Suicide, Addiction, and Comorbidity in Youth

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Disclosures

• NONE
Overview

• Epidemiology of Suicide
• Epidemiology of Adolescent Substance Use
• Role of mental disorders in SUDs.
• Suicide in teens, risk factors, methods.
• Clinical assessment and interview strategies of suicidal patients
• Substance induced disorders
• Comorbidity the rule not the exception
• Addiction – as a brain disease
• Meth, EtOH, opiates, benzos clinical overview
• Treatments
SUICIDE RATES BY RACE PER 100,000 LIVING POPULATION
— UNITED STATES, ALL AGES, 2000 —

Rate per 100,000

Age

White Males
White Females
Black Males
Black Females

CDC 2002 (WISQARS)
FLUCTUATIONS IN 20TH-CENTURY YOUTH SUICIDE RATES

— UNITED STATES, AGES 15–24 —

Rate per 100,000

Year

Epidemiology of drug abuse -2005

• 19.7 million Americans “users” in 2005
• 3.6 million dependent, 1.1 million between ages of 12-17 yrs
• Adolescent use declining
  – 11.6% (2002), 9.9% (2005)
  – lowest 5.3% (1992), highest 16.3% in 1979
• Young adults 18-25 - highest rates
  – 18.8% (1999), 20.1% (2005)
• First use – 50% in grade 6 have used alcohol or substances
• Monetary cost $275 billion/YEAR
  – Morbidity, mortality, fetal effects, health care cost, indirect cost

OAS 2005, SAMHSA/ NSDUH - national results data
Epidemiology of alcohol abuse

- 15.4 million alcohol dependent adults
- 13.8 % alcohol use disorder in lifetime
- 17.8 million needing but not receiving treatment
- Costs $165 billion
- Frequent alcohol use in pregnant women increased to 3.9%
- 10.8 million drinkers ages 12-20 in 2005
- 2.3 million “heavy drinkers” ages 12-20 in 05

NIAA 1998, CDC 1997, NSDUH 2005
Epidemiology of SUD in Teens -2014

- SUD among the most prevalent mental health conditions in the US
- 20 million Americans 12yrs and or older or 8% affected by drug/ethoh use dis. in 2015
- Includes 1.3 million adolescents or 5%
- Prevalence of SUD in teens similar irrespective of race, ethnicity, and sex.
- Prevalence increases with age in boys, 2x more likely as girls to have an SUD in adulthood
Substance Abuse Impact

• Leading cause of preventable death, disability and illness.

• Annual costs are estimated at 193 “billion” for drug use and 223 “billion” for etoh- this takes into account expenses associated with increased health problems, criminal activity, and loss of productivity at workplace.

• Related societal costs include family disintegration and increased risk of child maltreatment/neglect.
Role of Mental Disorders in Development of Substance Abuse

• Why are mental disorders associated with subsequent SUD?
• Are youth with mental disorder more likely to initiate substance use, become regular users, or become addicted with regular substance use?
• Does the risk of advancing to more serious stages of abuse differ by mental disorder or for different substances?
• Answering these questions – lead to development of the most beneficial preventive interventions?
Role of Mental Disorders in the Development of SUD

• 1/5 Teens with Anxiety Disorder have SUD
• Internalizing disorders associated with more serious transitions to serious stages of Alcohol Abuse and with earlier stages of drug abuse
• ¼ teens with a behavioral disorder developed a SUD

Role of Mental Disorders in the Development of SUD

- ADHD, ODD, CD all associated with increased risk for every stage of drug abuse
- 1/6 Teens with a behavior disorder developed and ETOH use disorder
- Conduct Disorder and ODD associated with first use of ETOH
- All after controlling for other comorbidity
Role of Mental Disorders in the Development of SUD-SUMMARY

• Regular use of another substance-including cigarettes- is the most potent risk factor for the transition to every stage of alcohol and drug abuse

• Adolescents who abuse 1 type of substance are at significant odd of transitioning to every stage of alcohol and drug abuse

• National Survey on Drug Abuse and Mental Health Services Adm 2015
Role of Mental Disorders in the Development of SUD-SUMMARY

• Example – Adolescents who used illicit drugs were 5X more likely to develop an alcohol use disorder as those who did not use illicit drugs

• Teens who smoked cigarettes at least 1x/week were 2x as likely to develop an alcohol or drug use disorder as compared with teens who did not smoke once a week

• 1. National Survey on Drug Abuse and Mental Health Services Adm 2015
Comorbidity of Substance Use and Mental Illness

Possible explanations:

• One disorder is a marker for the other

• Mental illness leads to self-medication with substances

• Substance use and withdrawal lead to symptoms of mental illness

• Substance use leads to mental illness in vulnerable individuals
SUICIDE IN TEENS
SEROTONIN AND THE CLINICAL FEATURES OF SUICIDE

1. Decreased serotonergic activity associated with excitable, impulsive, and violent behavior

2. Serotonergic activity reduced
   – in males,
   – after alcohol intake
   – in the elderly
# TEEN SUICIDE METHODS

— % OF ALL SUICIDES, UNITED STATES & IDAHO, 15-19 Year Olds —

<table>
<thead>
<tr>
<th>Method</th>
<th>U.S. 1999 (N=1,615)</th>
<th>IDAHO 1990-1998 (N=145)</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>M</td>
<td>F</td>
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<tr>
<td>Firearms</td>
<td>64</td>
<td>40</td>
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<tr>
<td>Hanging/ Suffocation</td>
<td>26</td>
<td>33</td>
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<tr>
<td>Ingestion</td>
<td>2</td>
<td>16</td>
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<td>CO poisoning</td>
<td>2</td>
<td>2</td>
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<tr>
<td>Jumping from a Height</td>
<td>2</td>
<td>5</td>
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<tr>
<td>Other</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

CDC 2003 (WISQARS) (accessed 06/15/03)
<table>
<thead>
<tr>
<th></th>
<th>Teens*</th>
<th>Adults**</th>
</tr>
</thead>
<tbody>
<tr>
<td>WITHIN MOST RECENT STUDY LIFETIME</td>
<td>24–36%</td>
<td>58–65%</td>
</tr>
<tr>
<td>WITHIN MOST RECENT YEAR</td>
<td>23%</td>
<td>50–56%</td>
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<tr>
<td>3 MONTHS</td>
<td>21%</td>
<td>56%</td>
</tr>
<tr>
<td>1 MONTH</td>
<td>7–15%</td>
<td>30%</td>
</tr>
</tbody>
</table>

Risk Factors

• Demographic factors
• Clinical Risk Factors
• Factors Specific to youth
Demographic risk factors

- Young and Elderly Men
- Native American or Caucasian
- Being single (widowed > divorced > separated > single)
- Economic or occupational stress, losses, humiliation
- New incarceration
- History of gambling
- *Easy access to firearms*
- *Social Isolation*
Clinical Risk Factors

- Past and current major psychiatric illness
- Personality disorder
- Current medical illness
- Current anger, agitation
- Easy access to lethal toxins
- Formulated plan, preparations for death, suicide note
Factors Specific to Youth

- Unwanted pregnancy
- *Lack of family support*
- History of abuse
- School problems
- Social ostracism
- Conduct disorder
- *Homosexual orientation*
- *Hx of cutting associated with attempts*
Ideation to Attempts

- Previous suicide attempts
- Lethal means
- Reasons to live/hopelessness
- Social Isolation/hx. of not telling others
- Family hx. of suicide
- Impulsive aggression
- Command voices
- Alcohol/drugs
REASONS TO HOSPITALIZE AN ATTEMPTER

**Sufficient**

- Medical necessity
- Abnormal mental state
- Persistent wish to die
- Highly lethal or unusual method
- History of noncompliance
- Social isolation
CONTRACTS FOR SAFETY

Problems with Traditional Assessment

(N=135, any age, inpatient)

31% of admitted multiple attempters had previously signed a contract
PLANNING AND LATER SUICIDE ATTEMPTS

Problems with Traditional Assessment

- 46% of planners attempt
- 21% of non-planners attempt
- 15% of planners make medically serious attempts
- 5% of non-planners make medically serious attempts

Simon & Crosby 2000
INTERVIEW STRATEGIES
Graceful ways of Raising the Topic of Suicide

• When you are depressed do you ever feel like a failure, worthless?
• When you are feeling depressed, like a failure do you ever wish you were never born?
• Do you ever feel like life is not worth living?
• Thoughts of death?
Ways of Raising the Topic of Suicide

• Thought of suicide?
• Planned a suicide?
• Attempted?
• Patients with depression often have thoughts about wanting to die?
  – What kinds of thoughts have you had?
Important questions in the suicidal patient

• Have you made any suicide attempts?
• What? When? How many?
• Medical Attention?
• Were you alone?
• Did you tell anyone? Before? After?
• Were you using?
• Impulsive?
• How did you get through/recover?
Assessing risk in the suicidal patient

• Do you have any reasons to live?
• Are there any events that would lead you to do it?
• What stops you?
• How would your family feel?
• Can you promise not to kill yourself?
• For how long can you promise?
• What’s the percent chance you’ll be alive in one week?
Probing for Impulsivity in Suicide

• Empathize with patients current struggles
• “In the past you’ve made suicide attempts in an impulsive way?”
• “Any current or future stressors that you can foresee might trigger future suicidality?”
• “What would it take for you to do it?”
• “How bad would things have to get?”
Questions for the Closing Phase

• Do you feel I understood your problem?
• Are you satisfied the way this interview went?
• Is there anything that’s important that I did not ask you?
• Do you think this interview helped you?
CURRENT “WISDOM”

• “Suicide is a fatal complication of an untreated, undertreated, or untreated condition”
Substance Related Disorders

Definition of Substance:

A drug of abuse (legal or illegal), a medication, and or a toxin

Two major types of substance related disorders

1) Substance Use disorders
2) Substance Induced disorders
Substance Induced Disorders

1) Intoxication
2) Withdrawal
3) Delirium (intoxication and/or withdrawal)
4) Dementia
5) Amnestic Disorders
6) Psychotic Disorders
7) Mood Disorders
8) Anxiety Disorders
9) Sexual Dysfunction
10) Sleep Disorders
Common Substances of Abuse

- Alcohol
- Cannabis
- Prescription meds
- Amphetamines
- Opiates
- Cocaine
- Hallucinogens
- PCP
- Inhalants
Neuropharmacology

• CNS depressants
  – sedatives/barbiturates/etoh

• Narcotics
  – pain killers/opiates/heroin

• Stimulants-
  – Meth/Speed/Cocaine

• Substituted/hallucinogenic Amphetamines
  – MDMA/Ecstasy/MDA/ketamine

• Hallucinogens
  – THC/LSD/PCP
## The Substances

<table>
<thead>
<tr>
<th>Dependence</th>
<th>Abuse</th>
<th>Intoxication</th>
<th>Withdrawal</th>
<th>Intoxication Delirium</th>
<th>Withdrawal Delirium</th>
<th>Dementia</th>
<th>Amnestic Disorder</th>
<th>Psychotic Disorders</th>
<th>Mood Disorders</th>
<th>Anxiety Disorders</th>
<th>Sexual Dysfunction</th>
<th>Sleep Disorders</th>
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<tbody>
<tr>
<td>Alcohol</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>I</td>
<td>W</td>
<td>P</td>
<td>I/W</td>
<td>I/W</td>
<td>I/W</td>
<td>I</td>
<td>I/W</td>
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<tr>
<td>Amphetamines</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>I</td>
<td></td>
<td>I</td>
<td>I/W</td>
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<td>I/W</td>
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<td>I/W</td>
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<td>Caffeine</td>
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<tr>
<td>Cannabis</td>
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<td>X</td>
<td>X</td>
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<td>I</td>
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<tr>
<td>Cocaine</td>
<td>X</td>
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<td>I</td>
<td>I/W</td>
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<td>I/W</td>
<td>I</td>
<td>I/W</td>
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<tr>
<td>Hallucinogens</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<td>I</td>
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<td>Inhalants</td>
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<td>Opioids</td>
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<td>I</td>
<td>I/W</td>
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<td>I/W</td>
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<tr>
<td>Phencyclidine</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<td>I</td>
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<tr>
<td>Sedatives, hypnotics, or anxiolytics</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>I</td>
<td>W</td>
<td>P</td>
<td>I/W</td>
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<td>W</td>
<td>I</td>
<td>I/W</td>
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<tr>
<td>Polysubstance</td>
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<td>X</td>
<td>I</td>
<td>W</td>
<td>P</td>
<td>I/W</td>
<td>I/W</td>
<td>I/W</td>
<td>I</td>
<td>I/W</td>
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</tbody>
</table>

*Also Hallucinogen Persisting Perception Disorder (Flashbacks).  

**Note:** X, I, W, I/W, or P indicates that the category is recognized in DSM-IV. In addition, I indicates that the specifier With Onset During Intoxication may be noted for the category (except for Intoxication Delirium); W indicates that the specifier With Onset During Withdrawal may be noted for the category (except for Withdrawal Delirium); and I/W indicates that either With Onset During Intoxication or With Onset During Withdrawal may be noted for the category. P indicates that the disorder is Persisting.
Types of Drugs Used by Past Month Illicit Drug Users Aged 12 or Older: 2005

- Marijuana only: 50%
- Marijuana and other illicit drugs: 10%
- Other drugs excluding marijuana: 25%

19.7 Million Past Month Illicit Drug Users
Past Month Use of Selected Illicit Drugs among Persons Aged 12 or Older: 2002-2005
Past Month Illicit Drug Use among Persons Aged 12 or Older, by Age: 2005
Substance Dependence or Abuse in the Past Year, by Age and Gender: 2005
Need for and Receipt of Specialty Treatment in the Past year for Illicit Drug or Alcohol Use among persons Aged 12 or Older: 2005
COMORBIDITY
Rates of Serious Psychological Distress in the past year among adults aged 18 or older, by age 2004-2005
Substance Use and Mental Illness

Comorbidity: U.S.
National Comorbidity Study

- 51% of people with lifetime alcohol and other substance use disorders (AOD) met criteria for at least one other lifetime mental disorder, and vice-versa
- 43% of people with AOD in past year also met criteria for another mental disorder in the past year
- 15% of people with another mental disorder in the past year also met criteria for an AOD disorder in the past year

- 2005 National Survey
Past Year Treatment for Mental Health problems among Adults Aged 18 or older, by type of treatment: 2002-2005
Past Year Treatment among Adults Aged 18 or Older with Both Serious Psychological Distress and a Substance Use Disorder: 2005

- Treatment only for mental health problems: 34%
- Treatment for both: 9%
- Drug treatment only: 4%
- No treatment: 53%
ADDICTION
ADDICTION

A disease process where the patient uses a mood altering substance, the patient is unable to control the time, frequency, or amount, and the use is associated with psychosocial or physical harm.
Disease Model of Addiction

• Addiction is a:
  – A compulsion
    • Long term neuroadaptations in the brain
  – A “brain disease”
    • Impaired neurogenesis
    • Activation of CM-DA function
  – Chronic medical disorder
• Social
• Cultural
• Environment
  – Adverse Experiences - Childhood sexual abuse
• Psychology

3 Langeland W et al.,
Disease Model of Addiction

- Genetics
  - Mapping of the human genome
  - 49% of the variance for age of onset of drinking \(^1\)
  - CHRM2 gene - alc dep and depression \(^2\)

- Temperament
  - Reduced startle response \(^4\)
  - Increased sensation seeking \(^5\)
  - Increased disruptive disorders \(^5\)
  - Depression leads to earlier relapse \(^6\)

\(^1\) Liu IC et al., \(^2\) Wang JC et al., \(^4\) Zimmerman U et al., \(^5\) Martin CA et al., \(^6\) Cornelius JR et al.,
The Limbic Reward System

• Natural activities such as eating, drinking, and sex activates the system and cause the release of dopamine
• The release of dopamine cause us to feel pleasure
• Dopamine and the resulting pleasurable feelings positively reinforce behaviors
Neurobiology of Addiction—specifically ETOH

- Activation of dopaminergic systems
- Blunted HPA axis
  - Dysregulation of GABAergic neurosteroid levels that normally contribute to alcohol sensitivity
- A degenerative disease/lesion
  - Decreased neurogenesis and volume loss
- Learned process
  - Long term memory at molecular levels or neuroadaptation
  - Earlier exposure higher risk
Methamphetamine
Amphetamines

• Adderall, Adderall XR
  (Amphetamine/dextroamphetamine)
• Dexedrine (dextroamphetamine)
• Methamphetamine
• Benzedrine
• CNS psychostimulants
  – Ritalin (methylphenidate), Concerta, Ritalin LA,
    Ritalin SR, Focalin, Focalin XR, Metadate, Methlin,
• Club drugs
Methamphetamine

- Crystal, Tina, Bumps, Meth, Ice
- Easily synthesized, inexpensive, addictive stimulant
- Stimulates dopamine release
- Desired effects
  - Increased energy, attentiveness, libido
- Side effects
  - Behavior changes, erectile dysfunction, mental health illness (psychosis), death
Dopamine

- Plays an important role in the control of movement, cognition, motivation, and reward
- High levels enhance mood and increase motor activity
- Too much produce nervousness, irritability, aggressiveness, and paranoia that approximates schizophrenia
- Too little dopamine results in the tremors and bradykinesia of Parkinson’s disease
- Plays a role in memory and attention
Chronic Meth Use

• Decreased dopamine binding potential in orbitofrontal and dorsolateral prefrontal cortex with secondary psychiatric symptoms
• Major depression
• Chronic psychosis/Schizophrenia
• Inattention
• Anxiety disorders
• Bipolar like conditions
• Personality disorders
Relative normalization

• Brain changes can be permanent in some cases
• Neuronal changes may partially recover with prolonged abstinence
• Relative normalization with abstinence at 14 months
• Adaptive changes occur with some degree of normalization of neuronal structure and function

Nordahl TE et al. Arch Gen Psychiatry, 2005
Meth Intoxication

- Alertness, euphoria, and increased sense of well-being
- Restlessness, tension, irritability, insomnia, appetite suppression
- Compulsive masturbation, sex, pornographic viewing
- Stereotyped compulsive behavior, compulsive cleaning
- Popping knuckles repeatedly, picking at scabs (tweaking)
- Impulsive and aggressive behavior that can sometimes result in violence
- Psychosis, marked by persecutory delusions and auditory hallucinations
Treatment of Intoxication

• May not require specialized medical treatment
• Acute toxicity characterized by delusions, paranoid thinking, and stereotyped compulsive behavior may require neuroleptic agents or other meds
• Overdose can be lethal and requires emergency medical attention
Withdrawal

• Intense cravings for more drug
• Depressive symptoms including:
  – Depressed mood
  – Loss of interests or pleasure
  – Fatigue
  – Sleep disturbances
  – Suicidal ideation
• Psychosis
Tina and Treatment

• Knowledge does not necessarily lead to change
• Peer influences are strong factors in encouraging behavior change
• Abstinence
  – Excellent form of harm reduction
• Harm reduction/moderation
  – Any movement toward staying clean is a move in the right direction
  – Maximize health and reduce the negative consequences of drug use through utilizing a full spectrum of strategies from safer drug use, to moderation, to abstinence
  – HIV/IVDA are a good example
  – Meet them where they are at to help them become more conscious of the harm in their lives and identify options for reducing those harms
Treatment of Meth withdrawal

• Unlike other withdrawal symptoms, physical symptoms are not serious or life threatening
• If psychotic, neuroleptics are helpful
• Antidepressants if depression persists longer than a week
• Try and avoid prescribing benzos/sedatives
• ?propanolol may be helpful with anxiety
• Lithium/Mood stabilizers
Treatment Models

• Cognitive-behavioral therapy
• Individual psychotherapy
• Family or couples therapy
• Psychiatric management
• Counseling
• Group
  – AA/NA
• others
OPIATES
Opiates

- **Natural:** codeine, morphine, MS Contin, opium, paregoric
- **Semi-synthetic (modified from natural substances):** DHCplus, diacetylmorphine, dihydrocodeine, Dilaudid, Endocet®, Endodan®, heroin, Hycodan®, Hycomine, Hycotuss®, hydrocodone, hydromorphone, Lortabs, Numorphan®, Opana®, oxycodone, Oxycontin, oxymorphone, Palfium®, Percocet®, Percodan®, Percolone, Roxicet, Roxicodone, Tussionex, Vicodin, Zantryl, Zydone®
- **Synthetic (man made):** Alfenta, alfentanil, anileridine, carfentanil, Darvon®, dextromoramide, Demerol®, Dolophine, Duragesic, fentanyl, LAAM, Leritine, Levo-Dromoran, levorphanol, Mepergan®, meperidine, methadone, methadose, Pathadol, Pethadol, propoxyphene, Rapifen, sufentanil, Sufenta, Wildnil®
- **Antagonists:** cyclazocine, levalorphan, Lorfan, nalmefene, naloxone, Narcan®, nalorphine, Nalline, naltrexone, Revex, ReVia, Trexan
- **Partial agonists:** Buprenex, buprenorphine, butorphanol, Dalgan, dezocine, nalbuphine, Nubain®, pentazocine, Stadol, Suboxone®, Subutex®, Talwin®, Temgesic
Opiate Related Disorders

• Opiate Abuse
• Opiate Intoxication Delirium
• Opiate Dependence
• Opiate Intoxication
• Mood disorder
• Psychotic disorder
• Sleep Disorder
• Sexual Dysfunction
• Withdrawal
• Opiate-Related disorder NOS
ALCOHOL
## Alcohol

<table>
<thead>
<tr>
<th>Condition</th>
<th>Population (%)</th>
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<tbody>
<tr>
<td>Ever had a drink</td>
<td>90</td>
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<tr>
<td>Current Drinker</td>
<td>60-70</td>
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<tr>
<td>Temporary problems</td>
<td>40+</td>
</tr>
<tr>
<td>Abuse*</td>
<td>male: 20</td>
</tr>
<tr>
<td></td>
<td>female: 10</td>
</tr>
<tr>
<td>Dependence*</td>
<td>male: 10</td>
</tr>
<tr>
<td></td>
<td>female: 3-5</td>
</tr>
</tbody>
</table>

*20-30 percent of psychiatric patients*
Alcohol

- Early onset – worst prognosis
- Early onset- increased rate of psych dx
- Comorbid conditions
  - MDD 2x
  - Panic Disorder 3x
  - Schizophrenia 5x
  - Bipolar disorder 7x
  - Antisocial or Conduct disorder in teens
- Greater social and psychiatric impairment \(^1\)
  - Other substances
  - Unemployment
  - Single
  - Abuse

\(^1\) Bulik CM
# Benzodiazepines

<table>
<thead>
<tr>
<th>Medication Name</th>
<th>Common Brand Name</th>
<th>Time to Peak</th>
<th>Eliminator ½ life [active metabolites]</th>
<th>Equivalent Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alprazolam</td>
<td>Xanax</td>
<td>1-2 hrs</td>
<td>6-12 hrs</td>
<td>1 mg</td>
</tr>
<tr>
<td>Chlordiazepoxide</td>
<td>Librium</td>
<td>1.5-4 hrs</td>
<td>5-30 hrs</td>
<td>25-50 mg</td>
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<td>Clonazepam</td>
<td>Klonopin</td>
<td>1-4 hrs</td>
<td>18-50 hrs</td>
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</tr>
<tr>
<td>Clorazepate</td>
<td>Tranxene</td>
<td>variable</td>
<td>[36-100 hrs]</td>
<td>15-30 mg</td>
</tr>
<tr>
<td>Diazepam</td>
<td>Valium</td>
<td>1-2 hrs</td>
<td>20-100 hrs</td>
<td>10-20 mg</td>
</tr>
<tr>
<td>Halazepam</td>
<td>Paxipam</td>
<td>1-3 hrs</td>
<td>30-100 hrs</td>
<td>40-60 mg</td>
</tr>
<tr>
<td>Lorazepam</td>
<td>Ativan</td>
<td>2-4 hrs</td>
<td>10-20 hrs</td>
<td>2 mg</td>
</tr>
<tr>
<td>Oxazepam</td>
<td>Serax</td>
<td>3-4 hrs</td>
<td>4-15 hrs</td>
<td>20-40 mg</td>
</tr>
<tr>
<td>Prazepam</td>
<td>Centrax</td>
<td>2-6 hrs</td>
<td>36-200 hrs</td>
<td>20-40 mg</td>
</tr>
</tbody>
</table>
# Sedative Hypnotic Benzodiazepines

<table>
<thead>
<tr>
<th>Medication Name</th>
<th>Common Brand Name</th>
<th>Time to Peak</th>
<th>Eliminator ½ life [active metabolites]</th>
<th>Equivalent Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estazolam</td>
<td>ProSom</td>
<td>0.5-5 hrs</td>
<td>10-24 hrs</td>
<td>2-4 mg</td>
</tr>
<tr>
<td>Flurazepam</td>
<td>Dalmane</td>
<td>1-1.5 hrs</td>
<td>40-250 hrs 30-45 mg</td>
<td></td>
</tr>
<tr>
<td>MidazolamVersed</td>
<td></td>
<td>0.5-1 hr</td>
<td>3 hrs</td>
<td>8-10 mg</td>
</tr>
<tr>
<td>Quazepam Doral</td>
<td></td>
<td>1-5 hrs</td>
<td>39-120 hrs</td>
<td>40 mg</td>
</tr>
<tr>
<td>Temazepam</td>
<td>Restoril</td>
<td>0.5-3 hrs</td>
<td>8-22 hrs</td>
<td>30 mg</td>
</tr>
<tr>
<td>Triazolam</td>
<td>Halcion</td>
<td>0.5-2 hrs</td>
<td>2 hrs</td>
<td>0.5 mg</td>
</tr>
</tbody>
</table>
## Sedative Hypnotic A-Typical Benzodiazepines Receptor Ligands

<table>
<thead>
<tr>
<th>Medication Name</th>
<th>Common Brand Name</th>
<th>Eliminator ½ life [active metabolites]</th>
<th>Equivalent Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eszopicolne</td>
<td>Lunesta</td>
<td>6 hrs</td>
<td>3 mg</td>
</tr>
<tr>
<td>Zaleplon</td>
<td>Sonata</td>
<td>1 hr</td>
<td>20 mg</td>
</tr>
<tr>
<td>Zolpidem</td>
<td>Ambien</td>
<td>2.6 hrs</td>
<td>20 mg</td>
</tr>
</tbody>
</table>
Alcohol and Drug Dependence in the Past Year among Adults Aged 21 or Older, by Age at First Use of Alcohol and Marihuana: 2005

- **DRUG DEP**: Age of first use 14 or younger vs. Age of first use 18 or older
- **ETOH DEP**: Age of first use 14 or younger vs. Age of first use 18 or older

Legend:
- Blue: Age of first use 14 or younger
- Red: Age of first use 18 or older
Pharmacology of Alcohol

- Absorbed in proximal small intestines
- B vit absorption
- Ethanol highly water/fat soluble
- Majority metabolized by liver
- Minor excretion unchanged by kidneys, lungs, sweat
- Antabuse
Management

• Pharmacological Treatment Can Work
• Psychological treatment needs to tailored
• Intensity of Treatment makes a difference
• Social approaches
Detox Unit

Withdrawal assessment monitoring management and acute treatment unit

Alcohol Withdrawal

1) Cessation or reduction of alcohol ingestion that has been heavy and prolonged
2) Signs develop within several hours to several days after alcohol reduction
   a) Automatic hyperactivity (sweating/pulse rate above 100)
   b) Hand tremors
   c) Anxiety
   d) Insomnia
   e) Nausea and vomiting
   f) Transient visual tactile or auditory hallucinations or illusions
   g) Agitation
   h) Grand Mal Seizures
   i) Delirium Tremens
3) Not due to medical or mental disorder
4) Above symptoms cause distress or impairment
5) Specify “with perceptual disturbance” if hallucinations or illusions occur with intact reality testing and without evidence of delirium
Delirium Tremens

- Confusion
- Disoriented
- Elevated heart rate, blood pressure and temperature
- Fluctuating level of consciousness
- Up to 5% alcohol dependent people may experience delirium tremens
- Up to 3% alcohol dependent people may experience seizure

Mortality for Delirium Tremens

Used to be 20%
Now ~ 1%
DRUGS FOR ETOH DEPENDENCE

• Disulfiram or Antabuse
• Acamprosate or Campral
• Naltrexone or Revia, Vivitrol
• Antidepressants
  – Treat associated depression, anxiety, craving
  – Desipramine, bupropion, ssri’s
• Anticonvulsants
  – Topiramate, Topamax
  – Valproate, Depakote
ABUSE VS DEPENDENCE
ABUSE

• Failure to fulfill obligations due to use
• Use in situations where is hazardous
• Legal problems related to use
• Use despite social/interpersonal consequences
Screening for Alcohol Problems

1. Have you ever felt the need to **CUT** down on your drinking?  
   □ Yes □ No

2. Have you ever felt **ANNOYED** by someone criticizing your drinking?  
   □ Yes □ No

3. Have you ever felt **GUILTY** about your drinking?  
   □ Yes □ No

4. Have you ever felt the need for an **EYE OPENER** to get you started in the morning?  
   □ Yes □ No
Dependence

• Maladaptive pattern of use leading to impairment
• Tolerance
• Withdrawal
• Larger amounts or for longer periods
• Desire/efforts to cut down
• Great deal of time spent on substance effects or recovering
• Other responsibilities are given up or reduced
• Substance is used despite the physical or psychological consequences
Comorbidity of Substance Use among Youths Aged 12 to 17, by Major Depressive Episode in the Past Year: 2005

- Past year illicit drug use
- Daily cigarette use past month
- Heavy ETOH use past month

- Had MDE past year
- Did not have MDE past year
Treatment of comorbid patients

• Detox
• Comprehensive Psychiatric evaluation
• Psychosocial treatments
• Pharmacological treatment
• Multidisciplinary approach
  – Biopsychosocialspiritual dimensions
Psychosocial Treatments

• Cognitive Behavioral therapies
  – MET and interviewing
    • Tries to mobilize patients desire to change
  – Stress management
  – Behavioral self control training
    • Self monitoring, goal setting, rewards for goal attainment, functional analysis of situations where the patient drinks, learning alternative coping skills
  – Problem solving versus avoiding high risk situations
Other Therapies

• Little evidence for psychodynamic
• Consensus suggests that ITP focused on drug use as well as stabilization of patients social and interpersonal life, disorganization that perpetuates alcohol and drug abuse
• Brief therapies delivered over 1 to 3 sessions may be effective in some cases
• Self help, 12 step
• Marital and family therapy
SUMMARY

• Epidemiology of SUD and Suicide 2005 and 2014 DATA
• Suicide and SUDs - an epidemic especially in teens and young adults
• Risk Factors for suicide from ideation to attempters
• Interview strategies for assessing suicidality in teens
• Patients with psychiatric disorders have higher rates of substance and ETOH abuse/dependence
• Addiction is seen as a brain disorder or disease
• Treatment of comorbid patients requires addressing the different multidisciplinary approach
• Diagnostic/Treatment - biological, social, psychological, and developmental aspects of the patients illness
• Biggest risk factor for SUDs is the use of any substance, behavioral disorders and internalizing disorders (anxiety/depression)