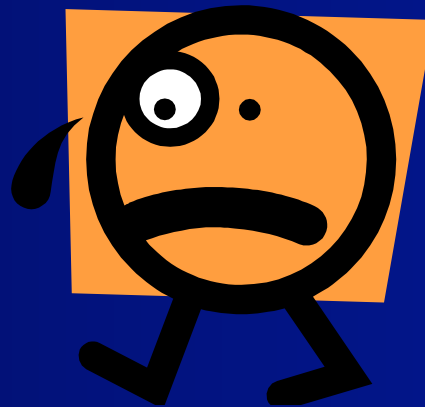


Dual Diagnosis

Mood Disorders and Substance use Disorders

Dr.Surita Rao



Outline

- SUD and Depression – Prevalence
- Neurobiology of Depression and Diagnostic Criteria
- SUD and Co-occurring Depression
 - Diagnostic Considerations
 - Assessment – Patients History
 - Treatment
- Relapse into Depression

SUD and Depression Prevalence

Mental Illness and Substance Use Disorders in America

Mental Illness and Substance Use Disorders in America

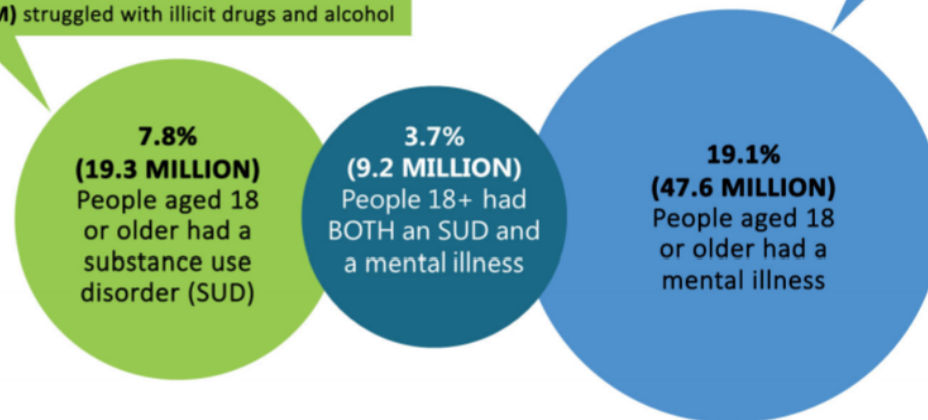
PAST YEAR, 2018 NSDUH, 18+

Among those with a substance use disorder:

- 3 IN 8 (38.3% or 7.4M)** struggled with illicit drugs
- 3 IN 4 (74.5% or 14.4M)** struggled with alcohol use
- 1 IN 8 (12.9% or 2.5M)** struggled with illicit drugs and alcohol

Among those with a mental illness:

- 1 IN 4 (23.9% or 11.4M)** had a serious mental illness



In 2018, **57.8M** Americans had a mental and/or substance use disorder.

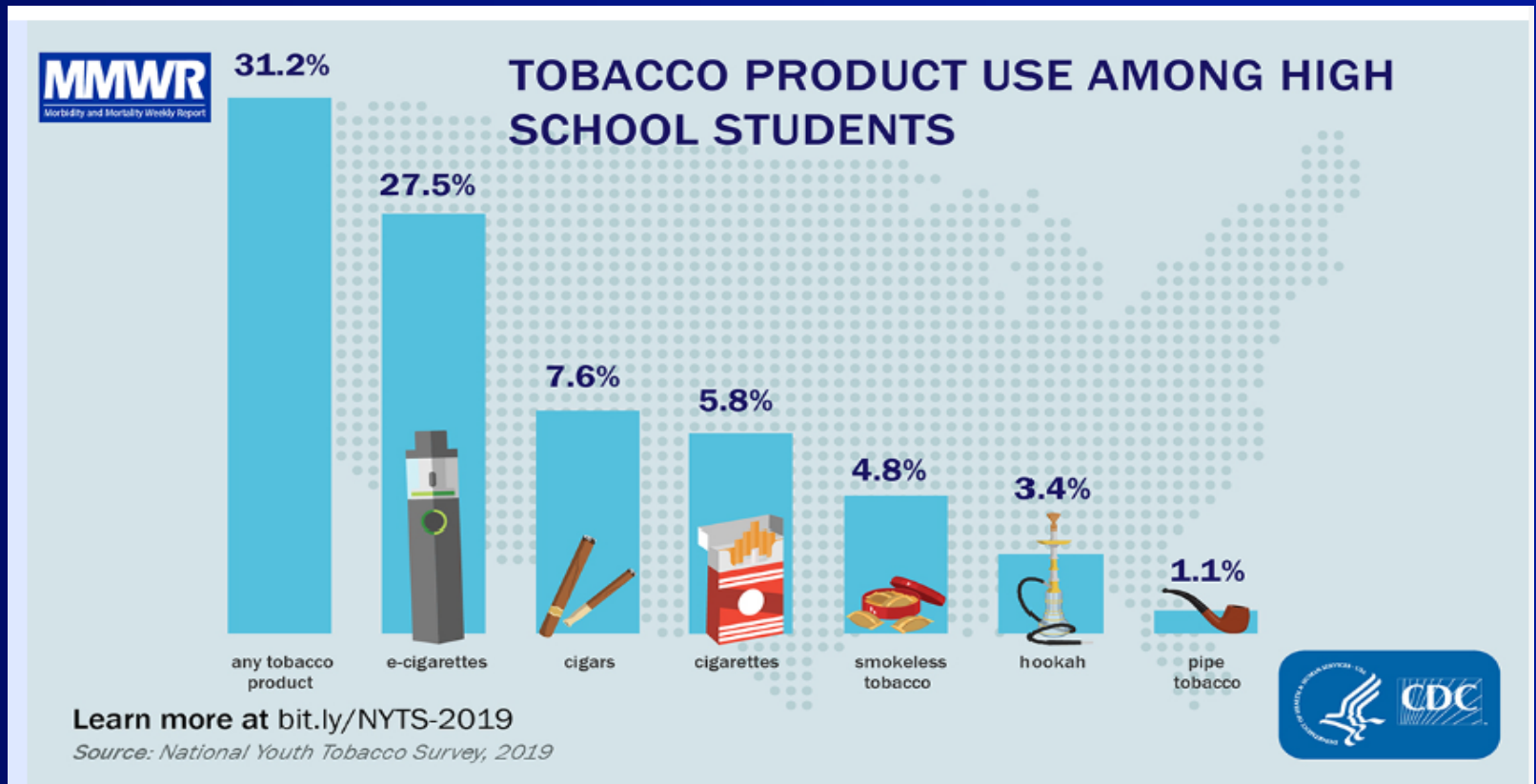
SAMHSA
Substance Abuse and Mental Health
Services Administration

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<https://www.samhsa.gov/data/report/nsduh-2018-data-collection-final-report>

Source : SAMHSA 2020 Report. Data from 2018

Tobacco Product Use Among High School Students



In 2019, an estimated 53.3% of high school students (8.0 million) and 24.3% of middle school students (2.9 million) reported having ever tried a tobacco product. [Source: Centers for disease control [CDC]

Co-Occurring Disorders : SAMHSA

Mental and Substance Use Disorders in America

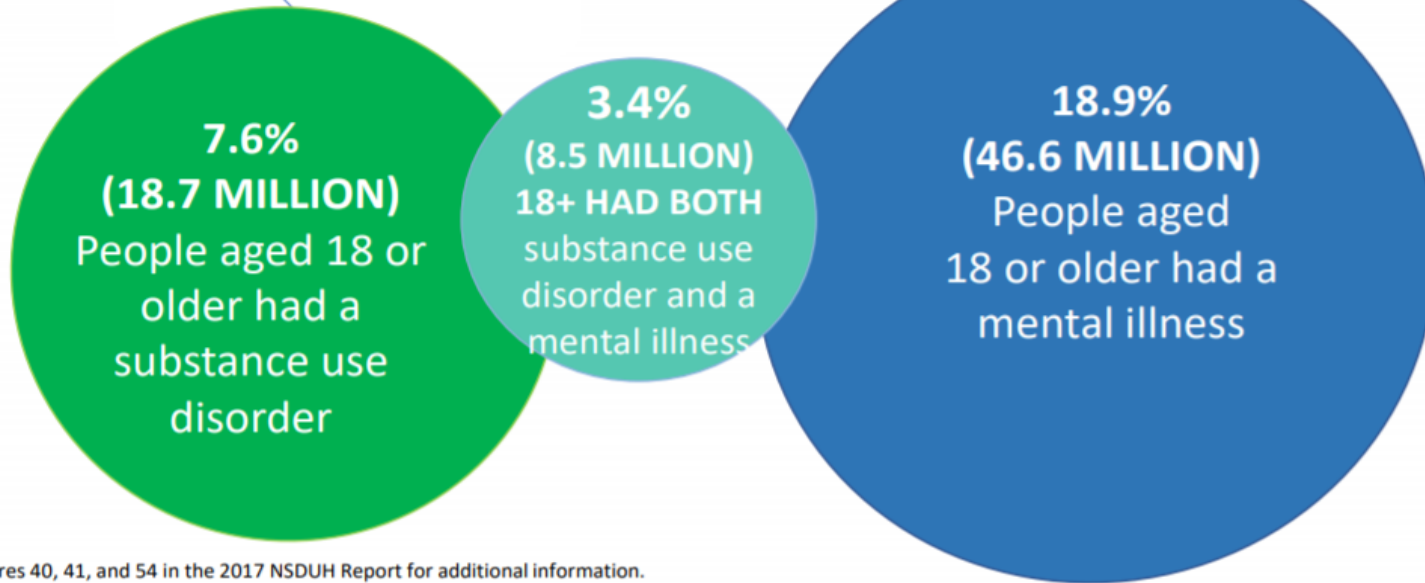
PAST YEAR, 2017, 18+

Among those with a substance use disorder:

- **3 IN 8 (36.4%)** struggled with illicit drugs
- **3 IN 4 (75.2%)** struggled with alcohol use
- **1 IN 9 (11.5%)** struggled with illicit drugs and alcohol

Among those with a mental illness:

- **1 IN 4 (24.0%)** had a serious mental illness



See figures 40, 41, and 54 in the 2017 NSDUH Report for additional information.

Co-occurring Disorders : Prevalence

- **METHODS:** Using 2015-2017 National Survey on Drug Use and Health data, prevalence of co-occurring substance use and mental disorders and receipt of mental health and substance use treatment services was estimated for adults aged 18-64 with OUD [Opioid use Disorder].
- Multivariable logistic regression assessed demographic and substance use characteristics associated with past-year mental illness (AMI) and serious mental illness (SMI) among adults with OUD as well as treatment receipt.
- Reference: Drug Alcohol Depend. 2019 Apr 1;197:78-82Epub 2019 Feb 14. **Co-occurring substance use and mental disorders among adults with opioid use disorder.** Jones CM, McCance-Katz EF doi: 10.1016/j.drugalcdep.2018.12.030.

Co-occurring substance use and mental disorders among adults with opioid use disorder

- Among adults with OUD, prevalence of specific co-occurring substance use disorders ranged from 26.4% (95% CI:23.6%-29.4%) for alcohol to 10.6% (95% CI:8.6%-13.0%) for methamphetamine.
- Prevalence of AMI was 64.3% (95% CI:60.4%-67.9%) and SMI was 26.9% (95% CI:24.2%-29.8%).
- Receiving both mental health and substance use treatment services in the past year was reported by :
 - 24.5% (95% CI:21.5%-29.9%) of adults with OUD and AMI [past-year mental illness]
 - 29.6% (95% CI:23.3%-36.7%) of adults with OUD and SMI serious mental illness
- Reference: Drug Alcohol Depend. 2019 Apr 1;197:78-82. **Co-occurring substance use and mental disorders among adults with opioid use disorder.** Jones CM¹, McCance-Katz EF².
- doi: 10.1016/j.drugalcdep.2018.12.030. Epub 2019 Feb 14.

A comparison of 2013 and 2017 baseline characteristics among treatment seeking patients who used opioids with co-occurring disorders. Journal of Substance Abuse Treatment. Volume 99, April 2019, Susan M.Snyder, Siobhan A.Morse, Brian E.Bride

- This study is the first to investigate the differing baseline characteristics among patients with co-occurring disorders who used opioids and entered residential treatment in 2013 and 2017.
- Our sample consisted of 1413 unique adults who reported using opioids upon admission to integrated residential treatment for co-occurring substance use and mental health disorders during 2013 ($n = 718$) and 2017 ($n = 695$).
- Opioid use was defined as self-reported use of heroin or illicit use of prescription opioids, including methadone, during the month prior to admission into the treatment program.
- All study participants completed an admission interview that included the Addiction Severity Index (ASI).
- The 2017 cohort demonstrated higher severity than the 2013 cohort on the employment, psychiatric, and alcohol and drug ASI composite scores.

Increasing complexity and severity of clinical presentations among patients with co-occurring illness [dual diagnosis]

- 2017 cohort worse employment, psychiatric, and alcohol and drug ASI composite scores
- Higher proportion 2017 cohort depressed, anxious, hallucinating, and suicidal ideation
- 2013 cohort worse medical and legal ASI composite scores
- 2017 and 2013 cohorts reported 9.9 and 12.4 days of prescription opioid use respectively.
- 2017 and 2013 cohorts reported 16.6 and 11.6 days of polysubstance use respectively.
- A comparison of 2013 and 2017 baseline characteristics among treatment seeking patients who used opioids with co-occurring disorders. Journal of Substance Abuse Treatment. Volume 99, April 2019, Pages 134-138. Susan M.Snyder, Siobhan A.Morse, Brian E.Bride <https://doi.org/10.1016/j.jsat.2019.01.023>

Neurobiology of Depression and Diagnostic Criteria

Depression: Neurobiology

- A variety of neurotransmitters are implicated: Serotonin, nor- epinephrine, dopamine
- Depression is thought to occur when levels of these neurotransmitters in the brain fall below normal ranges
- Hypothalamic-pituitary-adrenal axis is also implicated. Thyroid, Adrenal and Growth Hormone axes are the major hormonal axes implicated.
- Antidepressants generally help prevent re-uptake or breakdown of neurotransmitters leading to increased levels in the brain

Depression: Neurobiology

- SEROTONIN
- SSRI's: Their significant role in treating depression & other evidence
- Some suicidal patients have been shown to have:
 - low levels of serotonin metabolites in their CSF
 - Low concentrations of serotonin receptor sites on their platelets

Diagnostic picture can be a challenge with overlapping symptoms in a variety of disorders.

- Agitated Depression
- Post Traumatic Stress Disorder
- Attention Deficit Hyperactivity Disorder [hyperactive type]
- Personality Disorders [borderline, antisocial histrionic]
- Mixed episode of bipolar Disorder
- Compulsive shopping, gambling.
- Sexual compulsivity.
- Co-morbid drug and/or alcohol use disorder with one or more of these disorders

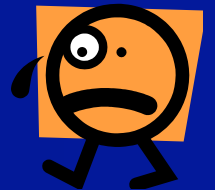
Symptoms of Clinical Depression

- Depressed Mood
- Anhedonia
- Marked weight loss or gain
- Insomnia/Hypersomnia
- Fatigue or loss of energy
- Psychomotor agitation or retardation
- Excessive Guilt, feelings of worthlessness
- Diminished ability to think or concentrate
- Suicidal ideation, recurrent thoughts of death



Key differences from grief

- Excessive inappropriate guilt
- Suicidal thoughts, including passive wishes to die.



Dysthymia

- Milder form of depression
- Duration: 2 years or longer
- Patient may feel “ I’m just a melancholic person”
- Quality of life issue
- Needs to be treated for: quality of life issues and risk of “ double depression”
- Responds to therapy and or anti-depressant medications

Depression : Other symptoms:

- Anxiety
- Irritability, impatience and anger
- Somatic complaints: common in the elderly
- Acting out, anger, irritability in children and adolescents
- Suicidal thoughts and behavior
- Psychotic symptoms can occur at times especially with severe untreated depression. These are usually "mood congruent". E.g., " I'm a bad person. I don't deserve to eat"

Anxiety

- It is a often a major presenting symptom
- It may indicate the presence of a co-morbid anxiety disorder or co-morbid substance abuse/dependence
- **Agitated depression or Depression with prominent anxiety symptoms can be difficult to distinguish from a mixed episode of bipolar disorder**
- Treatment with benzodiazepines: short term and long term considerations [rebound anxiety, may contribute to depression]
- **Anti-depressants [SSRI's] are the first line treatment of choice for anxiety disorders**

SUD and Co-occurring Depression

Diagnostic Considerations

Diagnostic Considerations

- Self medication which can turn into abuse or dependence
- Chronic substance use can make people depressed
- Alcohol, cocaine, marijuana, heroin
- Benzodiazepine use in this population
- Patient needs treatment for both illnesses simultaneously. Each illness can worsen the prognosis, morbidity and mortality of the other

Diagnostic Considerations

- Certain withdrawal syndromes can mimic mood and anxiety disorders [e.g., a patient in cocaine withdrawal can have many of the symptoms of clinical depression, alcohol and opioid protracted withdrawal symptoms can look like an anxiety disorder]
- Certain intoxication syndromes can mimic other psychiatric illness [Psychosis or hypomanic behavior in a patient who has used cocaine]

Diagnostic Considerations

- Long term use/abuse of certain addictive drugs can also lead to mood or anxiety symptoms [e.g., long term alcohol or sedative hypnotic abuse can lead to depression, insomnia and anxiety]
- Long and short term alcohol/drug abuse can also muddy the clinical picture as well as worsen existing symptoms.
- Patients may “ self-medicate” symptoms and illnesses with alcohol and or drugs. This can have complex effects on these syndromes. Immediate improvements followed by worsening of the underlying illness in the long term

SUD and Co-occurring Depression

Assessment

Assessment: The patient's history can help clarify the clinical picture

- **Get a "time line" of the patient's life and symptoms.**
- In the timeline particular attention should be paid to any periods of sobriety and the longest sober period. Ask if there were any psychiatric symptoms during these periods. Was the patient on any psychotropic meds. What was the life situation [e.g, were they in prison, in an abusive relationship]
- Did the appearance of the psychiatric symptoms precede the beginning of regular drug use/abuse.

Assessment - cont -

- Family History is very important. It may help with the decision of whether to prescribe or not prescribe a psychotropic medication in an unclear situation
- Family history of mental illness [including substance use disorders].
- Where family members treated with medications. Did it help. What medications do they take
- **Family history of Suicide.**

SUD and Co-occurring Depression

Treatment

Ongoing challenges in the care of these patients

- Co-occurring substance use and mental disorders are common among adults with OUD [opioid use disorder].
- Receipt of both mental health and substance use disorder treatment is suboptimal.
- Expansion of comprehensive care models for
- co-occurring disorders are needed

Reference: Drug Alcohol Depend. 2019 Apr 1;197:78-82. doi: 10.1016/j.drugalcdep.2018.12.030. Epub 2019 Feb 14. **Co-occurring substance use and mental disorders among adults with opioid use disorder.** Jones CM¹, McCance-Katz EF²

Integrated treatment works !

Integrated treatment or treatment that addresses mental and substance use conditions at the same time is associated with lower costs and better outcomes such as:

- Reduced substance use
- Improved psychiatric symptoms and functioning
- Decreased hospitalization
- Increased housing stability
- Fewer arrests
- Improved quality of life

SAMHSA

[Substance Abuse and Mental Health administration]

Prescribing considerations

- Whenever possible try to utilize non-addictive medications. This would include staying away from insomnia medications like ambien and lunesta.
- In early recovery it can be difficult to distinguish underlying mental illness from protracted withdrawal syndromes. The decision is on an individualized basis.
- There are 2 points of view about when to medicate among doctors specializing in addiction medicine/addiction psychiatry. Some prescribe sooner than others , even before the diagnosis is clear.
- Both perspectives and philosophies have merits.
- Documentation is very important in such a situation. Another person should be able to read your notes and be able to follow your critical thinking process in terms of making a decision to use medications.
- It is very important to document briefly the illness/symptoms you are targeting with a specific medications .

Anti-depressants

- Used to treat depression, mood disorders, anxiety disorders.
- Several different classes: all are equally effective. They are often chosen based on side effect profile
- “Newer” anti-depressants are much safer and are therefore used more frequently.

Antidepressants : SSRI's [Selective serotonin re-uptake inhibitors]

- ❑ Prozac [fluoxetine], zoloft [sertraline], paxil [paroxetine] , celexa [citalopram], lexapro [escitalopram], luvox [fluvoxamine]
- ❑ Side Effects: anxiety, restlessness, jitteriness, nausea, vomiting diarrhea, insomnia, weight loss [or gain] , sexual side effects.
- ❑ Serious or life threatening side effects are rare. Generally safe in overdose

Antidepressants

- **Wellbutrin [Bupropion]**: Works with dopamine , the “ feel good, reward and re-inforcement “ neurotransmitter in the brain.
Also used for smoking cessation [nicotine dependence]
Generally not useful for anxious patients .
- **Effexor [Venlafaxine]**: works on both serotonin and nor- epinephrine. Also useful in treating anxiety disorders
- **Remeron [Mirtazapine]**: Very sedating. Useful for the depressed patient who has insomnia
- **Cymbalta [Duloxetine]**: Helpful for patients with depression and pain.

Anti-depressants: Tricyclics

- TCA's [Tricyclic anti-depressants]
 - Elavil [Amitryptiline] , Pamelor [Nortryptiline]
 - Side Effects: dry mouth, constipation, urinary retention, sedation, weight gain, cardio vascular side effects [conduction delays] . Generally avoided in the elderly nowadays.
- Avoid in patients with co-morbid substance use disorders
- They are also used to treat nerve pain.

Anti-depressants:

MAOI's: Monoamine oxidase inhibitors

- Specially effective for atypical depression
- Severe life-threatening hypertensive crisis can occur if the patient eats certain foods like aged cheese, red wine
- Avoid in patients with co-morbid substance use disorders

Biological Therapies: ECT

[Electroconvulsive therapy]

- Highly effective and well tolerated form of treatment
- Often used in the elderly because of good safety profile
- Performed under anesthesia. A muscle relaxant is administered
- Electric current is administered and produces a seizure in the brain
- 8-12 treatments
- Common side effects are headache immediately after treatment and short term memory loss.
- Maintenance ECT

Atypical antipsychotics

Used as adjunctive medications

- Atypical antipsychotic as an adjunctive treatment for depression [Aripiprazole, quetiapine, ascenapine, olanzapine]
- Dopaminergic and serotonergic effects both of which help to treat the depression
- Patient may start feeling and acting less depressed, even before the antidepressant has taken full or partial effect
- Also used as an adjunct if depression is only partially treated with the antidepressant
- Consider for patients who are very hopeless, negative cognitions, suicidal thoughts.

Atypical Antipsychotics

Utilized in the following conditions

- Adjunct for mood disorders, severe disorganizing anxiety, Post Traumatic Stress Disorder
- Psychosis, Agitation, Acute aggression and anger
- Used in schizophrenia and Bipolar disorder [acute episodes and increasingly as maintenance medications]

- Olanzapine, Quetiapine, Aripiprazole , Risperidone, Ziprasidone

- Clozapine : Used only in treatment resistant Schizophrenia
{ agranulocytosis- granulocytes less than 500mm³ occurs in 1.6% of patient after a year}

Antipsychotic medication: NMS

- **Neuroleptic Malignant Syndrome** : hyperthermia, autonomic instability, diaphoresis, elevated CPK [creatine phosphokinase], fluctuations in consciousness and rigidity.
- Treatment: bromocriptine, dantrolene [possible use of either agent]
- Discontinue the Neuroleptic, hydration, temperature control
- Wait 2 weeks before restarting an anti-psychotic agent
- Cases on NMS have been reported with clozapine but at a lower incidence than conventional antipsychotic medications.

Typical antipsychotics

- [High Potency Conventional anti-psychotic medications] Haloperidol, Trifluoperazine, Fluphenazine, Thiothixene
- Mid Potency Conventional anti-psychotic medications : perphenazine, loxapine, Molindone
- Low Potency Conventional anti-psychotic medications : chlorpromazine, thioridazine, mesoridazine
- Dystonia, akathisia, tardive dyskinesia, parkinsonian symptoms { rigidity, tremor, bradykinesia }

Psychotherapy

- Always make a referral to a therapist/ counselor specializing in dual diagnosis and substance use disorders.
- Consider referring to a residential treatment program or an intensive outpatient program.
- Does the patient need a referral for detoxification
- Work with the patient to have appropriate release of information signed so that you can communicate with members of the extended treatment team.

Cognitive Behavioral Therapy

- This is the therapy that has demonstrated the most efficacy in clinical trials
- Cognitive restructuring
- Cognitive triad: the depressed person has a negative pessimistic beliefs about himself, the world and the future
- Depressed people process information in a negative, exaggerated manner.

Interpersonal Therapy

- Helps patient to work on relationships that may have been impacted negatively by the depression or relationships that may be negative, stressful and are contributing to the depression.
- Relationship with the therapist is positive, directive and supportive

Group Therapy

- Useful in treating depression
- Patient may be resistant: symptom of the illness
- Decreases isolation. Helps the person to realize they are not alone in being afflicted with this illness.
- Provides perspective. Helps the patient to see themselves reflected back. Listening to fellow patients share helps them to develop greater insight into themselves and their issues.

Relapse into Depression

Relapse into depression : ways to prevent it/cope with it

- Be alert for early subtle signs of the depression: Low energy, feeling decreased pleasure or interest in activities/hobbies, irritability, low mood
- Re-connect to treatment in a preventive manner. Return to therapy. Restart medications.
- If a person has had two episodes of depression they are encouraged to stay on their anti-depressant for life for prevention of future episodes. If they have had 3 or more episodes they are strongly recommended to stay on the anti-depressant for life.
- Analogous to " physical" illnesses: hypertension, heart disease, ulcers or gastritis.

Relapse into depression

Life Situations

- Chronic stress.
- Negative life circumstances [unhappy or poor fit job situation, difficult or abusive marriage/relationship] : “ I can't do anything to change it”
- Life situations : Therapist and patient should pay attention to them.

Prescribing Considerations

- “ on label” and “ off label” use of medications
- Education of the patient and clear documentation regarding rationale for pharmacotherapy plan and informed consent is very important.

Dual Diagnosis: prescribing considerations

- “Off label ” prescribing
- A standard and wide spread practice in medicine.
- Frequently used in treating protracted withdrawal from alcohol, sedative –hypnotics and opioids
- Some medications that are used are: Gabapentin, atypical anti psychotics [e.g, quetiapine, aripirazole] , sedating anti-depressants [mitrazapine, trazodone for insomnia]
- When to make a decision to start an anti-depressant or mood stabilizer.

Dual Diagnosis: prescribing considerations

- When a patient relapses: should medications be continued or not. If so which medications.
- Setting parameters regarding these issues. Educate the patient and engage him/her in the treatment plan.
- When a patient is actively using at the initial evaluation: should psychotropics be prescribed ?

Medications for the treatment of substance use disorders

- **Alcohol**: **Acamprosate** 333 mg , 2 tabs , 3 times a day. Naltrexone 50 mg daily [LFT's should be within 3 times normal]. Topiramate.
- **Opioids**: **Naltrexone**: blocking agent for opioids
- Agonist maintenance agents: [these are also used for detoxification from opioids]
- **Methadone**
- **Buprenorphine [Suboxone]** : partial agonist. Acts as a blocker at higher dosages. In the united states Suboxone is mixed with naloxone , so it will induce opioid withdrawal if crushed and injected.

Benzodiazepines

- Alprazolam, Diazepam, Chlordiazepoxide
- LOT [oxazepam, lorazepam, temazepam]: these do not go through hepatic first pass and are used in patients with liver disease or unknown status of the liver
- **Main agents in the treatment of alcohol withdrawal and sedative-hypnotic withdrawal**
- They should be used with extreme caution in patients with any substance use disorder and are best avoided in this patient population after the acute detoxification period.

Dual Diagnosis : Anxiety Disorders

- Generalized Anxiety Disorder
- Panic Disorder
- Post traumatic Stress Disorder
- Social Phobia

- SSRI's [Selective serotonin reuptake inhibitors] are first line medications for the treatment of anxiety disorders
- Adjunctive medications: Gabapentin, Guanfacine, Prazosin, Propranolol.
- Therapy is essential

Concurrent treatment of substance use disorders and PTSD using prolonged exposure: A randomized clinical trial in military veterans

- This study is the first to report on the use of an integrated, exposure-based treatment for co-occurring SUD and PTSD in a veteran sample. The findings demonstrate that integrated, exposure-based treatments are feasible and effective for military veterans with SUD and PTSD.
- A substantial amount of individuals with substance use disorders (SUD) also meet criteria for posttraumatic stress disorder (PTSD).
- Prolonged Exposure (PE) is an effective, evidence-based treatment for PTSD, but there is limited data on its use among individuals with current alcohol or drug use disorders.
- This study evaluated the efficacy of an integrated treatment that incorporates PE (*Concurrent Treatment of PTSD and Substance Use Disorders Using Prolonged Exposure* or COPE) among
- Concurrent treatment of substance use disorders and PTSD using prolonged exposure: A randomized clinical trial in military veterans. Sudie E. Back, Therese Killeen, Christal L. Badour, Julianne C. Flanagan, Nicholas P. Allan, Elizabeth Santa Ana, Brian Lozano, Kristina J. Korte, Edna B. Foa, Kathleen T. Brady. Addictive Behaviors Volume 90, March 2019, Pages 369-377.

Concurrent treatment of substance use disorders and PTSD using prolonged exposure: A randomized clinical trial in military veterans

- Military veterans ($N = 81$, 90.1% male) with current SUD and PTSD were randomized to 12 sessions of COPE or Relapse Prevention (RP).
- Primary outcomes included the Clinician Administered PTSD Scale (CAPS), PTSD Checklist-Military version (PCL-M), and the Timeline Follow-back (TLFB).
- On average, participants attended 8 out of 12 sessions and there were no group differences in retention.
- Intent-to-treat analyses revealed that COPE, in comparison to RP, resulted in significantly greater reductions in CAPS ($d = 1.4$, $p < .001$) and PCL-M scores ($d = 1.3$, $p = .01$), as well as higher rates of PTSD diagnostic remission (OR = 5.3, $p < .01$).
- Both groups evidenced significant and comparable reductions in SUD severity during treatment.
- At 6-months follow-up, participants in COPE evidenced significantly fewer drinks per drinking day than participants in RP ($p = .05$).

■ <https://doi.org/10.1016/j.addbeh.2018.11.032>

Depression in women

- PMDD
- Post Partum depression
- Menopause and perimenopause
- Pregnancy
- Take life issues and circumstances into consideration

Depression in women

- Women suffer from depression at higher rates than men.
- Research has demonstrated the highest rate of depression is during the childbearing years.
- Some women's brains may be more vulnerable to the hormonal shifts and changes that occur throughout the reproductive years.

“Baby blues”

- Post partum Blues [PPB]: “ Baby Blues”
- Generally begin 2-3 days post partum and last 2 weeks or less.
- Affect 50-85% of post partum women
- Crying spells, anxiety, mood shifts , irritability, sadness.

Post partum depression

- The symptoms do not resolve within 2 weeks or impact the mother's functioning.
- 10-15% of post partum women suffer from it
- DSM-IV criteria require the symptoms to begin within a 4 weeks period after birth of the baby.

- Questions- Discussion-Thoughts

Bipolar Disorder

-

Bipolar disorder: Manic Episode symptoms from DSM V

For a diagnosis of Bipolar I disorder, it is necessary to meet the following criteria for a manic episode.

The manic episode may have been preceded by and followed by hypomanic or major depressive episodes.

[A] A distinct period of abnormally and persistently elevated, expansive or irritable mood and persistently increased goal directed activity or energy lasting at least 1 week and present most of the day, nearly every day [or any duration if hospitalization is necessary]

Bipolar disorder: Manic Episode symptoms from DSM V

- [B] During the period of mood disturbance and increased energy or activity three [or more] of the following symptoms [four if the mood is only irritable] are present to a significant degree and represent a noticeable change from usual behavior
- Inflated self esteem or grandiosity.
- More talkative than usual , pressure to keep talking.
- Flight of ideas or subjective experience that thoughts are racing
- Distractibility as reported or observed
- Increase in goal directed activity [either socially, at work or school or sexually] or psychomotor agitation [purposeless no goal directed activity]
- Excessive involvement in activities that have a high potential for painful consequences [engaging in unrestrained buying sprees, sexual indiscretions or foolish business investments]

Bipolar Disorder : Manic Episode symptoms/criteria DSM V

- **[C]** The mood disturbance is sufficiently severe to cause a marked impairment in social or occupational functioning or to necessitate hospitalization to prevent harm to self or others or there are psychotic features.
- **[D]** The episode is not attributable to the physiological effects of a substance [e.g., a drug of abuse, a medication or other treatment]
- **Note:** A full manic episode that emerges during antidepressant treatment[e.g., medication, ECT] but persists at fully syndromal level beyond the physiological effect of that treatment is sufficient evidence for a manic episode and therefore a bipolar I diagnosis.
- **Note :** criteria A-D constitute a manic episode. At least one lifetime manic episode is required for the diagnosis of Bipolar I disorder

Bipolar Disorder: Subtypes

- Doctors diagnose bipolar disorder using guidelines from the *Diagnostic and Statistical Manual of Mental Disorders* (DSM). To be diagnosed with bipolar disorder, the symptoms must be a major change from your normal mood or behavior. There are four basic types of bipolar disorder:
- **Bipolar I Disorder**—defined by manic or mixed episodes that last at least seven days, or by manic symptoms that are so severe that the person needs immediate hospital care. Usually, depressive episodes occur as well, typically lasting at least 2 weeks.
- **Bipolar II Disorder**—defined by a pattern of depressive episodes and hypomanic episodes, but no full-blown manic or mixed episodes.
- **Bipolar Disorder Not Otherwise Specified (BP-NOS)**—diagnosed when symptoms of the illness exist but do not meet diagnostic criteria for either bipolar I or II. However, the symptoms are clearly out of the person's normal range of behavior.

Bipolar Disorder: Subtypes

Cyclothymic Disorder, or Cyclothymia: A mild form of bipolar disorder. People with cyclothymia have episodes of hypomania as well as mild depression for at least 2 years. However, the symptoms do not meet the diagnostic requirements for any other type of bipolar disorder.

A severe form of the disorder is called **Rapid-cycling Bipolar Disorder.**

Rapid cycling occurs **when a person has four or more episodes of major depression, mania, hypomania, or mixed states, all within a year.**

Rapid cycling seems to be **more common in people who have their first bipolar episode at a younger age.** One study found that people with rapid cycling had their first episode about 4 years earlier—during the mid to late teen years—than people without rapid cycling bipolar disorder. **Rapid cycling affects more women than men.** Rapid cycling can come and go.

Bipolar Medications

- They are all anti-convulsants except Lithium
- Valproic Acid, Carbamazepine
- Lamotrigine, Oxcarbazepine, Topiramate [also used for alcohol cravings]
- Gabapentin [used as an adjunctive medication]

Bipolar Medications

- Lithium
- Side effects; sedation, cognitive difficulties [poor memory, concentration], a sense of decreased creativity, dry mouth, hand tremor, increased appetite, weight gain, increased fluid intake [polydipsia], increased urination [polyuria], nausea, diarrhea, psoriasis, acne.
- Therapeutic blood levels:0.6-1.2 mEq/L [drawn 10-12 hours after the last dose].
- Elderly patients : 0.4 - 0.8 mEq/L
- A standard level for acute and maintenance treatments : 0.8 mEq/L
- Li is not metabolized in the liver. It is excreted unchanged through the kidney.

Bipolar Medications

- Lithium
- Only medication shown to reduce suicide among patients with bipolar disorder
- Recent data suggests: Main effects do not occur at the synapse with neurotransmitters but post-synaptically with the level of G-proteins and other second messengers, such as [PIP] phosphatidylinositol phosphate
- Li inhibits the alpha unit of G-proteins, especially those connected to beta-adrenergic receptors via cyclic adenosine monophosphate [cAMP]

Bipolar Medications : Lithium

- Lithium: Teratogenecity
- Ebstein's anomaly a malformation of the tricuspid valve associated with Li use in the first trimester.
- These risks are probably lower than the risk for neural tube defects are associated with divalproex and carbamazepine
- Clinical Use: Effective in pure mania, less so in mixed mania. Effective in prevention of both manic and depressive episodes. It is about as effective as tricyclic antidepressants in the treatment of bipolar depression
- Not as effective for rapid cycling bipolar disorder
- Co-morbid substance abuse : lithium is not as effective a medication

Bipolar Medications: Valproic acid

- Mode of Action: Increase levels of GABA [gamma amino butyric acid] in the brain.
- Metabolized by the liver . No active metabolites.
- Highly protein bound [can lead to interactions with other protein bound medications]
- When used for seizure disorder target blood levels: 50-100 micrograms/ml. for bipolar disorder titrated by clinical effect average dosing range is around 1500 mg /day
- Start at 250 mg per day and increase gradually
- Can be administered with a loading dose of 20 mg/kg for acute mania
- If given with lamotrigine the lamotrigine blood levels are elevated, so the dose of lamotrigine should be titrated lower and slower. .

Bipolar Medications

■ Topiramate

- Main adverse effects: sedation, dizziness, ataxia, weight loss, kidney stones, cognitive difficulties [these affect speech and language and can affect up to 25% of patients]
- Typical starting dose is 25-50 mg /day increasing slowly to 200-400 mg /day
- Enhances the GABA effect at GABA –A receptors, inhibits the rapid firing of sodium channels and antagonizes kainate at AMPA receptors [aminomethylphenylacetic acid]
- 80% excreted by the kidney unchanged, 20% metabolized by hepatic oxidation

Bipolar Medications

- LITHIUM: Li carbonate, Li citrate [may be better tolerated for nausea], Eskalith CR [controlled release: may have fewer cognitive side effects, lower peak levels but more renal SE's]
- It is a naturally occurring salt
- Side Effects: tremors, weight gain
- Hypothyroidism,
- Renal Effects: Long term effects on the kidney are often irreversible : a decrease in glomerular function resulting in a mildly elevated creatinine level [mild azotemia]. Rarely, severe chronic renal insufficiency and nephrotic syndrome with glomerular pathologies of varying types.
- Cardiac Effects: sick sinus syndrome, AV blockade, premature ventricular beats, blockade of the sinoatrial node.
- Mild leukocytosis, mild increases in free calcium

Bipolar Medications

- **Oxcarbazepine** [10-keto analogue of carbamazepine]
- Starting dose of 300 mg twice daily, increasing to a maximum dose of 2400 mg per day in twice daily divided doses
- Rare side effect: hyponatremia
- No routine measurements of plasma levels, electrolytes, LFT's or blood count required
- In high risk populations [elderly, patients on other sodium altering medications] routine measurements of serum sodium may be indicated

Bipolar Medications

■ Lamotrigine

- Most Serious side effect: Stevens-Johnson syndrome.
- Rash occurs in 40% of patients, especially when the initial dosage is high. A rash may lead to Steven-Johnson syndrome. Severe rashes that require hospitalization: 3 in 1000 adults, 1 in 100 children.
- Common SE's: blurred vision, headaches, ataxia, dizziness, nausea, fatigue
- Start at 25 mg /day and increase by 25-50 mg every 1-2 weeks until a maintenance dose of 75-250 mg /day is reached. It can be dosed once or twice daily. Titration is slowed down when used concurrently with valproic acid.

Opioid use disorder Case example

Mina is a 24 year old , married white female , with opioid dependence [heroin, oral opioid analgesics]. She is the mother of two young toddlers , an 18 month old daughter and a 3 year old son. Prior to entering treatment in a residential treatment program for mothers with substance use disorder, she and her husband and children were living in family shelter.

Her husband is also addicted to opioids and has now entered treatment a different residential facility. Prior to entering treatment, he was having an affair with a woman also living at the family shelter. When outpatient found out, there was a physical fight between her and the other woman at the shelter, witnessed by her children.

In her initial appointment with the addiction psychiatrist she cautiously shared that she had started a "maintenance program" of her own with street buprenorphine after finding out that she was pregnant. She had settled on a dose of 8 mg daily of the "street bought" buprenorphine.

She has bipolar disorder type II and Post traumatic stress disorder. She is prescribed, a atypical agonist [quetiapine], is on buprenorphine [as opiate agonist maintenance therapy] and oxcarbazepine. She and her husband had a planned therapeutic leave, to spend an afternoon in the park with their children, to help with family bonding. Patient now reports that she is two months pregnant..

Opioid use disorder: Case example

- She was connected to a buprenorphine prescriber in the community who took her public sector insurance. She signed releases of information for the provider, which was a requirement, in order to be on agonist maintenance therapy and participate in this residential mothers program .
- Her counselor also reached out to the counselor taking care of her husband in his residential program.
- Some family meetings were planned with her husband. Some of these would be phone conference calls. .
- She was diagnosed with bipolar disorder NOS and Post traumatic stress disorder.

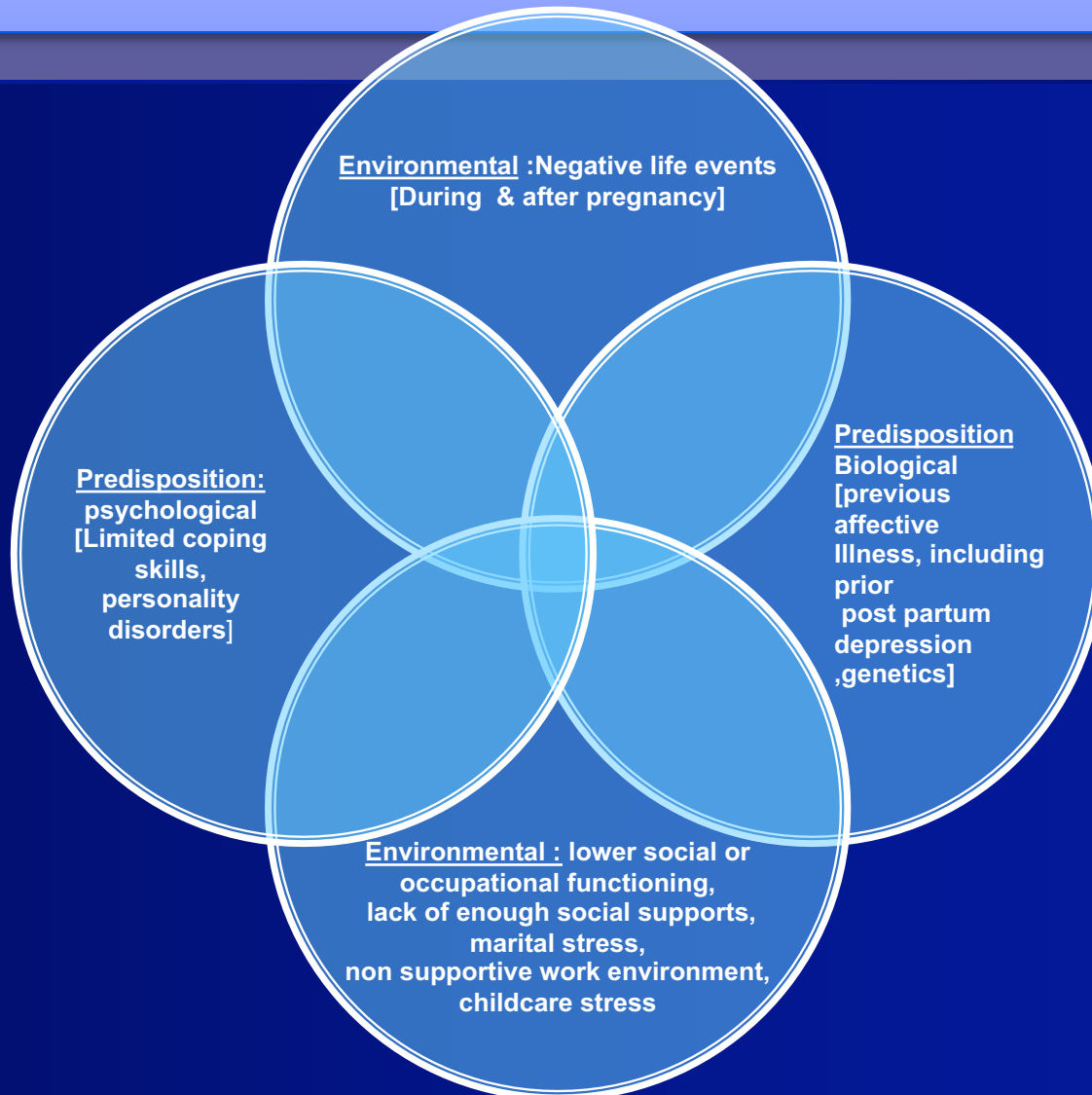
Issues of Treatment

- Family issues
- Housing [possibly a therapeutic family shelter]
- Transportation
- Employment
- Parenting support
- Agonist maintenance therapy
- Psychiatric care

Treatment plan

- Why select a residential level of care
- Residential mothers' programs
- Barriers to mothers entering treatment [child care, fear of DCF involvement, loss of custody]
- Pharmacotherapy for co-morbid mood and trauma related illness
- Psychotherapy for her co-morbid mood disorder and PTSD [integrated into the therapy for her substance use disorder]
- Pharmacotherapy for her opioid use disorder
- Considerations due to her unplanned pregnancy on her care [Referral and engagement in a high risk Ob-Gyn clinic]
- Family work
- Housing, employment, childcare, relationships.

Post Partum Depression : Multi-factorial causes



Postpartum Risk Factors: Psychosocial/Environmental

- **Doubts about parenting ability**
- **Feeling overwhelmed by caring for new baby**
- **Lack of emotional/childcare support**
- **Marital or financial difficulties**
- **Negative emotions about pregnancy**
- **Perceived loss of pre-child identity**
- **Body image issues after childbirth**
- **Fatigue after delivery**
- **Lack of sleep/disrupted sleep**
- **Stress due to lifestyle changes.**
- **Unrealistic expectations of being a "perfect mother."**
- **Substance abuse**

Post Partum Psychosis

- Very rare condition: 1-2 of every 1000 post partum women
- Symptoms usually begins within 48-72 hours of delivery.
- It is a medical emergency
- Immediate hospitalization is needed

The elderly patient

- Somatic symptoms instead of depressed mood.
- Need lower doses of medications
- More sensitive to side effects
- Losses: Spouse, job [retirement], physical competence, independence, "sidelining" from the mainstream of life

Dual Diagnosis: questions

- Withdrawal from which drug can present with symptoms of clinical depression?
- What is a "time line" in the context of getting a history from a dually diagnosed patient.
- Is suicidal ideation in a patient presenting to the emergency department with [crack] cocaine withdrawal of less concern than similar symptom sin a patient with a lifelong history of major depression.

Depression questions

- Name 2 neurotransmitters that are implicated in depressive disorders
- Name a hormonal axis that has been linked to clinical depression.
- Do women suffer from depression at higher rates than men?
- What can make depression a potentially life threatening illness?

Post Partum Illnesses: Multi-factorial causes

- Past history of mental illness
- Family history of mental illness
- Interpersonal problems, limited social support
- Lack of good coping skills
- Environmental problems.

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the female reproductive cycle. Helen G. .Kim, Adele C. Viguera, Benita Dieperink