Addiction: It’s a Brain Disease….and it Gets Complicated!

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WHY DO WE LIKE TO GET HIGH?

BRAIN REWARD PATHWAY

Exists to reward us for activities consistent with our survival
WHY DOES THE REWARD PATHWAY EXIST?

 Exists to reward us for activities consistent with our survival

 - Food
 - Water
 - Sex
 - Child Rearing

THE POWER OF THE BRAIN REWARD PATHWAY

 Exists to reward us for activities consistent with our survival

 - Food
 - Water
 - Sex
 - Child Rearing
WHY DO WE USE DRUGS?

BRAIN REWARD PATHWAY

- I like
- I want
- NEUROADAPTATION
- I need !!!
- Brain Hijacked

WHY DO WE USE DRUGS?

BRAIN REWARD PATHWAY

- Food
- Water
- Sex
- Child Rearing
- DRUG of CHOICE
Loss of control or Powerlessness?

- We just described the Neurobiological basis of the “First Step.”
- “Our lives have become unmanageable and we admit our powerlessness over alcohol.”

Why are some people more predisposed?

- Genetic predisposition.
- Social factors and availability of drug.
- Environmental factors, trauma.
- Co-occurring psychiatric disorders.
- Personality and disposition
- Disabling medical conditions.
- Chronic pain.
### Genetic Predisposition

- Sons of alcoholics are 3-4 times more likely to develop alcoholism
- Wired to get high
- Genetics alone does not explain it all.
- Many children of chemically dependent parents never develop addiction

### Social factors and availability

- Drug availability
- Societal attitudes toward drug use
- Peer group attitudes toward drug use
### Environmental factors and trauma

- Childhood abuse or neglect is a strong predictor
- Adult trauma including bereavement
- Trauma is near universal, how it gets handled is what determines impact
- Unaddressed, untreated trauma is highly correlated with addiction

### Co-occurring psychiatric and medical conditions.

- Major depression, Anxiety disorders and PTSD
- Bipolar disorder and Schizophrenia
- Personality Disorders
- Chronic pain
- Terminal medical conditions
Caveats

- The Patient
  - Denial is great
  - Insight is poor
- The clinician
  - Ignorance
  - Avoidance
  - Oversight

Missed diagnoses

- 40% of psychiatric inpatients meeting SCID criteria for current alcohol disorder and drug use disorder went undiagnosed at discharge.
- Only 40% had received the diagnoses on admission!

Epidemiology

- According to the ECA data for alcohol dependence,
  - 13.9% lifetime prevalence
- Any other drug disorder
  - 6.1% lifetime prevalence
- Nicotine dependence
  - lifetime prevalence: 24%

Reiger et al., JAMA 264 (19): 2511-2518, 1990

Co morbidity in ECA

<table>
<thead>
<tr>
<th></th>
<th>Alcohol dependence Prevalence % (OR)</th>
<th>Drug dependence Prevalence% (OR)</th>
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<tbody>
<tr>
<td>General Population</td>
<td>7.9</td>
<td>3.5</td>
</tr>
<tr>
<td>Any mood disorder</td>
<td>14.9 (2.2)</td>
<td>11.3 (4.4)</td>
</tr>
<tr>
<td>Bipolar disorder</td>
<td>27.6 (4.6)</td>
<td>21.8 (8.3)</td>
</tr>
<tr>
<td>Major depression</td>
<td>11.6 (1.6)</td>
<td>10.7 (3.6)</td>
</tr>
<tr>
<td>Panic disorder</td>
<td>21.7 (3.3)</td>
<td>13.3 (4.4)</td>
</tr>
<tr>
<td>Any Anxiety disorder</td>
<td>12.2 (1.8)</td>
<td>6.9 (2.4)</td>
</tr>
<tr>
<td>Schizophrenia</td>
<td>24.0 (3.8)</td>
<td>12.9 (4.2)</td>
</tr>
<tr>
<td>Antisocial PD</td>
<td>51.5 (14.7)</td>
<td>30.8 (15.6)</td>
</tr>
</tbody>
</table>
Lifetime Prevalence of substance use disorders:

Schizophrenia – 50% (85% are dependent on nicotine).
Bipolar disorder – 56%
Post-traumatic stress disorder – 52% of men, and 28% of women

Lifetime Prevalence of substance use disorders (cont’d):

- Major depressive disorder – 16.5% have an alcohol use disorder, and 18% have a drug use disorder
- Anxiety disorders – 36%
- ADHD – 52% (3x the incidence of the general population)
Axis II

- Personality Disorders
  Not all patients who abuse substances have personality disorders.
- If a patient who is using substances has a personality disorder, it is more likely to be in Cluster B

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- Adults with a substance use disorder were almost three times as likely to have a serious mental illness (20.4%)

47.9% of adults with both a serious mental illness and a substance use disorder received some type of treatment, only 11.8% received both mental health and addiction treatment services.


Dually diagnosed individuals are at elevated risk of:

- RELAPSE
- HOSPITALIZATION (MEDICAL AND PSYCHIATRIC)
- HOMELESSNESS
- HIV & HEPATITIS INFECTION
- INCARCERATION
- FAMILY STRESS
- VIOLENCE
- SUICIDE
Co morbidity implications

- Substance abuse is one of the primary factors related to frequency of hospitalization for chronically mentally ill patients. (the other being medication noncompliance)


Assessment guidelines

Ask the question.
Show interest.
Show that you care.
Show that it matters.
Be non judgmental.
Accept Co-morbidity as a fact not a contaminant!
## Screening for substance use in psychiatric patients

- Screening instruments
- Clinical interview
- Collateral information
- Laboratory investigations

## Inquire about Substance Use

- The extent and pattern of use, quantity, quality, duration, expense, how intake was supported, physical effects, tolerance, withdrawal
- Physical, vocational, social, family, financial and legal consequences
- Perceived benefits.
- Prior substance treatment.
<table>
<thead>
<tr>
<th>Questionnaires &amp; rating scales</th>
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<tbody>
<tr>
<td>■ 4 Item CAGE</td>
</tr>
<tr>
<td>■ 10 Item Alcohol Use Disorders Identification Test (AUDIT)</td>
</tr>
<tr>
<td>■ Michigan Alcohol Screening Test (MAST) 25 items</td>
</tr>
<tr>
<td>■ Mental Illness Drug and Alcohol Screening (MIDAS)</td>
</tr>
<tr>
<td>■ Drug Abuse Screening Test (DAST)</td>
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<table>
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<tr>
<th>Diagnostic issues</th>
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<td>■ How to determine whether the syndrome is substance-induced or a primary psychiatric disorder with co-occurring substance abuse or dependence.</td>
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</table>
Additional diagnostic considerations:

- The following might suggest a primary psychiatric disorder:
  - Symptoms *precede* onset of substance use.
  - Symptoms *persist* for more than a month after cessation of acute intoxication or withdrawal.
  - Symptoms *substantially in excess of* what would be expected given the type or amount of substance used, or the duration of use.

Additional diagnostic considerations (cont’d.):

- Family history
- Are symptoms present during times of abstinence
- Postpone final diagnoses until 2-4 weeks of detoxification (if possible)
The Chicken or the Egg?

- Substance induced mood disorder.
- Mood induced substance disorder?
- Once identified BOTH disorders need specific treatment
- Particularly problematic due to patient defenses.

Making the diagnosis

- Critical issue is WHEN to treat psychiatric Symptoms
  - Clients with severe or persistent psychosis, mania or depression, need medication, regardless of presumed cause.
  - Treatment of depression immediately following detoxification decreases depression & is associated with longer periods of abstinence.
## Treatment guidelines

- Treat medical problems, overdoses/intoxication and withdrawal symptoms
- Conservative management of psychiatric symptoms.

## Traditional treatment

- **Sequential treatment**: Commonly a justification for exclusion from treatment

- **Parallel treatment**: Mental health and substance use disorders treated simultaneously by different professionals
Concepts related to Integrated Treatment

- Single program provides for both disorders – severe psychiatric and substance use disorders.
- Both disorders treated by the same clinicians.
- Clinicians are trained in treating psychiatric and substance use disorders.

Integrated Treatment differs from traditional substance abuse treatment:

- Focus on preventing increased anxiety rather than on breaking through denial.
- Emphasis on trust, understanding, and learning rather than on confrontation, criticism and expression.
- Emphasis on reduction of harm from substance use rather than on immediate abstinence.
- Slow pace and long-term perspective rather than rapid withdrawal and short term treatment.
# Concepts related to Integrated Treatment (cont’d):

- Provision of **stage wise and motivational counseling** rather than confrontation and front-loaded treatment.

- Supportive clinicians readily available in **familiar settings** (rather than being available only during office hours and at clinics).

- **12 step groups available to those who** can benefit rather than being mandated for all patients.

- **Psychopharmacology** permitted as indicated according to clients psychiatric and medical needs.

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# involves changing ones’:

- habits
- activities,
- expectations,
- beliefs
- friends
- ways of coping with internal distress
**Motivational Interviewing**

- help clients recognize how substance abuse interferes with their ability to achieve personally valued goals
- Appropriate for clients in the ‘Persuasion’ ‘Active Treatment’ stages.
- Motivation is defined in terms of what one does: recognizing a problem, finding a way to change, starting and sticking with the change strategy.

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**Cognitive Behavioral Therapy**

- identify and change problematic thoughts, feelings and behaviors.
- learning skills to manage problems and achieve goals NOT on insight
- appropriate for ‘Active Treatment’ and ‘Relapse Prevention’ stages.
- Empirical data support the use of CBT for: depression, anxiety, anger, sleep problems, hallucinations and delusions.
PHARMACOLOGICAL TX

One of the most common difficulties is that MDs fail to identify and appreciate co-morbid substance use disorders and the related non-adherence to meds.

Prescribing guidelines for pts who use substances

- Determine diagnoses, so that medications are not used to manage substance-induced Symptoms
- Use meds with low abuse potential
- Use meds with low lethality
- Dispense limited amount of medication follow closely
- Use random UDS
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