Pharmacotherapy for Substance Use & Co-Occurring Disorders

2017 New England School of Best Practices in Addiction Treatment

Pharmacotherapy (Medication Assisted Treatment or MAT) for Substance Use Disorders

August 29, 2017

© 2017, Shulman & Associates, Training & Consulting in Behavioral Health

Good Morning

It takes two things to be a consultant - 
Gray Hair and Hemorrhoids.
The Gray Hair makes you look distinguished - 
The Hemorrhoids make you look concerned.

1
Dear Participants:
I know when you are texting in class. Seriously, no one just looks down at their crotch and smiles

Sincerely, Your Trainer
Pharmacotherapy for Substance Use & Co-Occurring Disorders

HELPING
Our Kinds
Of Folks

[Image of hands holding a syringe]

[Image of a sign that says, "Some people forget your future. Ex-wife"]
Pharmacotherapy for Substance Use & Co-Occurring Disorders

The Current State of Affairs

- Alcohol use among high school and college students has declined
- Those who use, often drink to intoxication
- Alcohol prevention efforts for college fraternities have not worked
- Marijuana use has increased in all age groups
- Overdose deaths from benzodiazepines increased 5 times from 2001–2014
- We are in the midst of an opioid epidemic
- 2016 – first decrease in opioid prescriptions
- Overdose deaths from prescription opioids increased 3.4 times from 2001–2014
- Overdose deaths from heroin increased 6 times from 2001–2014
Pharmacotherapy for Substance Use & Co-Occurring Disorders

Why Pharmacotherapy?

Death Rates/Year – all causes:
- Alcohol: 80,000
  - Accidents, overdose, resultant medical problems
- Opioids: 30,000
  - Overdose, resultant medical problems
- Cannabis: <50
  - Probably more when considering impaired driving
  - NO current medications

More Bad News

- Nearly 23 million Americans over age 12 are now addicted to an illicit or prescription drug and/or alcohol
- This is more than those with heart disease or cancer
- Does not include tobacco/electronic nicotine delivery systems (vaping)
- One in 4 deaths attributed to SUDs

The Reality of Opioid Dependence

- 2.0 million people in the U.S. have prescription opioid dependence (2015)
- Only 18% receive treatment
- 591,000 people had a heroin disorder (2015)
- Sales of legal opioids have increased 400% in last 10 yrs.
- Overall opioid prescriptions went from 112 million in 1992 to 282 in 2012 and per-capita consumption quintupled
- Most O.D. deaths among adolescents and 20 years olds
- With increasing restrictions on prescription opioid, there has been a switch to heroin
**The Great American Relapse:**

An Old Sickness has Returned to Haunt a New Generation

The face of heroin use in America has changed utterly.

- Forty or fifty years ago people addicted to heroin were overwhelmingly male, disproportionately black, and very young (the average age of first use was 16). Most came from poor inner-city neighborhoods.
- These days, more than half are women, and 90% are white. The drug has crept into the suburbs and the middle classes. And although users are still mainly young, the age of initiation has risen: most first-timers are in their mid-20s.
- Heroin use increased 145% between 2007 and 2014, and mortality due to heroin overdose more than quintupled between 2000 and 2014, in part due to the restrictions on Rx opioids.

**The Reality of Opioid Dependence**

- Long-duration prescription opioid use align geographically with highest rates in the south and Appalachia.
- Women 45 and older have higher rates of opioid use disorder than men.
- Males younger than 45 have higher rates of opioid disorder than females.
- Females fill more opioid prescriptions than males across all age groups.
- High dosage opioids prescriptions associated with higher rates of opioid use disorder than people who fill low dose prescription across both short- and long duration regimens.

**Greater Risk for Opioid OD**

Opioid dependent individuals who have not use opioids in some time:

- Release from jail/prison
- Discharge from an abstinence-based treatment program
- Discharge (routine or non-routine) from MAT with a period of no use of opioids.
Pharmacotherapy for Substance Use & Co-Occurring Disorders

Intervention
- Rx. for opioid overdose
- General treatment for substance use disorders
- Rx. for Opioid use disorder
- Rx. for Alcohol use disorder
- Rx. for Nicotine use disorder
- Rx. for Co-Occurring psychiatric disorders

Overdose Deaths
- Opioids (including prescription opioids and heroin) killed more than 33,000 people in 2015, more than any year on record.
- Nearly half of all opioid overdose deaths involve a prescription opioid.
- Estimates for next 10 years is 500,000 O.D.s
- In 2015, among the the five states with the highest rates of death due to drug overdose were two of the New England states, New Hampshire and Rhode Island
- Opioids continue to be the most significant contributor to overdose deaths exceeding drug-related deaths from all other intoxicants

Signs of OVERMEDICATION, which may progress to overdose
- Unusual sleepiness, drowsiness, or difficulty staying awake despite loud verbal stimulus or vigorous sternal rub.
- Mental confusion, slurred speech, intoxicated behavior.
- Slow or shallow breathing
- Extremely small "pinpoint" pupils, although normal size pupils do not exclude opioid overdose.
- Slow heartbeat, low blood pressure.
- Difficulty waking the person from sleep.
Pharmacotherapy for Substance Use & Co-Occurring Disorders

**Signs of OVERDOSE**

- Often results in death if not treated, includes:
- Extreme sleepiness, inability to awaken verbally or upon sternal rub.
- Breathing problems that can range from slow to shallow breathing in a patient that cannot be awakened.
- Fingernails or lips turning blue/purple.
- Extremely small "pinpoint" pupils.
- Slow heartbeat and/or low blood pressure

**How Did We Get Here?**

- Instant gratification society
- Pharmaceutical companies marketing practices
- Physicians over-prescribing
- More than 80 percent of all of the opioid prescriptions in the world are written by doctors in the United States
- Recent recommendations to physicians is that opioids be used only for short term surgical pain and malignant pain – NOT for chronic pain
- Ant physician in this country can prescribe oxycodone in high doses but not buprenorphine without special training

**How Did We Get Here?**

- Opioid-induced hyperalgesia (OIH)
- A state of nociceptive sensitization caused by exposure to opioids
- The condition is characterized by a paradoxical response whereby a patient receiving opioids for the treatment of pain could actually become more sensitive to certain painful stimuli
- Can explain the loss of opioid efficacy and need to use more of the drug
- American Pain Society recommending that pain be considered the 5th Vital Sign - 1996
- Led to overprescribing
Opioid Overdose Naloxone (Narcan)

How It Works

- Was first approved by the FDA for usage in 1971.
- The drug is an opioid antagonist, which means it competes with opioids already present in the body by binding to opioid receptors in the brain.
- What this does is prevent the opioid receptors from binding with any further opiates present so that a person who ingested too much of the substance will not experience overdose from toxicity.
- The drug not only keeps the body from binding any further opioids but it also completely counteracts the effect of an opioid overdose.

Opioid Overdose Naloxone (Narcan)

- An opioid antagonist indicated for the emergency treatment of known or suspected opioid overdose
- Can be given by injection into a muscle, under the skin, into a vein through an IV or in a nasal spray
- Evzio is an automatic injector system
- In 2014, when Evzio was approved in the US, the list price was $575 for a two-pack. Now, it has a list price of $4,500 — an increase of 680%.
- Nearly three quarters (73%) of prescriptions for NARCAN® Nasal Spray have a co-pay of $10 or less
- NARCAN® Nasal Spray is available to all qualified group purchasers (e.g., first responders) for $37.50 per 4mg dose ($75 per carton of 2 doses)
Pharmacotherapy for Substance Use & Co-Occurring Disorders

Narcan

- Is not a controlled substance
- Has no abuse potential
- If administered to an individual not using opioids, nothing happens
- Can USUALLY immediately reverse opioid overdose
- The increasing combination of heroin & fentanyl (100 times more powerful than morphine) or carfentanil (10,000 times more powerful than morphine) and may make Narcan ineffective

Buprenorphine & Overdose

- Buprenorphine has a higher affinity for the opioid receptors than do other opioids, naloxone may not be effective at reversing the effects of buprenorphine-induced opioid overdose
Potency of Fentanyl

It would only take 2-3 milligrams of fentanyl to induce respiratory depression, arrest and possibly death (see photo of penny). When visually compared, 2 to 3 milligrams of fentanyl is about the same as five to seven individual grains of table salt.

Fentanyl & Carfentanil

- Used in conjunction with heroin or found as an adulterant in counterfeit pharmaceutical products
- Fentanyl is an FDA approved drug for pain management early 1960s
- Most fentanyl today made in clandestine labs, primarily China and Mexico
- May require multiple administrations of Narcan
- Depending on how much the person has used, Narcan may not be able to reverse overdose

"The terrorist threat families in America see is NOT IN THE STREETS OF ALEPPO. It’s FENTANYL coming down your street."

- Sen. Ed Markey
Pharmacotherapy for Substance Use & Co-Occurring Disorders

This Is Narcan, Only the First Step

The Problem

- Naloxone is only a tourniquet
- Use is analogous to stop the bleeding from n injury
- The injury still needs to be treated
- In one community, rescue squad personnel had to use naloxone 3 different times on the same individual during one shift
- What NEEDS to happen after the opioid overdose reversal???

After Overdose Reversal?

- Some system for connecting addict to addiction treatment
- Use of first responders to take individual directly to treatment
- Use of Peer Counselors when reversal is complete (e.g., like AA 12 Step call)
- Some cities funding such efforts
Pharmacotherapy for Substance Use & Co-Occurring Disorders

### Treatment for Substance Use Disorders (General)
- Psychosocial treatment
- Recovery support services/case management
- Pharmacotherapy (MAT)

### Psychosocial Treatment
- Was the original therapeutic approach to addiction
  - AA 1935
- The basis for older and many/most current treatment programs
- A Twelve Step disease model approach
- Initially most counselors were not clinicians but provided treatment out of their own experience
- Over time, more clinical approaches and evidence-based treatment
- Emphasis on the power of the group to change behavior (group therapies)

### It’s Not 1960 Any Longer
- Patients back then starting using much later
- Were “rehabilitatable,” now many only “habilitatable”
- Patients with co-occurring mental health or legal problems were not generally referred or admitted to addiction treatment programs
- Lack of employment or intact family was generally the result of use now
- Educational issues were not as commonly a problem then

*For all these reasons, psychosocial treatment alone then worked better than today*
Pharmacotherapy for Substance Use & Co-Occurring Disorders

- Yet, in spite of our best efforts using psychosocial treatment, most patients will drink/use again
- If we use abstinence as the sole outcome measure, outcome for addiction treatment is less positive than for 10 different types of cancer (5 year outcomes)

What can we add to psychosocial treatment to improve outcome?

Recovery Support Services (RSS)
Rather than treatment interventions, they are assistance with:
- Housing (for the homeless)
- Transportation
- Childcare
- Vocational Training (for the unemployed)
- Employment (for the unemployed/ex-felons)
- Education (for those without a H.S diploma or GED)
- Literacy training
- Financial Counseling/Aid
- Legal Aid
- Parenting Training
Pharmacotherapy for Substance Use & Co-Occurring Disorders

RSS Importance

- For many patients, particularly in the public sector, Recovery Support Services (which includes case management), may be as, or even more important, than treatment.

Demographic Predictors of Poor Treatment Outcome (both MH & SA)

1. Under 25 years of age
2. Never married or having lived as married
3. Unemployed
4. No high school diploma or GED

Without these needed services, here is where we are:
Pharmacotherapy for Substance Use & Co-Occurring Disorders

A Valued Addition

- Peer support staff
- Used in conjunction with, or following active treatment
- Peer support counselors have become more accepted, credentialed and reimbursable by payers

This improves outcome, but still not enough

So We Add Pharmacotherapy for Substance Use Disorder Relapse Prevention
The Complication

- Before discussing pharmacotherapy for addictive disorders, we must take into account the complication of co-occurring mental health and substance use disorders.

Complicating the Drug Crisis

- Most individuals who have a substance use disorder and/or make up the overdose statistics also have a co-occurring mental health disorder.
- Creates additional difficulties in identification and treatment.

What Is Comorbidity?

- Comorbidity: Addiction and Other Mental Illnesses
- When two disorders occur in the same person, either concurrently or sequentially.
- Comorbidity implies interactions between the illnesses that affect the course and prognosis of both.
Why Do These Disorders Often Co-occur?

- Drug abuse may bring about symptoms of another mental illness. Increased risk of psychosis in vulnerable marijuana users.
- Mental disorders can lead to drug abuse, possibly as a means of "self-medication."
- Overlapping genetic vulnerabilities.
- Overlapping environmental triggers.
- Involvement of similar brain regions.
- Drug use disorders and other mental illnesses are developmental disorders.

Comorbidity Rates in Alcohol Disorder Samples

(ECA) (ECA*) (Ross, Glaser, and Germanson 1988)

Estimates for Co-Occurring Mental Health & Substance Use Disorders

- 35 – 50% of patients with a diagnosed mental health disorder are estimated to have a co-occurring substance use disorder.
- 50 – 65% of patients with a diagnosed substance use disorder are estimated to have a co-occurring mental health disorder.
Co-Occurring MH Disorders in a Corrections Population

- Estimates range from 70 – 85% with mood disorders and antisocial personality disorders being common
- The corrections system houses more persons with mental illness that all the other systems combined yet provides little treatment

Co-Occurring MH Disorders in Methadone Program Patients

- The prevalence of psychiatric disorder is up to 10 times higher in the population on methadone maintenance than in the general population
- The prevalence of psychiatric disorder in the population on methadone maintenance is two to three times higher than that found in community surveys of those with a substance-use disorder.

TODAY, EVERY PROGRAM TREATS PATIENTS WHO HAVE CO-OCCLUDING MENTAL HEALTH AND SUBSTANCE USE DISORDERS BUT HOW MANY ARE TREATING BOTH THE ADDICTION AND THE PSYCHIATRIC COMORBIDITY?
Pharmacotherapy for Substance Use & Co-Occurring Disorders

Co-Occurring Disorders Are An Expectation, Not An Exception and Treating one disorder without the other will become an exercise in futility.

When Co-Occurring Addiction and Mental Health Disorders Exist, Treating Either Without the Other Will Lead to Successful Outcome When:

Bipolar & Related Disorders
Bipolar Disorder

Unipolar disorders present with only depression
Bipolar Disorder presents with both depression and mania and is divided into two types:
- Bipolar I: with full mania (not changed in the DSM-5)
- Bipolar II: with hypomania

Bipolar Disorder is one of the most misdiagnosed, over-diagnosed psychiatric disorders

Bipolar Disorder Misdiagnosis*

- Total misdiagnosis 69%
- Times individual misdiagnosed 3.5
- Physicians consulted before correct diagnosis 4
- Misdiagnosed as:
  - Unipolar Depression 60%
  - Anxiety Disorder (especially PTSD) 26%
  - Schizophrenia 18%
  - Borderline or Antisocial Personality Disorder 17%

Pharmacotherapy for Substance Use & Co-Occurring Disorders

Bipolar Disorder and Alcohol Problems

- Women with bipolar disorder are **SEVEN** times more likely to have alcohol problems than women without.
- Men with bipolar disorder are **FOUR** times more likely to have alcohol problems than men without.

**WHY?**

- It is unclear what is causal.
- This is a chicken/egg situation.
- Best guess: patients with bipolar disorder are treating the symptoms of their disorder with alcohol.
Pharmacotherapy for Substance Use & Co-Occurring Disorders

**Pharmacotherapy for Bipolar Disorder**

- **Mood Stabilizers**
  - Lithium
  - Depakote
  - Tegretol
  - Lamictol
  - Risperdal
  - Clorazil

- **Atypical Antipsychotics**
  - Abilify
  - Zyprexa
  - Quetiapine fumarate (Seroquel)
  - Ziprasidone (Geodon)

- **For Bipolar Depression**
  - Symbyax
  - Seroquel
  - Latuda
Pharmacotherapy for Substance Use & Co-Occurring Disorders

### Lithium
- Old line mood stabilizer
- Many clinicians don't like it
- Therapeutic dose and LD50 (lethal dose for 50% of the people) dose are close
- NSAID (e.g., Aleve) use increases the likelihood of a lethal dose because it is metabolized before the lithium allowing lithium levels to increase
- 50% of people with BPD attempt suicide and 15% complete it
- BUT . . . of those with BPD, on lithium for 2 years, there is a reduced rate of suicide

### Depressive Disorders

### PHQ-9
The PHQ-9
(Physicians Health Questionnaire)
is a well accepted, nine-item screening tool for depression, available online (no cost)
Depressive Disorders

- Disruptive Mood Dysregulation Disorder*
- Major Depressive Disorder, Single Episode
- Major Depressive Disorder, Recurrent
- Dysthymia (Persistent Depressive Disorder, also include chronic major depression)*
- Substance-Induced Depressive Disorder
- Depressive Disorder Associated with Another Medical Condition
- Premenstrual Dysphoric Disorder (no longer “for further study”)*
- * New

Major Depressive Disorder (MDD)

Requires meeting 5 of 9 criteria (unchanged)

- Depressed mood most of day, nearly every day
- Loss of interest or pleasure
- Significant weight loss or gain
- Insomnia or hypersomnia
- Psychomotor agitation or retardation
- Fatigue or loss of energy nearly every day
- Feelings of worthlessness
- Reduced ability to concentrate or think or indecisiveness
- Recurrent thoughts of death or suicidal ideation

Accompanied by clinically significant distress
Pharmacotherapy for Depression

Commonly Prescribed Antidepressants
- Selective serotonin reuptake inhibitors (SSRIs) (block the reabsorption or reuptake of serotonin in the brain)
  - Celexa
  - Lexapro
  - Prozac
  - Luvox
  - Paxil
  - Zoloft

Depression & Cardiac Problems
- Depressed people die earlier, most common causes are cardiac and stroke
- Use of the antidepressant Lexapro* appears to help prevent a potentially serious stress-related heart condition, a new study finds.
- The condition is known as known as "mental stress-induced myocardial ischemia." Although people with this condition may not develop noticeable symptoms, their heart muscle is not receiving adequate blood supply, according to researchers from Duke University School of Medicine in Durham, N.C.
- However, the researchers found that people taking the antidepressant Lexapro (escitalopram) were more than two and a half times less likely to be affected by the condition, which can be spurred by emotional stress.

Pharmacotherapy for Depression

Commonly Prescribed Antidepressants
Serotonin norepinephrine reuptake inhibitors (SNRIs) - block the reabsorption of the neurotransmitters serotonin and norepinephrine in the brain.
- Pristiq
- Cymbalta
- Effexor
- Fetzima
Pharmacotherapy for Depression

Commonly Prescribed Antidepressants
*Atypical Antidepressants) – Don't fit in any of the other classes of antidepressants
- Wellbutrin - also used for smoking cessation
- Remeron
- Serzone
- trazadone
- Vibryd
- Brintellix

Effective Time for Antidepressants to Work
- Generally 6 weeks to 6 months
- Psychiatric medication management not a science
- For some, no antidepressant works

For Treatment-Resistant Depression
- Transcranial magnetic stimulation
- ECT
- Ketamine (see next – not yet FDA approved)
Pharmacotherapy for Substance Use & Co-Occurring Disorders

Ketamine
- Ketamine, a "dissociative anesthetic" for starting and maintaining anesthesia, lifts depression almost immediately via a byproduct of its metabolism
- NIH-funded team finds rapid-acting, non-addicting agent in mouse study
- A chemical byproduct, or metabolite, created as the body breaks down ketamine and likely holds the secret to its rapid antidepressant action (NIH).
- The metabolite singularly reversed depression-like behaviors (including suicidality) without triggering any of the anesthetic, dissociative or addictive side effects associated with ketamine.
- This discovery fundamentally changes our understanding of how this rapid antidepressant mechanism works and holds promise for development of more robust and safer treatments.

When Do You Medicate for Psychiatric Disorders?

When the risk of not medicating exceeds the risk of medicating!
Anxiety Disorders

Chronic Anxiety

It's not stress that kills us, it is our reaction to it. - Hans Selve
Specific Anxiety Disorder Diagnoses in the DSM-5

- Separation Anxiety Disorder
- Selective Mutism
- Specific Phobia
- Social Anxiety Disorder (Social Phobia in DSM-IV)
- Panic Attack (not a diagnosis)
- Panic Disorder
- Agoraphobia
- Generalized Anxiety and Worry Disorder

Incidence of Anxiety Disorder in the U.S.

- 3.7 percent of America’s full time adult workers age 18 or older (4.3 million Americans) had one or more anxiety disorders in the past year
- Overall 12.9 million American adults, or 5.7 percent of the population, experienced an anxiety disorder in the past year

SAMHSA, 2015

Trauma- and Stressor-Related Disorders

- Acute Stress Disorder
- Posttraumatic Stress Disorder
- Adjustment Disorders
- Reactive Attachment Disorder
- Disinhibited Social Engagement Disorder
Acute Stress Disorder

Traumatic events are now explicit as to whether they are:
- Experienced directly
- Witnessed
- Experienced indirectly
Pharmacotherapy for Anxiety Disorders

Benzodiazepines Anxiolytics
- Xanax
- Librium
- Valium
- Klonopin
- Tranxene
- Dalmane

Non-Benzodiazepines Anxiolytics
- Buspar

Benzodiazepines

- Drug of choice for management of withdrawal, particularly alcohol
- Contraindicated for:
  - Abstinent alcoholics
  - Older adults
Pharmacotherapy for Substance Use & Co-Occurring Disorders

Personality Disorders

- Cluster A Personality Disorders
  - Paranoid Personality Disorder
  - Schizoid Personality Disorder
  - Schizotypal Personality Disorder

- Cluster B Personality Disorders
  - Antisocial Personality Disorder
  - Borderline Personality Disorder
  - Histrionic Personality Disorder
  - Narcissistic Personality Disorder

- Cluster C Personality Disorders
  - Avoidant Personality Disorder
  - Dependent Personality Disorder
  - Obsessive-Compulsive Personality Disorder

"Thank you for calling the Paranoia Help-Line. Please hold while your call is traced..."
Personality Disorders – No change in DSM-5

- The essential element of personality disorder is that it is not an episodic condition in an otherwise well-functioning individual.
- It is a chronic dysfunction that begins early in life and is slow to change.
- The DSM-IV system for categorizing personality disorders is unchanged in the DSM-5.
- Patients with these disorders are often not likeable, may be seen as difficult rather than sick and may be rejected by clinicians and payers (treatment refractory).
- With Substance Use Disorders, Antisocial Personality Disorder is often associated with the use of illicit substances.
- Axis II has been eliminated.
Pharmacotherapy for Personality Disorders

- **NONE** for the disorder itself
- Medications for some of the “cross cutting” symptoms, which are symptoms that are not part of the diagnostic criteria but may be problematic (e.g., insomnia)

Schizophrenia Spectrum & Other Psychotic Disorders
## Schizophrenia Spectrum & Psychotic Disorders

- No bulleted type listing of disorders in section as with DSM-IV-TR, also difference in ordering
  - Delusional Disorder
  - Brief Psychotic Disorder
  - Schizophreniform Disorder
  - Schizophrenia
  - Schizoaffective Disorder
- DSM-5 differences in organization and emphasis (e.g., no subtypes of schizophrenia in DSM-5) – only catatonia as a specifier
- Follows concept of dimensions vs. categories

## Schizophrenia

- Conditions defined by one or more of:
  - Delusions
  - Hallucinations
  - Disorganized thinking
  - Disorganized/abnormal motor behavior
  - Negative symptoms: anhedonia, diminished emotional expression, avolition, etc.
- Impairments in functioning; duration of 6 month minimum
- Rule out schizoaffective or substance related Dx

## Schizophreniform Disorder

- Same symptoms as Schizophrenia
- Differs from Schizophrenia in terms of duration of illness (at least one month but less then 6 months)
- Course:
  - About 1/3 of initial cases recover within 6 mo.
  - About 2/3 go on to be diagnosed as Schizophrenia or Schizoaffective Disorder
- DSM-5 provides no guidance as to clinical services or case management issues
Pharmacotherapy for Substance Use & Co-Occurring Disorders

**Brief Psychotic Disorder**

A. One or more of the following, with one of (1), (2) or (3) required:

1. Delusions
2. Hallucinations
3. Disorganized speech (frequent derailment or incoherence)
4. Grossly disorganized or catatonic behavior

B. Duration at least one day but less than one month

C. Not better explained by major depressive or bipolar disorder with psychotic features or other psychotic disorder such as schizophrenia or the physiological effects of a substance

---

**Schizoaffective Disorder**

- Diagnostic criteria
  - Uninterrupted period of illness with major mood episode concurrent with Criterion A of schizophrenia
  - Delusions or hallucinations for 2+ weeks in absence of a major mood episode during some period
  - Major mood episode criteria met for majority of illness duration

- Diagnosis can change to schizophrenia if psychotic systems persist without recurrent mood episode

---

**Substance/Medication-Induced Psychotic Disorder**

Between 7% and 25% presenting with a first episode of psychosis in different setting are reported to have Substance/Medication-Induced Psychotic Disorder
Pharmacotherapy for Substance Use & Co-Occurring Disorders

Cannabis & First Psychotic Episode

Recent study in London, 410 patients with first-episode psychosis and 370 population controls

- The risk of individuals having a psychotic disorder showed a roughly three-times increase in users of *skunk*-like cannabis (high-potency, unpleasantly-aromatic) compared with those who never used cannabis

Schizophrenia & Substance Use

- Some people who abuse drugs show symptoms similar to those of schizophrenia. Therefore, people with schizophrenia may be mistaken for people who are affected by drugs.
- Most researchers do not believe that substance abuse causes schizophrenia
- However, people who have schizophrenia are much more likely to have a substance or alcohol abuse problem than the general population

Schizophrenia & Substance Abuse

- Substance abuse can make treatment for schizophrenia less effective. Some drugs, like marijuana and stimulants such as amphetamines or cocaine, may make symptoms worse
- Research has found increasing evidence of a link between marijuana and schizophrenia symptoms
- People who abuse drugs are less likely to follow their treatment plan
Pharmacotherapy for Substance Use & Co-Occurring Disorders

Pharmacotherapy for Schizophrenic Disorders

First Generation
- Haldol
- Thorazine

Second Generation
- Zyprexa
- Seroquel
- Abilify
- Risperdal
- Risperdal Consta, a Long-acting Injection of the oral medicine RISPERDAL® (Risperidone).
  (Every two week injection for Schizophrenia)

ADHD
DSM-5 Criteria for ADHD

Inattention
- Six or more (of 9) symptoms persisting at least 6 months to a degree that is inconsistent with the developmental level and negatively impacts directly on social and academic/occupational activities
- For adolescents (17 and older) and adults at least five symptoms are required

Hyperactivity and Impulsivity
- Six or more (of 9) symptoms persisting at least 6 months to a degree that is inconsistent with the developmental level and negatively impacts directly on social and academic/occupational activities
- Several inattentive or hyperactive-impulsive symptoms were present prior to age 12
- Symptoms present in two or more settings
- For adolescents (17 and older) and adults at least five symptoms are required

Specifications (subtypes):
- Combined presentation
- Predominantly inattentive presentation
- Predominantly hyperactive-impulsive presentation

Changes DSM-IV to DSM-5
- Some symptoms to several symptoms
- Onset changed from 7 to 12 years
- New language for subtypes but same as in DSM-IV
- Cut-off from 6 to five symptoms
- Will make it easier to diagnose adults with ADHD
The Controversy about ADHD
ATTENTION DEFICIT/HYPERACTIVITY DISORDER (ADHD)

- Incidence in the General Population is: 2.3%
- Incidence in a cocaine using population is: 32-34%
- Up to 15% of adults with ADHD will still meet full criteria by age 25
- Up to 65% of adults with ADHD will still meet in "partial remission" criteria by age 30
- Rate of ADHD are higher among people with SUDs

ADHD and Substance Use Disorders

- In one study 23% of alcohol dependent (DSM-IV) patients showed evidence of retrospective ADHD in childhood
- ADHD was proved to be persistent in 33.3% of the adult patients
- In the group of substance addicted patients, 54.1% (DSM-IV) presented with diagnostic criteria for ADHD in childhood and 65.5% showed evidence of ADHD persisting in adulthood
- Presence of ADHD is a significant risk factor for developing a SUD (52% vs. 27% in one study)
- No difference in Alcohol Use Disorder
- Higher with drug use or drug use + AUD

ADHD Still Affects People into Adulthood

- Prevalence is a little lower but still found in older adults
- They suffer from typical ADHD problems such as restlessness, distractability and from concurrent depression and anxiety
- Up to 4.2% of people 60 and older had symptomatic ADHD

(Keeney S, et al “The Prevalence of ADHD in Older Adults in Netherlands” APSARD, 2016; Abstract #35)
People 
DO NOT 
Just Outgrow 
ADHD!

The Concern

- The symptoms of ADHD, when not recognized as such, sometimes are misinterpreted as non-compliance and resistance which may lead to administrative discharge

ADHD 
Co-occurs 
with Many 
Types of SUDs
Adolescents and Adults with ADHD were

- Twice as likely to have a lifetime history of nicotine use
- Nearly 3 times more likely to report nicotine dependence in adolescence/adulthood
- Almost 2 times more likely to meet diagnostic criteria for alcohol abuse or dependence approximately 1.5 times more likely to meet criteria for marijuana use disorder
- Twice as likely to develop cocaine abuse or dependence
- More than 2.5 times more likely to develop an SUD overall
- Very commonly found in the CJ system

Adult ADHD
Self-Report Scale
(ASRS-v1.1)
Symptom Checklist
Pharmacotherapy for Substance Use & Co-Occurring Disorders

Common Stimulant Medications for ADHD

- Adderall (regular and extended formulations)
- Dexedrine
- Vyvanse (also used for binge eating disorder)
- Concerta
- Ritalin (regular and extended formulations)

Prescribing Stimulants for Children with ADHD

- Concern about developing later addiction because of their early use of ADHD drugs
- Actual evidence is just the opposite

ADHD Still Affects People into Adulthood

- Prevalence is a little lower but still found in older adults
- They suffer from typical ADHD problems such as restlessness, distractability and from concurrent depression and anxiety
- Up to 4.2% of people 60 and older had symptomatic ADHD

(Exoo J, et al "The Prevalence of ADHD in Older Adults in Netherlands" APSARD, 2005;Abstract 15)
The Use of ADHD Medications in Stimulant Addiction

- Early in recovery it is not prudent to begin ADHD treatment with stimulants, and the use of non-stimulants, like Stattera may be warranted.
- For patients who have been abstinent for some period of time, the risk of using stimulants to effectively treat ADHD symptoms is generally believed to be lower. In these cases, the use of extended-release formulations of stimulants including transdermal formulations is preferred.
- Consider non-drug therapies such as cognitive therapy, behavior modification, anger management, social training & family therapy.
- Combination of drug & non-drug tx. may be best.

Note on Medications for ADHD

- Medication works better for hyperactive than inattentive symptoms.
- See more inattentive symptoms as people age.
- Different disorders?

Pharmacotherapy for Addictive Disorders (Withdrawal Management)
Pharmacotherapy for Substance Use & Co-Occurring Disorders

Three Goals for Withdrawal Management

- Avoidance of potentially hazardous consequences of discontinuation of drugs of dependence
- Facilitation of the patient's completion of detoxification and timely entry into continued treatment
- Promotion of patient dignity and easing discomfort during the withdrawal process

The best predictor of current and future withdrawal problems are past withdrawal problems

Assessment Instruments for Withdrawal by Substance

**Alcohol:**
- Clinical Institute Withdrawal of Alcohol, Revised (CIWA-Ar)

**Benzodiazepines:**
- Clinical Institute Withdrawal of Benzodiazepines, Revised (CIWA-Br)

**Cocaine:**
- Cocaine Selective Severity Assessment (CSSA)

**Opioids:**
- Subjective Opiate Withdrawal Scale (SOWS)
- Objective Opiate Withdrawal Scale (OOWS)
- Clinical Opiate Withdrawal Scale (COWS)
Pharmacotherapy for Substance Use & Co-Occurring Disorders

The CIWA-Ar
(Clinical Institute Withdrawal Assessment of Alcohol, Revised)

- It requires under two minutes to administer
- It requires no medical knowledge
- It provides you with a quantitative score that predicts the severity of withdrawal from alcohol

Downloadable from the Internet

Pharmacotherapy For Withdrawal Management

Alcohol Withdrawal
- Benzodiazepines
- Barbiturates (phenobarbital)

Opioid Withdrawal
- Methadone
- Buprenorphine
- Clonidine

Stimulant Withdrawal (no medications FDA approved)
- Amantadine (antiviral & anti-parkinsons)
- Modafinil (anti-narcolepsy agent)
Pharmacotherapy for Substance Use & Co-Occurring Disorders

### Insomnia Disorder
- Difficulty initiating Sleep
- Difficulty maintaining Sleep
- Early morning awakening with inability to return to sleep
- At least 3 nights/week for at least 3 months
- Occurs despite adequate opportunity for sleep
- Not better explained by another sleep disorder (e.g., narcolepsy), the physiological effects of a substance or a co-occurring mental health disorder

### Obstructive Sleep Apnea May Cause Snoring

**How To Stop Snoring:**
- Place pillow tightly over partner's face
- Hold till snoring stops
- Delete this message

### The Messages We Give
- “You’ll never die from lack of sleep!”
- Insomnia is genuine suffering. The patient is awake, night after night, and then drowsy in the daytime, snoozing in group therapy and often given “check marks” or “write ups” by treatment center staff for “not participating.”
- **BUT**
  - It can lead to symptoms of depression
  - It causes people to become irritable and moody
  - It can make the individual more accident prone
  - Associated with substance use disorder relapse
Pharmacotherapy for Substance Use & Co-Occurring Disorders

Pharmacotherapy for Insomnia in Early Recovery

Insomnia and Early Recovery

- Insomnia may lead to an increase in the risk of relapse for people in the early phases of recovery from addiction.
- The researchers say the incidence of insomnia in early recovery may be five times higher than in the general population.
- Treatment can include Trazadone and CBT.
- Because of the risk of relapse, we need to weigh the slight risks of these medications against the risk of relapse.
Smoking and Insomnia

- Recent research has documented the importance of heavy chronic smoking as contributing to insomnia.
- Participants were assessed over 7 waves of data collection that spanned approximately 29 years, from mean ages 14.1 years to 42.9 years.

Medications for Insomnia

- Doxepin (Sinequan), a tricyclic antidepressant, is often prescribed in doses of 100mg or more for depression. But at very low doses this medication acts as a soporific.
- Trazodone (Desyrel), which is one of the most popular medications used to treat insomnia. Trazodone in low doses (50mg to 100mg) can provide the side effect of sedation without this effect carrying over to the next day.
Pharmacotherapy for Substance Use & Co-Occurring Disorders

Medications for Insomnia (OTC)

- Hydroxyzine, or benadryl, as with most antihistamines, have a very sedative property, which makes it useful for treating insomnia.
- Melatonin is an over-the-counter natural remedy that has gained popularity in recent years. Melatonin is a natural hormone produced by the pineal gland that is activated at night, but inactive during the day, the use of Melatonin may help reset the cycle.

Sexual Dysfunctions
**Sexual Dysfunctions**

- **Erectile Disorder** – Inability to have or maintain an erection sufficient for sexual intercourse - persistence of the problems for 6 months, 75% of the time
- **Female Orgasmic Disorder** – same persistence; removal of “normal excitement phase;” recognition that orgasm is “not all or nothing;” allows for comorbid diagnosis of Arousal Disorder and Orgasmic Disorder – 25% of females do not experience orgasm
- **Delayed Ejaculation** – cardiac and hypertensive medications?
- **Premature Ejaculation** – ejaculating before or within one minute of intromission (ICD-10 is 15 seconds)

**Premature Ejaculation**

- No medicines specific for this problems
- SSRIs sometimes prescribed because the mechanism of action for depression can also slow down premature ejaculation
- There are OTC “desensitizing” medications that might help
Medications for Erectile Dysfunction

- Cialis (daily use, and as needed)
  - “Two bathtubs required”
- Levitra
- Viagra

All of the above have a transient effect on enzymes that allow erection by causing smooth muscle relaxation when sexually stimulated. They are taken before suspected sexual contact; are vasodilators which require the male to be stimulated.

Viagra

WARNING

Don’t snort Viagra
Sexual Dysfunctions

- Female Sexual Interest/Arousal Disorder – Medication –
  - Estimated to affect 10% of US women
- FLIBERSARIN
  - Works on neurotransmitters in the brain and needs to be taken daily. It works on the same neurotransmitters that are associated with anxiety and depression
  - Questions about efficacy
  - Sometimes erroneously referred to s “female Viagra” or the ”little pink pill” (reference to Viagra called (the little blue pull”)

Sexual Dysfunctions

- Male Hypoactive Sexual Desire Disorder
- Genito-Pelvic Pain/Penetration Disorder: this diagnosis will likely be made for those previously diagnosed with either Vaginismus or Dyspareunia
  - Vaginismus: involuntary spasming of the vagina when there is an attempt to insert anything
  - Dyspareunia: painful sexual intercourse
- Substance/Medication Induced Sexual Dysfunction
### Dyspareunia Medications

- Most frequently caused by lack of vaginal lubrication
- Topical non-estrogen applied directly to vagina (Osphena)
- Estrogen to increase natural estrogen – comes presenting risks for post-menopausal women (Premarin)
- OTC Topical lubricants (“K-Y Jelly”)

### Drug Induced Sexual Dysfunction

- Some studies found alcohol addiction is associated with sexual dysfunction (particularly inhibited orgasm while others find no association).
- Nicotine use is associated with sexual arousal dysfunction in both men and women
- Marijuana use is often intended to stimulate sexual desire and pleasure, but can significantly impair orgasmic ability and intensity
- Cocaine is a stimulant and is often used to increase sexual desire and energy; however, it can inhibit sexual arousal and subsequently lead to painful sex, particularly for women
- Heroin use is associated with decreased sexual desire in men
- However, the rates of sexual dysfunction in methadone and buprenorphine users is no different from the general
Pharmacotherapy for Substance Use & Co-Occurring Disorders

Spot Quiz

Question: Which diagnosis would you assign to a chameleon who could not change color?

Spot Quiz

Answer:

Ereptile Dysfunction
Relapse Prevention for Addictive Disorders

The Best Chance

The best chance for recovery for people with alcohol and opioid disorders is the combination of:
- Psychosocial treatment
- Recovery Support Services (RSS)
- Pharmacotherapy (Medication Assisted Treatment or MAT)
Pharmacotherapy for Substance Use & Co-Occurring Disorders

Recovery Support Services (RSS)
Rather than treatment interventions, they are case management to provide assistance with:
- Housing (for the homeless)
- Transportation
- Childcare
- Vocational Training (for the unemployed)
- Employment (for the unemployed/ex-felons)
- Education (for those without a H.S diploma or GED)
- Financial Counseling/Aid
- Legal Aid
- Parenting Training
- Literacy training

Demographic Predictors of Poor Treatment Outcome (both MH & SA)
1. Under 25 years of age
2. Never married or having lived as married
3. Unemployed
4. No high school diploma or GED
Pharmacotherapy for Substance Use & Co-Occurring Disorders

**RECOVERY SUPPORT SERVICES (RSS)**

- The importance of assessment for the need for RSS
- The need to provide or arrange for RSS
- CSAT & computerized RSS assessment

**Peer Counselors**

- Growing movement
- Certification
- Pay
Pharmacotherapy for Substance Use & Co-Occurring Disorders

Without these needed services, here is where we are:

This improves outcome, but still not enough

So We Add Pharmacotherapy for Substance Use Disorder Relapse Prevention
Why Should We Consider Pharmacotherapy?

We use medications for both acute and chronic diseases.

**BUT**

when we use insulin for the treatment of diabetes, we do not call it “Medication Assisted Treatment”

when we use an anti-hypertensive for the treatment of high blood pressure, we do not call it “Medication Assisted Treatment”

Why Psychosocial Treatments Alone Are Limited in Effectiveness
Pharmacotherapy for Substance Use & Co-Occurring Disorders

Challenges of Current Therapies

- Psychosocial support alone has high relapse rate\(^1\)
  - Approximately 90% at 48 months (alcohol dependence)
- Poor adherence is common with daily oral meds\(^2,\,^3\)
  - “Forgetting”
  - Chaos in the environment
  - Side effects (common with all meds)
- Dependence drives a desire for intoxication
- High rates of AMA discharges (inpatient) & drop out (outpatient) from treatment (opioid dependence)

References:

The Problem of ADHERENCE!

- Of all of the FDA approved drugs for alcohol and opioid dependence\(^*\), all except Vivitrol are oral medications requiring the patient to take 1 to 2 pills, 1 to 3X/day.
- In addition to the usual causes of medication noncompliance, for the alcohol or opioid dependent person, the daily ambivalence about giving up the alcohol or opioid is another reason not to take the medications.
- *Implantable buprenorphine

Pharmacy Claims for Oral Naltrexone

![Graph showing pharmacy claims for oral naltrexone]

Pharmacy claims for NTX-PO in a plan with 1.5 million insureds for 3 years (2000-2002)
- Approximately 90% did not refill even once – despite having coverage

Stephenson et al. Effects of Medication Treatment on Cue Inhibition. American Academy of Pharmaceutical Practice 2004
Challenges of Current Therapies

- High relapse rate with psychosocial support alone
  - Approximately 90% at 48 months (alcohol)
- Poor adherence is common with daily oral medications
  - Difficult social environment
  - Forgetting to take the medication
  - Adverse effects as with all medications
- Alcohol dependence drives a yearning for intoxication

References:

Challenges of Psychosocial Treatment Alone for Opioid Dependence

- Psychosocial support alone has high relapse rate
  - Opioid dependent patients treated in inpatient treatment - had early relapse post-discharge (i.e., a return to daily opiate use).
  - Follow-up interviews 94% reported a relapse, and the initial relapse occurred within one week in 53% of cases
- Dependence drives a desire for intoxication
- For opioid dependent individuals, high rates of AMA discharges (inpatient) & drop-out (outpatient) from treatment makes success more difficult

References:
Pharmacotherapy for Substance Use & Co-Occurring Disorders

Vivitrol
- Developed with a grant from NIAAA because of compliance issues
- Once a month injectable naltrexone
- Blocks the effects of alcohol and opioids
- Reduces craving
- Minimizes adherence problems

Common Medical Contraindications
- on opioids for pain management (opioid antagonists);
- end stage liver disease
- allergic to any of the ingredients.
Other contraindications exist specifically for the use of the aversive medication disulfiram (Antabuse®)
- psychosis
- coronary artery disease
- diabetes
- severe pulmonary disease
- chronic renal failure, seizures
- cirrhosis with portal hypertension
- patients who have recently received metronidazole (Flagyl®)
- significant impulsivity
- over age 60.

Pharmacotherapy should be considered a treatment tool as others like group therapy or CBT
Pharmacotherapy for Substance Use & Co-Occurring Disorders

For alcohol dependence, consideration should always be given to anti-addiction medications along with psychosocial treatment

- Disulfiram ("Antabuse®")
- Acamprosate ("Campral®")
- Oral Naltrexone ("Revia® & "Depade®")
- Sustained release injectable naltrexone ("Vivitrol®")

Suggestions re: Anti-addiction Medications for Alcohol Dependence

**Antabuse** (Disulfiram)

- an abstinence goal and no more than moderate impulsivity
- patient would likely avoid drinking if there were more concrete, immediate and predictable consequences to drinking
- potential consequences to the patient of drinking are imminently dangerous and/or potentially devastating
- Above to be used with suitable adherence enhancement measures
- Can be used for "short-term insurance"

**Campral** (Acamprosate)

- reports of relief of discomfort or dysphoria with drinking (negative reinforcement)
- experience of significant protracted abstinence symptoms (Post Acute Withdrawal)
- the risk of relapse is related to the patient’s reports of apprehension or anxiety about withdrawal
- **Major Drawback:** Dosing is 2 pills, 3X/day
Oral Naltrexone

- Naltrexone is used to treat alcohol or opioid drug dependence. It reduces the pleasurable effects of alcohol and as an opioid antagonist, it helps block the effects of narcotic (opiod) drugs, such as heroin and other opioids.
- It may help reduce cravings for opioids & alcohol.
- Diminished desire for substance use is an optimum outcome of naltrexone treatment and response if use.
- Most studies show that naltrexone significantly reduces the chance for relapse after the person has stopped drinking.
- It also appears particularly effective for people with a family history of alcoholism.
Comparison of Opioid Treatment Medications

**METHADONE**
Dolophine, Methadose
Methadone activates opioid receptors in the brain, fully replacing the effect of whichever opioid the person is addicted to.

**BUPRENOPIRE**
Suboxone, Subutex
Buprenorphine
Activates opioid receptors in the brain, partially replacing the effect of whichever opioid the person is addicted to.

**NALTREXONE**
Vivitrol
Naltrexone binds to the opioid receptors in the brain, blocking the effects of the opioid.

How Vivitrol Works

EXCESSIVE STIMULATION OF THE Dopamine REWARD SYSTEM IS BLOCKED

AGONIST DRUGS
Pharmacotherapy for Substance Use & Co-Occurring Disorders

**Methadone**
- Used for detoxification or maintenance
- Any physician with DEA number can prescribe methadone for pain management or detoxification from opioids
- Only a federally licensed methadone clinic can use methadone for maintenance
- Drug of choice for pregnant opioid addicts

**Federal Regulations for Admission for Methadone Maintenance**
- At least 18 years of age;
- Document, at least, one year history of addiction. A positive opiate drug test is not required if an individual meets DSM-IV requirements for opiate dependence or if an individual is clearly at risk of relapse while receiving services in an abstinence based program;
- Current physiological dependence on opiates of a one year history of addiction;
- Exceptions to minimum admission criteria of current physiological dependence on opiates or a one year history of addiction can be made under the following circumstances:
  - Individuals who have been in penal or chronic care for six months or longer;
  - Patients 16-18 years of age require a two year history of addiction;
  - Pregnant patients;
  - Previously treated patients; Individuals who complete MSW within 30 days of treatment.

**Priority for admission to the following**
- Pregnant patients;
- Individuals at risk for relapse;
- Previously treated patients;
- Patients just released from jail and/or hospital.
**Pharmacotherapy for Substance Use & Co-Occurring Disorders**

**Who Are These Patients?**

- May have unsuccessfully tried abstinence treatment, many multiple times
- Significant co-occurring disorders
- Significant histories of antisocial/criminal behavior
- Usually poor
- At “the end of the line,” last stop

**Desired Outcomes Determine Choice of Agonist or Abstinence**

**Abstinence**

- Total cessation of use
- When this is the measure of outcome, it may or may not include improved functioning

**Opioid Substitution**

- Decreased/elimination of criminal behavior
- Increased employment
- Enhanced social and family functioning

**My Solution to the Drug Problem**

- Make all drugs legal
- Require users to obtain their drugs from Comcast customer service!
Pharmacotherapy for Substance Use & Co-Occurring Disorders

Buprenorphine

- Used for detoxification or maintenance
- Lower abuse potential than methadone
- Lower level of physical dependence (less withdrawal discomfort)
- Ceiling effect doses
- Less likely to overdose
- Qualifying physicians (8 hour course) can prescribe/administer in office practice
- New current limit is 275 patients
- Qualifying NPs and Pas require 24 hrs. course

Probuphine

- A 6 month implantable buprenorphine
- An attempt to deal with the compliance problems and diversion
- Should be used patients who have achieved and sustained prolonged clinical stability on low-to-moderate doses of a transmucosal buprenorphine-containing product (i.e., doses of no more than 8 mg per day of Subutex or Suboxone)

Agonist Diversion

- Methadone: Most methadone found on the street does not come from methadone clinics but rather from physicians writing pain management prescriptions
- Buprenorphine: Most buprenorphine found on the street is used by opioid addicts to manage withdrawal symptoms rather than as their primary drug
Pharmacotherapy for Substance Use & Co-Occurring Disorders

**Long-Term Follow-Up of Suboxone**
- Addiction to opioid pain relievers
- 50% reported abstinence 18 months after starting therapy
- After 3.5 years, 61% reported abstinence
- Fewer than 10% met current criteria for dependence
- At follow-up, those still engaged on opioid agonist therapy were much more likely to report abstinence than those who stopped


**NIATx.com**
- Buprenorphine Organization Readiness Tool (toolkit)

**All Cause Mortality Rates**
**Major Risks for Opioid OD**
Risk of return to use and overdose after opioid abstinence or treatment:
- After release from criminal justice facilities
- After discharge from abstinence-based addiction treatment
- After conclusion of agonist or antagonist treatment

**Criteria for Use of Pharmacotherapy**
Alcohol and/or opioid dependence (required); and
- High addiction severity; or
- High levels of craving; or
- History of relapse after treatment; or
- History of AMA discharge or drop-outs from treatment; or
- Potential for serious consequences or imminent danger if use again; and
- Willingness to use pharmacotherapy; and
- Absence of medical contraindications (required)

**Counselor Objections to the Use of Agonists**
Still Addicted???

- Some people object to the use of methadone or buprenorphine for opioid dependent patients because if they use them, “they are still addicted”
- **THIS IS FLAT OUT WRONG!**
- Addiction includes:
  - Loss of control
  - Compulsion
  - Continued use in spite of adverse consequences
  - Craving
- If they are not abusing methadone or other psychoactive drugs, they remain physiologically dependent, not addicted.

How Long?

- A frequently asked question is “How long does the person have to be on “it” (the agonist drug)
- When explored, it is found to be a thinly veiled opposition to ANY use of the drug
- People should “be on it” as long as it is working and they feel the need to continue

ANTAGONIST DRUGS
Pharmacotherapy for Substance Use & Co-Occurring Disorders

### Opioid Antagonist Drugs
- Oral Naltrexone
- Vivitrol (injectable, long-acting naltrexone)

FDA approved for both alcohol & opioids

---

### What is VIVITROL?

**VIVITROL is:**
- A once-a-month, injectable, extended-release formulation of naltrexone
- Avoids the compliance problems of daily dosing
- Compatible with counseling and AA & NA
- Is an opioid blocker (i.e., antagonist)
- Administered by a healthcare professional
- Compatible with psychiatric medications

**VIVITROL is NOT:**
- Euphoric (i.e. pleasure producing)
- Addictive (no withdrawal if stopped)
- Aversive (e.g. disulfiram – "Antabuse"
- VIVITROL is NOT an agonist (e.g., methadone) or partial agonist (e.g., buprenorphine)
Some Research Results for Vivitrol

VIVITROL - Significantly Reduces Drinking Days\(^1,2\)

- Baseline (N=56)
- Placebo (N=28)
- VIVITROL (N=28)

Results are from a post hoc subgroup analysis of a 6-month multicenter, double-blind, placebo-controlled clinical trial of alcohol dependents who were abstinent for 4 or more days prior to treatment initiation.


VIVITROL Reduced Holiday Drinking

Among patients who were abstinent for 4 or more days prior to treatment initiation.

Similar findings were observed among patients who were abstinent 7 days prior to treatment initiation (n=53).

Bohn MJ. Poster presented at: Annual Meeting of the American Psychiatric Association; May 19-24, 2007; San Diego, CA.
Pharmacotherapy for Substance Use & Co-Occurring Disorders

Impact on Participation in Counseling and Mutual Support Groups


Results 2006-2008
- Improved client outcomes in small demo
  - Continuation of substance abuse treatment
  - Increased independent living
  - Improved employment and
  - Decreased recidivism (2/3)
- Began to demonstrate business case
  - 64% decrease in cost vs. prior treatment

Implementing Medication-Assisted Treatment
With Vivitrol
Florida Systems Development - RWJ Foundation Grant

Summary of Efficacy Results

In clients who were abstinent from alcohol for the week before treatment initiation, VIVITROL and counseling, as compared to placebo and counseling, provided:

- Rapid & substantial reduction in drinking days
- Sustained continuous abstinence over 6-month study
- Sustained reduction in heavy drinking days for 18 months
- Substantial reduction in holiday drinking
Pharmacotherapy for Substance Use & Co-Occurring Disorders

Vivitrol Opioid Treatment Pivotal Trial: Krupitsky et al, Lancet 2011
- 24 week double-blind, placebo-controlled, randomized trial following inpatient detox, N=250
- Clear superiority vs. placebo at preventing lapses and sustained relapse/dependence
- No ODs or deaths
- FDA approval of Vivitrol for opioid dependence October, 2010

Northeast Recovery Division (CRC) Vivitrol Client Outcomes
Includes clients admitted and discharged between 1/1/11 through 9/30/11 at White Deer Run - Allenwood, Cove Forge, Bowling Green at Brandywine, Wilmington Treatment Center and Life Center of Galax

<table>
<thead>
<tr>
<th></th>
<th>Opiate Clients Enrolled</th>
<th>Opiate Clients Denied</th>
<th>All Other Opiate Clients</th>
<th>Variance (Denied)</th>
<th>Variance (All Other)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Clients</td>
<td>358</td>
<td>460</td>
<td>8,053</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Average Length of Stay</td>
<td>23.11</td>
<td>37.76</td>
<td>35.59</td>
<td>29%</td>
<td>45%</td>
</tr>
<tr>
<td>% Treatment Complete</td>
<td>87.3%</td>
<td>65.8%</td>
<td>65.5%</td>
<td>25%</td>
<td>31%</td>
</tr>
<tr>
<td>% AMA</td>
<td>10.7%</td>
<td>24.5%</td>
<td>26.6%</td>
<td>5%</td>
<td>6%</td>
</tr>
<tr>
<td>Readmission Rate</td>
<td>8.0%</td>
<td>13.4%</td>
<td>15.8%</td>
<td>4%</td>
<td>9%</td>
</tr>
</tbody>
</table>

Cost for Vivitrol
- $900 - $1,100 each injection
- Most commercial insurance companies and Medicaid programs now increasingly paying for it
- Alkermes, the maker of Vivitrol, will pay up to $500/month in copay assistance for those who have commercial insurance, with no time limit
Pharmacotherapy for Substance Use & Co-Occurring Disorders

Of all of the FDA approved medications for the treatment of opioid dependence, Vivitrol (naltrexone) is the only one that does not produce or continue physiological dependence. However, it does require initial abstinence of 7-14 days.

Maryland Enacts Law Prohibiting Prior Authorization For Medications To Treat Opioid Addiction

- On May 25, Maryland Governor Larry Hogan (R) signed into law emergency legislation that prohibits insurers, nonprofit health service plans and health maintenance organizations from applying preauthorization requirements for medications used to treat opioid addiction (methadone, buprenorphine and naltrexone).
- Prior authorization is a requirement from your insurance company to your physician. The physician has to get specific medications (or operations) approved by the insurance company before the insurance company will provide full (or any) coverage for them.

Pharmacotherapy for Nicotine Dependence
Pharmacotherapy for Substance Use & Co-Occurring Disorders

**Smoking & Relapse**

- More people die from the use of tobacco and second hand smoke than die from the use of alcohol and other drugs, AIDS, car accidents, suicide, homicide and WW II combined!
- Smoking serve as a trigger for relapse to other drugs
- When the route of administration of the drug of choice is smoking (e.g., “crack”), the risk is increased

**Smoking Cessation Myths**

- “You can’t stop more than one thing at a time”
- Therefore . . . If the patient is dependent on alcohol, benzodiazepines and cocaine, we should choose one of the drugs to treat and leave the others for later after the patient is stable in their recovery from the first drug disorder!!!!!!!

**Diagnosis**

- In the DSM-5, the diagnosis of nicotine dependence found in the DSM-IV was changed to Tobacco Use Disorder
- Nicotine in the addicting substance
- One of the most compulsively used psychoactive substances due to:
  - speed of effect
  - dosing schedule
The Facts About E-Cigarettes

- E-cigarettes are less carcinogenic than smoking tobacco because there is no combustion
- It reduces the problems of second-hand tobacco smoke
- The extent of danger is not currently known
- E-cigarettes have helped some people to stop smoking
- Some non-smokers, particularly adolescents, who never smoked, have started vaping
- NO psychoactive substance use is appropriate for the adolescents developing brains

Smoking vs. Vaping

- General agreement that electronic nicotine delivery systems are safer than smoking
- Safer does not = safe (e.g., during the AIDS crisis in the 1980s, language changed from safe sex to safer sex)
- Come in flavors like tobacco, menthol, vanilla, cherry, coffee, chocolate, grape, apple, cotton candy and bubble gum as well as alcoholic drinks
- New book of business for the tobacco companies
Pharmacotherapy for Substance Use & Co-Ocurring Disorders

The “E-Joint”
- A new device known as an “e-joint” brings together marijuana and an e-cigarette
- A brand of e-joint, JuJu Joint, holds 100 milligrams of THC, the psychoactive ingredient in marijuana—twice as much as a traditional joint
- It is disposable and comes filled with 150 hits.
- The device produces no smoke and has no smell.

Recent Study
- Psychiatric patients who took part in a smoking-cessation program while they were in the hospital for treatment of mental illness were more likely to quit smoking and less likely to be hospitalized again for mental illness, a new study shows
- 224 patients at a smoke-free psychiatric hospital in California
- Eighteen months after leaving the hospital, 20 percent of those in the treatment group had quit smoking, compared with 7.7 percent of those in the control group
- Forty-four percent of patients in the treatment group and 56 percent of those in the control group had been readmitted to the hospital.

Smoking Cessation Is Linked to Reduced Prevalence of Substance Use and Mood/Anxiety Disorders
- Some survey participants with current or past histories of the disorders quit smoking during the 3-year period between initial and follow-up interviews. Compared with participants with such histories who continued to smoke at or near their initial intensity, these people who quit were less likely to have current diagnoses of the disorders at the follow-up interview.
- * NESARC, 2001–2002
Pharmacotherapy for Substance Use & Co-Occurring Disorders

Pharmacotherapy for Nicotine

**Antidepressants**
- Sustained-release bupropion
  - Zyban
  - Wellbutrin (commonly prescribed as an antidepressant)

**Nicotine Replacement (Anticraving)**
- Chantix
- Nicotine gum
- Nicotine transdermal patches
- Nicotine nasal sprays

Recent Research

- Abrupt cessation of smoking more successful than gradual cutting down

Where Are You RE: Behavioral Health Patients Continuing Tobacco Use?
Pharmacotherapy for Substance Use & Co-Occurring Disorders

IF THE SCIENCE IS THERE, why is pharmacotherapy not being used more commonly?

• Lack of commitment of the administrative and senior clinical staff
• But the commitment of the administrative and senior clinical staff to the use of pharmacotherapy is no guarantee that it will work
• Must get buy-in from the line clinical staff and avoid the following

Mixed Messages About Pharmacotherapy

Innovations don’t sell themselves . . .

• In 1601...
  Capt. James Lancaster evaluates the effectiveness of lemon juice to prevent scurvy. Results excellent.
• In 1747...
  Dr. James Lind carries out a second study. Results excellent.
• In 1796 ...
  British Navy finally adopts use of lemon juice to prevent scurvy.
Pharmacotherapy for Substance Use & Co-Occurring Disorders

Erroneous Beliefs
- Erroneous beliefs that:
  - Medication is meant to replace psychosocial treatments
  - Medication is incompatible with AA/NA
  - Vivitrol is psychoactive or addictive

Types of Mixed Messages
- “If your using drugs, you’re not really sober”
- “AA doesn’t support using drugs”
- “I did it the hard way”
- “If you just work the program, you won’t need any drugs”
- “My sponsor would never have approved it for me”
- “You can’t treat a drug problem with a drug”
- “If you are on drugs, you can’t speak at a meeting”

H. Westley Clark, M.D., J.D., M.P.H., CAS, FASAM
Director, Center for Substance Abuse Treatment (CSAT)

At the opening plenary session of the 2011 Cape Cod Symposium on Addictive Disorders (1,100 attendees), Dr. Clark said the following:

“Failing to offer and use Medication Assisted Treatment, particularly Vivitrol, is tantamount to malpractice!”
Pharmacotherapy for Substance Use & Co-Occurring Disorders

The Veteran’s Administration

- The VA has determined that the use of pharmacotherapy in the treatment of addictions:

  IS THE STANDARD OF CARE!

United Nations
March, 2013

"A particular form of ill-treatment and possibly torture of drug users is the denial of opiate substitution treatment,” the report says, adding this is considered a human rights violation when it occurs in jails and prisons.

There has been/still is(?) a bias by some clinicians in the field against the use of medication

Until recently (and sometimes still) it also included the use of psychiatric medications
Pharmacotherapy for Substance Use & Co-Occurring Disorders

The Genesis of Counselor Objection

• Early physician ignorance
• The 70’s benzodiazepine “cure”
• If you are on methadone, “you’re still addicted”
• General resistance to change
• “Why can’t we do it the way we always have?”
• Anxiety about trying something new they may not understand

Probably, this may be similar to:

• The slow acceptance of psychiatric comorbidity
• The slow acceptance of psychiatric medications
• The growing awareness of the role of trauma in the development of SUDs
• The growing recognition of the need for Recovery Support Services and case management
• The replacement of the need to “hit bottom” with early intervention
• The replacement of “confrontation” with Motivational Interviewing
• The movement toward a recovery model

There Is No Magic Bullet!

All of the oral anti-craving and opioid substitution medications and Vivitrol work best in conjunction with psychosocial treatment and/or recovery support services.


Oral Naltrexone and Vivitrol Are SUPPLEMENTS, Not REPLACEMENTS!
IF I believe that Addiction is a chronic, relapsing brain disease, THEN I will treat it as a chronic disease which means consideration of the use of medications as would occur with other chronic diseases such as hypertension and diabetes.

Putting It All Together

Recovery

REx Including Case Management
Pharmacotherapy (MAT)
Psychosocial Treatment
Pharmacotherapy for Substance Use & Co-Occurring Disorders

The Worst Reason for Doing Anything in the Present Is Because That Is the Way We Did It In the Past

Good Advice for Providers

“Some days you just have to look at the world in a different way!”

We Can Provide More Cost-Effective Treatment
There is light at the end of the tunnel

Remember

- All treatments work for some people
- No one treatment works for everyone!

Hey! Don’t just have a good day. Instead have a Fantastic, Great, Super-Duper, Totally Awesome, Wonderful Day!