Patient Protection and Affordable Care Act (PPACA):
   a. the price of outpatient mental health treatments reduced to 35% in 2013 and 20% in 2014
   b. include fixed amounts despite service provided
   c. costs between 20%–40% of the Medicare-approved amount
   d. answers a and c above

6. True or False. Christopher Amenson, a psychologist, created guidelines to help foster productive approaches to coping and living with mentally ill family members.
   a. True
   b. False
7. The Americans with Disabilities Act prohibits employers from discriminating against qualified individuals with disabilities in the following:
   a. job applications and hiring
   b. job assignments
   c. promotion and discharge
   d. all of the above

8. Group therapists are legally required to inform clients of the following information prior starting sessions:
   a. Potential bias of the therapist
   b. Patient’s rights within the therapeutic group
   c. Criminal records of patient’s participating
   d. Answers a and c above

9. Multiple studies have pointed out the effectiveness of social skills training for patients with mental illness, such as:
   a. the effects were maintained over time even in the absence of sustained training
   b. the benefits lead to full clinical recovery
   c. benefit women more than men
   d. none of the above

10. True or False. Multiple studies have shown that the vast majority of mentally ill individuals are violent.
   a. True
b. False

**Correct Answers:**

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Footnotes:


13. Karolinska Institutet (2010, May 19). Dopamine system in highly creative people similar to that seen in schizophrenics, study finds.


Researched Abuse Diversion and Addiction-related Surveillance (RADARS(®))


186. Institute of Medicine, Improving the Quality of Health Care for Mental and Substance-Use Conditions. Washington, DC: Institute of Medicine, 2006.


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