Is there a single pathway to addiction?

- Drug Categories
  - Alcohol
  - Cannabis
  - Cocaine
  - CNS depressants
  - CNS stimulants
  - Opioids
  - Hallucinogens
  - Inhalants
  - Anabolic-androgenic steroids
  - Synthetic
  - OTC
  - Club drugs

- Addicting Molecules
- Alcohol
- Cocaine
- Nicotine
- Hash

- Various images of molecules and text boxes related to addiction and drug categories.

- Text: "Drugs of abuse have very different structures and neurotransmitter targets in the brain, but they all exhibit:
  - acute reward
  - chronic reward
  - sensitization
  - negative withdrawal symptoms
  - associative cue learning
  - incentive motivation (relapse)
  - A progression from impulsive to compulsive drug use (which defines the progression from abuse into addiction)."
The Body's Own Psychotropics
- The brain makes its own morphine (beta endorphin) and its own marijuana (anandamide)
- The brain may even make its own antidepressants, anxiolytics, and hallucinogens
- Drugs often mimic the brain's natural neurotransmitters
- Often, drugs are discovered prior to the natural neurotransmitter

Exogenous vs. Endogenous Drugs
**We knew about:**
- Morphine before the discovery of β-endorphin
- Marijuana before the discovery of cannabinoid receptors and anandamide
- Valium and Xanax before the discovery of benzodiazepine receptors
- Elavil & Prozac before the discovery of the serotonin transporter site

**TRANSITION TO ADDICTION**
Taking drugs may begin as a voluntary choice to seek a pleasant stimulus, but for addicts, that choice is no longer volitional, even in the face of terrible personal consequences.

Types of Craving
- Cue-based craving
  - Response to environmental cue
  - Cue creates internal state which is recognized as craving
  - Most notable in cocaine & nicotine
- State or stress-based craving
  - Emotional tone, level of perceived stress, state of self care set the state
  - Craving appears to emerge out of difficult emotional states
  - Most notable in alcohol & sedatives
THE IMPORTANT ROLE OF STRESS

Stressors can trigger drug craving in addicts. One explanation is that abused drugs raise levels of cortisol which plays a primary role in stress responses. Cortisol raises the level of activity in the mesolimbic reward system. By these mechanisms, stress may contribute to the abuser’s desire to take drugs in the first place, as well as the subsequent compulsion to keep taking them.

The Anatomy of the Nervous System

- A complex wiring diagram, carrying electrical impulses to wherever the 'wire' is plugged in – at the synapse.
- There are an estimated 100 billion neurons, which make over 100 trillion synapses in the human brain.

The Anatomy of the Nervous System

- Neurons send electrical impulses from one part of the cell to another part of the cell.
- At the presynaptic terminal, chemicals are released to any of a variety of sites on a second postsynaptic neuron or to other sites distant to the synapse by diffusion.
- The postsynaptic neuron can also “talk back” to the presynaptic neuron with chemical messengers of its own.

Fast-Onset vs. Slow-Onset Signals

- Some neurotransmitter signals are very fast in onset
  - Rapidly change the flux of ions, thus altering the excitability of the neuron
  - Glutamate: universally stimulates almost any neuron
  - GABA: universally inhibits almost any neuron
Fast-Onset vs. Slow-Onset Signals

- Some neurotransmitter signals take longer to develop
  - Called **neuromodulators**
  - Examples are the monoamines norepinephrine and serotonin as well as various neuropeptides

Neurotransmitters

- The known or suspected neurotransmitters in the brain already number several dozen.
- Based on theoretical considerations of the amount of genetic material in neurons, there may be several hundred to several thousand unique brain chemicals.

Categories of Neurotransmitters

1. Cholinergic – Acetylcholine
2. Monoamines
   - Catecholamines – Norepinephrine, Dopamine
   - Indoleamines - Serotonin
3. Amino acids – GABA, Glutamate
4. Neuropeptides – Substance P, Enkephalin
5. Lipids - Anandamide

Co-Transmitters

- Each neuron was originally thought to use one neurotransmitter only and to use it at all of its synapses.
- It is now known that many neurons have more than one neurotransmitter
- Co-transmission often involves a monoamine coupled with a neuropeptide

Co-Transmission

- Under some conditions, the monoamine is released alone; under other conditions, both are released
- The rationale behind the use and action of many drugs arose in the era of thinking about one neuron using only one neurotransmitter, so that the more selective a drug, the better it could modify neurotransmitters.
- It is now believed in order to replace or influence abnormal neurotransmission, it may be necessary to use multiple drug actions.

Chemical Neurotransmission: A Team of Molecular Players

- Neurotransmitter
- Specific ions that interact with ion channels
- Various enzymes
- Transport carriers
- Active transport pumps
- Second messengers
- Receptors
- Transcription factors
- Genes
- Gene products

Each molecule is:
- a known or potential site of drug interactions
- a theoretical site of malfunction that could possibly contribute to a nervous or mental disorder
Opening/Closing of Ion Channels

- Ions: Sodium, Potassium, Chloride, Calcium
- Regulation of opening/closing:
  - Electricity
  - Called voltage-gated
  - Neurotransmitter binding to a receptor
    - Called ligand-gated

Transport Carriers

- Bind to molecules that need to shuttle into cells that otherwise would not be able to get into the cell through the membrane.
- If a transport carrier is coupled with an energy-providing enzyme such as ATPase, it is called an active transport pump.
- Example: reuptake of neurotransmitter into its presynaptic neuron

Active Transport Pump

Reuptake Inhibition
**Regulation of Receptors**

Drugs can cause:
- A decrease in the rate of receptor synthesis
  - Down-regulation or desensitization
  - Takes days to occur
  - Diminishes the sensitivity of neurotransmission
- Immediate desensitization by activating an enzyme that makes the receptor immediately insensitive.
- An increase in the rate of receptor synthesis
  - When receptors are blocked by a drug
  - Increases sensitivity of neurotransmission
  - May also produce a disease (e.g., Tardive dyskinesia)

**Special Properties of Receptors**

- They are organized into multiple subtypes
- Their interactions with drugs define the type of drug (i.e., agonist, antagonist, partial agonist, etc.)
- Allosteric modulation

**The Agonist Spectrum**

- Naturally occurring neurotransmitters stimulate receptors
  - Agonists
  - Various drugs acting at a receptor exist in a spectrum from full agonist to antagonist to inverse agonist

**Regulation of Enzymes**

- The enzymes most important in the neurotransmission process are those that make and destroy the neurotransmitters
- There are very few drugs that are enzyme inhibitors. (Most drugs target the receptors)
- The binding of inhibitors can be either reversible or irreversible

**Pharmacological Subtyping**

- Each neurotransmitter can act on more than one neurotransmitter receptor.
- There are multiple subtypes of receptors for every neurotransmitter
  - Serotonin: 1A, 1D, 2C
  - Norepinephrine: a1, a2
  - Dopamine: D2, D4

**There is a spectrum of degree to which a receptor can be stimulated**
**AGONIST**
- Stimulates receptors
- Function Example
  - Turns on the synthesis of the second messenger to the greatest extent possible
  - Opens ion channel column completely

**ANTAGONIST**
- Blocks the actions of everything in the agonist spectrum
- By themselves, antagonists have no intrinsic activity
- Function Example
  - Neither opens nor closes ion channels

**INVERSE AGONIST**
- Does the opposite of agonists
- Function Example
  - Causes ion channel to close completely

  • Note: An antagonist will also block the action of an inverse agonist just as it would an agonist.

**PARTIAL AGONIST**
- Exerts an effect similar to but weaker than that of the full agonist
- Example
  - Opens the ion channel to a certain extent but only partially as compared with the full agonist
  - ‘Light & Dark’ as an analogy
- Can appear as net agonists or as net antagonists depending on the amount of naturally occurring full agonist that is present

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**A Modern Formulation of Psychiatric & Substance Use Disorders**

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At left, the channel in its resting state.

The PARTIAL AGONIST causes the channel to open partly. The PARTIAL AGONIST causes the channel to close partly; in this case the Partial Agonist is having an ANTAGONISTIC effect.

The AGONIST opens the channel fully. 

[Image: Psychopharmacology (2000)]

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[Image: 42]
Integration of at least four key elements
1. Genetic vulnerability to the expression of a disease
2. Life event stressors that come that individual's way (divorce, legal problems)
3. The individual's personality, coping skills, and social support available from others
4. Other environmental influences on the individual (e.g., viruses, toxins, other diseases)

Genetic Vulnerability
- People do not inherit a mental illness/SUD; they inherit a vulnerability to it.
- Factors are poorly understood, multiple in number, and very complicated
- Different genes may be abnormal in different families with the same psychiatric illness

The Two-Hit Hypothesis of Psychiatric & SUD Disorders
- In order to manifest an overt disorder, one must not only sustain the first hit, namely all the critical genetic vulnerabilities, but one must also sustain a second hit of some type from the environment.

SUBSTANCE USE DISORDER, TOLERANCE, INTOXICATION AND WITHDRAWAL DRUGS OF ABUSE

SUBSTANCE USE DISORDER
(DSM-5)
(Dependance – DSM-IV-TR)
“A problematic pattern of substance use, leading to clinically significant impairment or distress, as manifested by at least 2 of 11 criteria, occurring in the same 12-month period.”

Essential Features
- A cluster of cognitive, behavioral, and physiological symptoms indicating that the individual continues using the substance despite significant substance-related problems.
- An underlying change in brain circuits that may persist beyond detoxification, particularly in individuals with severe disorders
  - Behavioral effects may be exhibited in the repeated relapses and intense drug craving when exposed to drug-related stimuli.
SUD Criteria

**Pathological Pattern of Behaviors**
- Impaired Control
- Social Impairment
- Risky Use
- Pharmacological Criteria

**SUD Criteria**

**IMPAIRED CONTROL**
1. The substance is often taken in larger amounts or over a longer period than was intended.
2. There is a persistent desire or unsuccessful efforts to cut down or control use.
3. A great deal of time is spent in activities necessary to obtain, use, or recover from the effects.
4. Craving, or a strong desire or urge to use.

**SUD Criteria**

**IMPAIRED CONTROL: Commentary**
- In some instances of more severe substance use disorders, virtually all of the individual's daily activities revolve around the substance.
- Craving is manifested by an intense desire or urge for the drug that may occur at any time but is more likely when in an environment where the drug previously was obtained or used.
- Current craving is used as a treatment outcome measure because it may be a signal of impending relapse.

**SUD Criteria**

**SOCIAL IMPAIRMENT**
1. Recurrent use resulting in a failure to fulfill major role obligations at work, school, or home.
2. Continued use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of the drug.
3. Important social, occupational or recreational activities are given up or reduced because of use.
4. Commentary:
   - The individual may withdraw from family activities and hobbies in order to use the substance.

**SUD Criteria**

**RISKY USE**
1. Recurrent use in situations in which it is physically hazardous.
2. Use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the drug.
3. Commentary:
   - The key issue in evaluating this criterion is not the existence of the problem, but the individual's failure to abstain despite the difficulty it is causing.

**SUD Criteria**

**PHARMACOLOGICAL CRITERIA**
1. Tolerance
2. Withdrawal
   - Commentary:
     - The drug (or a closely-related substance) may be taken to relieve or avoid withdrawal symptoms. This now counts as the presence of withdrawal.
3. NOTE:
   - Neither tolerance nor withdrawal is necessary for a diagnosis of a substance use disorder.
**Pseudoaddiction**
- Symptoms of tolerance and withdrawal occurring during appropriate medical treatment with prescribed medications
- Symptoms related to undermedication

**TOLERANCE**
- Dopamine release $\rightarrow$ Stimulation of receptor
- Stimulation of receptor $\rightarrow$ Activation of cAMP
- cAMP enters nucleus $\rightarrow$ Activation of CREB
  - cAMP Response Element Binding protein
- CREB activates Dynorphin
- Dynorphin desensitizes Dopamine Receptor
- Resensitization, (Reverse Tolerance)
  - Activation of Δ fos B

**Intoxication Syndrome**
"Clinically significant problematic behavioral or psychological changes (e.g., inappropriate sexual or aggressive behavior, mood lability, impaired judgment) that developed during or shortly after use of the substance."

**Heroin/Opiates**
- General Effects
  - Analgesia, control coughing & diarrhea
- Effects of Intoxication
  - Decreased TPR, BP; confusion, miosis, slurred/slowed speech, severe constipation
- Effects of Overdose
  - Respiratory insufficiency/failure, clammy skin, seizures, coma, death

**Depressants** *(Barbiturates, Benzos, Alcohol)*
- General Effects
  - Decreased anxiety/restlessness, dysinhibition
  - Skeletal muscle relaxant
- Effects of Intoxication
  - Slurred/slowed speech, disorientation, change in sensorium, sedation/violence, memory impairment, trauma/accidents
- Effects of Overdose
  - Respiratory failure, stupor, coma, death
  - Status epilepticus

**Stimulants** *(Cocaine/Crack, Amphetamines, Nicotine)*
- General Effects
  - Increased alertness, energy, assertiveness, HR, BP
  - Decreased fatigue, appetite
  - Manic presentation, dilated pupils
- Effects of Intoxication
  - Increased TPR, BP, diaphoresis, N/V, hyperactive reflexes, repetitive compulsive behaviors, biting/self-mutilation
- Effects of Overdose
  - Cardiac arrhythmias, Seizures, Hallucinations, Death
Cannabis
• General Effects
  ◦ Mild hypnotic; exaggerates mood & personality
  ◦ Relaxation, increased appetite
• Effects of Intoxication
  ◦ Blood shot eyes, coughing, loss of motor coordination, confusion
• Effects of Overdose
  ◦ Dissociation/depersonalization, poor concentration, psychosis, anxiety reaction, paranoia

Hallucinogens
(LSD, PCP, MDMA, Ketamine etc.)
• General Effects
  ◦ Altered perceptions, intensifies sensations
• Effects of Intoxication
  ◦ Delusions, impaired judgment/distorted reasoning
• Effects of Overdose
  ◦ Intense ‘trip’ experience, Psychosis, Death
  ◦ MDMA: malignant hyperthermia, seizures, N/V

Inhalants
• Effects of Intoxication
  ◦ Lethargy/restlessness, slurred speech
  ◦ Tremors, headache, N/V
  ◦ Ataxia, confusion, depression
• Effects of Overdose
  ◦ Renal/liver failure
  ◦ Peripheral neuropathy
  ◦ Coma/Death

Withdrawal Syndrome
“The development of a substance-specific syndrome due to the cessation of (or reduction in) substance use that has been heavy and prolonged. The syndrome causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.”

WITHDRAWAL STATES
• Withdrawal syndrome is the predictable constellation of signs and symptoms following abrupt discontinuation of, or rapid decrease in, intake of a substance that has been used consistently for a period of time.
  ◦ Usually the opposite of a substance’s direct pharmacologic effects.
• Substances in a given pharmacologic class produce similar withdrawal syndromes
  ◦ The onset, duration, and intensity are variable, depending on the particular agent used, the duration of use, and the degree of neuroadaptation

Heroin/Opiates
• Rhinorrhea
• Yawning
• Loss of appetite
• Irritability
• Tremors
• Lacrimation
• Cramps
• Nausea
• Chills
• Diaphoresis
• Body aches
• Panic
Depressants

- Anxiety
- Insomnia
- Tremors
- Delirium
- Seizures
- Possible death

Stimulants

- Apathy
- Hypersomnia
- Irritability
- Depression
- Disorientation

Cannabis

- Occasional reports of insomnia
- Hyperactivity
- Decreased appetite

Hallucinogens & Inhalants

- Unknown

Club Drug Facts

<table>
<thead>
<tr>
<th>Name</th>
<th>Class</th>
<th>Street Name</th>
<th>Desired Effect</th>
<th>Risks</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBD</td>
<td>Stimulant</td>
<td>K2, Spice, Kratom</td>
<td>Euphoria</td>
<td>Tachycardia, anxiety</td>
</tr>
<tr>
<td>DMT</td>
<td>Sedative</td>
<td>Georgia Home Boy, Liquid XTC</td>
<td>Relaxation and well-being</td>
<td>Post-use anxiety</td>
</tr>
<tr>
<td>Cannabis clove / Red</td>
<td>Synthetic Cannabinoid</td>
<td>Red Kratom</td>
<td>Relaxation and well-being</td>
<td>Akathisia, tremors, palpitations, headache, nausea, vomiting, depression</td>
</tr>
<tr>
<td>Salvia</td>
<td>Salvia Divinorum</td>
<td>Special K, &quot;K&quot;</td>
<td>Hallucinations</td>
<td>Disorientation</td>
</tr>
<tr>
<td>Phenethylamine</td>
<td>Synthetic Cannabinoid</td>
<td>Plant Food, Bush Sacks</td>
<td>Euphoria, Hyperactivity</td>
<td>Post-use depression and edginess, teeth grinding</td>
</tr>
<tr>
<td>LSD</td>
<td>Hallucinogen</td>
<td>Acid</td>
<td>Hallucinations</td>
<td>Post-use flashbacks</td>
</tr>
</tbody>
</table>

Post-Acute Withdrawal Syndrome

- PAWS
- Anxiety
- Depression
- Autonomic Instability
- Insomnia/hypersomnia
- Drug cravings
- Poor concentration/attention deficits
Responsibilities
- Addictions nurses are concerned with the actual or potential responses of people to addictive substances or behaviors. These responses include:
  - Conditions which increase vulnerability to or risk for addiction
  - The consequences that occur when people use those substances or engage in those behaviors
  - The responses of people to dependence on addictive substances/behaviors
  - The conditions that affect recovery and rehabilitation

Facts About Addiction
- Addiction affects 22 million Americans
- 75% of addicts are in the workforce
- Only 9% of Americans who need treatment receive it
- New medications can help control craving
- Relapse is a normal part of the disease
- Treatment can work

Physiological Problems
- Altered levels of CNS responsiveness
  - Hyperactivity, sedation, seizures
- Altered psychomotor patterns
- GI dysfunctions
- Cardiovascular dysfunctions
- Hepatic disorders
- Respiratory disorders
- Difficulty with pain management
- Increased risk of STDs
Psychological Problems
- Impulse dyscontrol
- Unmanageable feeling states
  - Mood symptoms, shame, guilt, anger
  - Hopelessness/helplessness/aggressiveness
- Disruption in self-concept
- Excessive use of defense mechanisms

Family Problems
- Family life disruption/crisis
- Role model failure
  - Marital infidelity, nonsupport of dependents
- Enabling behaviors of family members
- Children assume role of parents
- Instability

Social/Community Problems
- Disturbed interpersonal relationships
- Altered productivity at work
- Inability to behave/social inappropriateness
- Deterioration in social life
- Increased criminal activity, violence
- Transient domiciles
- Risk factors: poverty, racism, unemployment
- Homelessness

Workplace Problems
- Stressful environments, maladaptive coping strategy
- Absenteeism, lateness
- Decreased morale
- On the job accidents
- Inconsistent behavior at work
- Deterioration in work performance

Legal Problems
- DUI
- Prostitution
- Arrests for disturbing the peace
- Increased criminal activity
- Illegal drug sales/distribution
- Domestic violence

Spiritual Problems
- Disruption in spiritual connectedness
- Diminished purpose in life
- Feelings of meaninglessness
- Loss of control over self
Cognitive Problems
- Problems in acquisition of new information
- Problems in learning new life skills/healthy patterns of living
- Altered states of consciousness/clouded sensorium
- Impaired problem solving
- Dysfunctional views of the world and other people
- Lack of insight

The Progression of Addiction

The Addicted Person
- The addict's behavior creates a disturbed environment for those who live with him.
- As addiction progresses, the addict becomes more preoccupied with the drug
  - Maintaining a supply
  - Covering up
  - Despairing about getting high again
  - Though the family is loved, they take a back seat

During Periods of Abstinence:
- The addict feels lonely and isolated because he no longer has meaningful relationships with people
- These feelings are compounded by additional feelings of shame, fear, and guilt
- To survive, the addict denies these feelings and places the blame for them on others, family, friends, and co-workers

The Family is Drawn in
- Since the addict cannot bear to feel, he cannot tolerate family members expressing honest feelings
- As the addict loses control over his own life, he demands and gains control over the family's life
- The family learns to plan its life around the addiction

FAMILY RULES
- Every family has rules that keep family life running smoothly. Some rules are spoken, others are unspoken but understood.
Rule #1
• The addict feels he is not to blame for using. The blame is placed on someone else in the family, usually the spouse or a child who is acting out.

Rule #2
• Everyone must protect the addict from the consequences of using.

Rule #3
• Don’t talk to anyone about the family situation:
  ◦ To other family members
  ◦ To outsiders
  ◦ Letting no information out or new information into the family keeps the addict’s grip on family members
  ◦ A rigid insistence on family loyalty

What Can The Family Do?
• Hold the addict/alcoholic responsible for his/her behaviors.
• Be consistent in enforcing consequences.
• Acknowledge your anger and frustration with the addicted person.

THE NURSING ASSESSMENT

SCREENING TOOLS
LAB TESTS
SUBSTANCE-INDUCED DISORDERS
INFECTIOUS DISEASES

Initial Nursing Assessment
• Purpose:
  ◦ to determine the need for medication and medical management
• Includes:
  ◦ Evaluation of predicted withdrawal severity
  ◦ Presence of medical comorbidity
  ◦ Presence of psychiatric comorbidity
Medical Perspectives

- Persons with addictive disorders often do not receive regular health care.
  - Medical care for acute and chronic conditions can be fragmented and inefficient
  - They miss opportunities to receive preventive health care
  - In addition to the direct effects of intoxication, overdose and withdrawal, abused substances can affect every body system

Methods of Assessment

- Interviews with the patient
- Interviews with collateral sources (family members, friends, other providers)
- Observation of the patient
- Structured interviews
- Self-report questionnaires and rating scales
- Psychological tests
- Physical examination & laboratory tests

BEFORE YOU TREAT:

- Obtain a detailed Drug & Alcohol history
  - Including current/recent use history
- Urine Drug Screening
  - Screening tests have not been developed or are not readily available for newer ‘designer drugs’
- Determine priority of data collection
  - Based on the client’s immediate physical needs.

Collect Data in a Systematic and Ongoing Way

- Objective & subjective data regarding current health status
- Past medical, psychiatric & addictions history
  - Review every body system
  - History of psychiatric symptoms
  - SUD history
- Family history, current family status
- Mental status

Collect Data in a Systematic and Ongoing Way

- Spiritual health
  - Concept of higher power
  - Source of hope and strength
- Personal, developmental & social history
- Work and/or school adjustment
- Relationships with others
- Coping skills, ability to adapt

Collect Data in a Systematic and Ongoing Way

- Current use of addictive substances/behaviors
  - Duration, frequency, route
  - Effect of the substance/behavior
  - Consequences of the substance/behavior
  - Presence of intoxication/withdrawal/tolerance
  - Presence/absence of cognitive deficits
  - Suicide risk assessment (include protective factors)
Assess the Stage of Change
- Precontemplation
- Contemplation
- Preparation
- Action
- Maintenance
- Relapse/reoccurrence

Next Steps
- Use standardized assessment forms, techniques, tools that have been validated through research and clinical practice
  - Screening Tools
    - Drug Abuse Screening Test (DAST)
    - Alcohol Use Disorders Identification Test (AUDIT)
    - Addictions Severity Index (ASI)
    - Substance Abuse Subtle Screening Inventory (SASSI)
  - Withdrawal Assessment Tools
    - CIWA, CINA, COWS

Laboratory Management
- CBC
- Electrolytes
- Magnesium
- Calcium
- Phosphate
- Liver enzymes
- Urine drug screen
- Pregnancy test
- Breathalyzer or blood alcohol level
- Skin test for tuberculosis
- Chest x-ray
- EKG
- Hepatic enzymes
- Sexually transmitted diseases

SPECIAL POPULATIONS

Child with FAS

Adolescent Use
Prevention Strategies
- Provide positive role models.
- Reinforce dangers of use.
- Teach positive behaviors.
- Establish limits, structure.
- Anticipate pressures.
- Reinforce positive coping.
- Provide life skills training.
- Monitor media use.
Differential Diagnosis

Many disorders may mimic substance abuse and Substance abuse may mimic many disorders

EFFECT OF SUBSTANCE USE

EUPHORIA ✅ DYSPHORIA ✅

(INTOXICATION) (MANIA/IRRITABILITY)

(WITHDRAWAL) (DEPRESSION/ANXIETY)

Alcohol Intoxication

<table>
<thead>
<tr>
<th>BAL</th>
<th>Consequences</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.02-0.05</td>
<td>Mildly impaired coordination</td>
</tr>
<tr>
<td>0.08-0.1</td>
<td>Potential changes in behavior</td>
</tr>
<tr>
<td>0.1-0.15</td>
<td>Impaired driving, slurred speech, ataxia, sensory function</td>
</tr>
<tr>
<td>and</td>
<td>Impaired balance, gross judgment, cognition impairment</td>
</tr>
<tr>
<td>0.2-0.3</td>
<td>All sensory motor function impaired</td>
</tr>
<tr>
<td>0.3 &amp; up</td>
<td>Potential cardiovascular and respiratory collapse</td>
</tr>
<tr>
<td></td>
<td>Coma, death</td>
</tr>
</tbody>
</table>

Substance-Induced Mental Disorders

- Nine substance-induced disorders in DSM-IV
  - Organic brain syndrome disorders
    - Substance-induced delirium, persisting dementia and persisting amnestic disorder
  - Mimics of Axis I disorders
    - Substance-induced psychotic, mood and anxiety disorders
  - Substance-induced sexual dysfunction
  - Substance-induced sleep disorder
  - Hallucinogen persisting perceptual disorder

INFECTIONOUS DISEASES RELATED TO ALCOHOL AND OTHER DRUG USE

Challenges for the Clinician

- To differentiate the occult or incipient infection from symptoms of intoxication or withdrawal
- To recognize an atypical presentation of an infection modified by defective host defenses (splenectomy or AIDS) or the patient's self-medication with antibiotics or analgesics
- 60% of hospital admissions among IDUs are related to acute infections
Skin & Soft Tissue Infections

- Organisms most often seen:
  - S. aureus
  - Groups A, C, F & G beta-hemolytic streptococci
- IDUs who mix their drugs with saliva or who lick their needles before injecting are prone to development of polymicrobial infections with viridans streptococci
- Repeated injection of nonsterile, potentially vasoactive opiates can cause ischemic necrosis at the injection site.

Respiratory Infections

- Pneumonia
- Drug-induced bronchospasm
- Pulmonary edema
- Development of various types of foreign body granuloma from contaminants in injected materials (cotton, starch or talc)
- TB

Eye Infections

- IDUs have an increased incidence of bacterial and fungal endophthalmitis
  - C. albicans endophthalmitis as part of a syndrome of disseminated candidiasis in IDUs who injected 'brown heroin' (from fungal contamination of the lemon juice used to dissolve the drug)
  - Most commonly reported bacterial causes include S. aureus and Bacillus cereus

Other Common Infections

- HIV/AIDS
- Sexually transmitted infections
- Hepatitis

Planning Care

- Developed through collaboration among the addictions nurse, the multidisciplinary treatment team, the patient and significant others.
- The plan of care:
  - Addresses priorities first
  - Incorporates principles of appropriate treatment
  - Includes specific interventions that reflect current science and evidence of effectiveness
  - Includes health education
  - Designates a discharge plan
  - Includes strategies for health promotion and restoration of health

PLANNING, IMPLEMENTING & EVALUATING CARE
Implementation of Care
- Interventions are based on problem identification
- Interventions include:
  - Detoxification as needed
  - Appropriate administration of pharmacologic therapies
  - Development of a therapeutic relationship
  - Maintain safety
  - Health teaching
  - Involvement of patient in goal setting
  - Attention to family issues
  - Referral for ongoing support

Evaluating Care
- Document the patient’s responses to interventions
- Examine the patient’s progress toward attainment of outcomes
- Use ongoing assessment data to revise plan of care as needed.
- Involve the patient, significant others, and other healthcare providers in the evaluation of care.
- Ensure that evaluation is an ongoing process.

THE LEVELS OF CARE

EARLY INTERVENTION
- DUI Program
- Patients do not meet criteria for chemical dependency
- Program is designed to explore and address problems or risk factors that are related to substance use and to assist patients in recognizing the harmful consequences of inappropriate substance use.

GENERAL OUTPATIENT
- Patients come in once or twice a week
  - Weekly individual therapy session
  - Weekly group therapy session

INTENSIVE OUTPATIENT
- Patients come in 3 times a week – either during the evening or during the day.
  - Three 1-hour lectures
  - Three group therapy sessions
  - Individual sessions as needed
PARTIAL HOSPITALIZATION
• Patients come in Monday through Friday from 8 a.m. to 4 p.m.
  ◦ Two individual therapy sessions per week
  ◦ Four group therapy sessions per week
  ◦ Twenty hours of lectures per week

RESIDENTIAL REHAB
• This is a therapeutic community designed to maintain recovery.
• Patients attend:
  ◦ Individual therapy sessions
  ◦ Group therapy sessions
  ◦ Educational lectures
  ◦ Other activities

DETOXIFICATION
• Detoxification is the gradual safe elimination of the drug from the body.
• Occurs over 3 to 5 days
  ◦ Depressants (alcohol & benzodiazepines)
  ◦ Opiates (heroin, Oxycontin, Vicodan, etc.)
• There is no detoxification for stimulants or hallucinogens (cocaine, PCP, LSD, Meth)

ADDITIONAL SERVICES
• Dual Diagnosis
• Family Program
• Gender-Focused Groups
• 12-Step Meetings (Support Groups)
• Aftercare Services/Case Management

MOTIVATION-BASED TREATMENT
• Motivation-based interventions have been found to be the most effective in treating co-occurring disorders
  ◦ Adapted to the patient’s motivation for change
• Changes in maladaptive behavior occur over a series of stages
• Stages of Treatment provides a framework for assessing:
  ◦ Motivational states
  ◦ Setting goals
  ◦ Selecting stage-appropriate interventions
Stages of Treatment
Treatment progresses through a series of four stages:
1. Engagement
2. Persuasion
3. Active treatment
4. Relapse prevention
Each stage is defined in terms of the patient's AOD use, and the nature of the relationship with the DD Clinician. When a patient's stage of treatment is determined, appropriate goals can be identified and a treatment plan formulated.

Relationship between Stages of Treatment and Stages of Change
<table>
<thead>
<tr>
<th>Stages of Treatment</th>
<th>Stages of Change</th>
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<tbody>
<tr>
<td>Engagement</td>
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<td>Active treatment</td>
<td>Action</td>
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<tr>
<td>Relapse prevention</td>
<td>Maintenance</td>
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</tbody>
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ENGAGEMENT
- **Definition**
  - Patient does not have regular contact with the clinician
- **Goal**
  - To establish a working alliance with the patient

Examples of Clinical Interventions for the Engagement Stage
- Outreach
- Crisis intervention
- Support and assistance to social networks
- Stabilization of psych symptoms – medication management
- Family meetings
- Close monitoring

PERSUASION
- **Definition**
  - Patient has regular contact with clinician, but does not want to work on reducing substance abuse
- **Goal**
  - To develop the patient's awareness that substance use is a problem
  - Increase motivation to change

Examples of Clinical Interventions for the Persuasion Stage
- Individual and family education
- Motivational interviewing
- Social skills training
- Safe housing ('damp' housing)
- Medication management
- Psychological preparation for lifestyle changes necessary to achieve remission
ACTIVE TREATMENT

- Definition
  - Patient is motivated to reduce substance use, as indicated by reduction for at least 1 month but less than 6 months

- Goal
  - To help the patient further reduce substance use and attain abstinence

Examples of Clinical Interventions for the Active Treatment Stage

- Family and individual problem solving
- Active treatment groups
- Social skills training
- Self-help groups
- Individual counseling
- Substituting activities (e.g., work, sports)
- Pharmacological treatments to support abstinence
- Safe housing ('dry' housing)
- Psychoeducation
- Stress management and coping skills

TYPES OF GROUPS

Psychoeducational Groups

- Educate and share knowledge about disease
- Early in recovery
- Helps in precontemplative and contemplative stages

- Format
  - Leader led
  - Interactive
  - May use slides or props

Skills Group/Focus Group

- Cultivates skills needed to remain abstinence
- Practice is essential to improve functioning
- Provides education specific to the skill or topic of the group

- Format
  - Interactive
  - Focus on specific topics (e.g., anger mgt, stress mgt)
  - May give homework

Interpersonal Process Group

- Examines developmental experiences as they relate to current situations
- Discuss 'here and now' issues
- Probing of individual and interactions

- Format
  - psychotherapy
Support Groups
- Make connections to community
- Support ongoing recovery
- 12-step or other format
- Engage with sponsor/mentor
Format
- Peer support
- Education

Individual Therapy
- Designed to bring about modifications of feelings, thoughts, attitudes, and behaviors that have caused problems for the person.
- Used as a component of total treatment plan
- Evaluate response, side effects and adherence to medications prescribed.
- Discharge planning and coordination are an essential part of therapy.

Family Therapy
- Focuses on examining and improving
  - Family processes
  - Communication
  - Decision-making
  - Problem solving

Dialectical Behavior Therapy (DBT)
- Developed to treat patients with Borderline Personality Disorder
- Has been adapted for use across many diseases including SUD.
- Treatment addresses the following functions:
  - Improving patient motivation to change
  - Enhancing patient capabilities
  - Generalizing new behaviors
  - Structuring the environment

Mindfulness
- Main theorist: Dr. Jon Kabat-Zinn
- Defined as paying attention in a particular way:
  - On purpose
  - In the present moment
  - Nonjudgmentally
- Engages the patient to be with their thoughts, not to act on them.
- Promotes stress reduction & improve mood
Acceptance & Commitment Therapy
- Can be used for short term or long term therapy
- Emphasizes
  - Values
  - Forgiveness
  - Acceptance
  - Compassion
  - Living in the moment
- Goal: to create a rich and meaningful life

Contingency Management
- Use of prizes or rewards for abstinence and treatment adherence
- Based on principles of operant conditioning
- Reinforces positive outcomes

Community Support
- Part of aftercare
- Continuous involvement with support in the community improves abstinence and sustained recovery.
- Programs available
  - Twelve Step Programs – AA, NA
  - Secular Organization for Sobriety (SOS)
  - AlAnon & AlAteen
  - ACOA

Management of Pain
- Pain management often becomes an issue.
  - Fear of causing or worsening addiction
    - This management style generally results in inadequate pain management and frustration for patient and provider.
    - With opiate dependence, pain control can be achieved only with substantially higher doses of opiates
      - Once a dose is determined, pain meds should be given on a regular schedule rather than as needed.

Types of Pain
- Objective
  - Biological
  - Nociception
  - Pain
- Subjective
  - Psychological
  - Suffering
- “Pain is mandatory, suffering is optional.”
  - Dalai Lama

Biological Pain Signals
- Aching
- Sore
- Burning
- Sharp
- Tingling
- Cramping
- Pounding
Psychological Pain Signals
- Awful
- Agonizing
- Torturing
- Dreadful
- Distressing
- Excruciating
- Grueling

Medical Consequences

Alcohol
- Medical consequences seen in almost every organ system
  - Women are more susceptible to many of the effects at lower doses because of less first-pass metabolism of alcohol and lower body weights.
- Withdrawal, Seizures and DTs
  - Benzodiazepines are the only medications proven to ameliorate symptoms of withdrawal and decrease the risk of seizures and delirium.

Alcohol
- Neurologic Consequences
  - Head trauma
  - Alcohol can lower the seizure threshold in epileptics and seizures may be the presenting sign of an intracranial hemorrhage
  - Cognitive impairment (Wernicke-Korsakoff)
    - From thiamine deficiency (confusion, ataxia, nystagmus)
    - Treat with parenteral thiamine 100mg administered before glucose
    - Alcoholic polyneuropathy

Alcohol
- Gastrointestinal Consequences
  - Gastritis
  - Hepatitis
    - From an asymptomatic elevation of the hepatic transaminases to hepatic failure
    - AST usually higher than ALT
    - Higher ALT suggests another etiology (Hep C)
    - Classic alcoholic hepatitis presentation:
      - Fever, leukocytosis, RUQ pain & tenderness, elevation of AST
    - Cirrhosis
    - Pancreatitis

Alcohol
- Other consequences:
  - Folate deficiency with megaloblastic anemia
- Predictors of death:
  - Hyperglycemia, anemia, hypoxemia, acidosis, older age, leukocytosis, elevated blood urea nitrogen, elevated lactate dehydrogenase, hypocalcemia or hypovolemia
Opiates, Cocaine & Other Drugs

- Complications are often related to route of administration
- Injection Drug Use
  - Skin and soft tissue infections common
  - Cellulitis caused by staphylococci & streptococci
  - False-positive screening for syphilis often found
  - Bloodborne pathogens spread by injection or risky behaviors
  - HIV, Hep B, Hep C

Opiates, Cocaine & Other Drugs

- Inhalation of Drugs
  - Effects related to the size of the particles
    - Larger particles affect the airways
    - Smaller particles reach the alveoli
  - Complications include:
    - Granulomatous responses to fibrogenic substances such as talc
    - Bronchitis from inhaled smoke
    - Bronchospasm from inhaled cocaine
    - Pneumothorax or pneumomediastinum from prolonged breath holding or stimulant use
    - Hemoptysis from airway irritation

Co-Occurring Disorders

Epidemiology

Substance Related Problems

- 3rd leading cause of death in U.S.
- Alcoholism causes 80% of cases of hepatic cirrhosis
- Aocholism increases the risk of pancreatitis
- Increased incidence of HIV/STD
- Patients injured while under the influence fill 50% of U.S. trauma beds

7 of the 10 Leading Causes of Disability in the World

- Major Depressive Disorder
- Traffic accidents (often substance-related)
- Alcohol Use
- Self-inflicted injuries
- Bipolar disorders
- Violence
- Schizophrenia
Prevalence

- General Population
  - 26.6% have a substance use disorder
  - 21.4% have a mental disorder
- Patients with Mental Disorders
  - 51% have a substance use disorder
- Patients with Substance Use Disorders
  - 41-66% have a mental disorder

National Comorbidity Study (1996)

Classification Systems

The Quadrants of Care

- Category I: Mental disorders less severe
  - Substance disorders more severe
  - Location of Care: State hospitals, jails, ERs, etc.
- Category II: Mental disorders more severe
  - Substance disorders less severe
  - Location of Care: Mental health system
- Category III: Mental disorders less severe
  - Substance disorders more severe
  - Location of Care: Substance Abuse System
- Category IV: Mental disorders more severe
  - Substance disorders more severe
  - Location of Care: State hospitals, jails, ERs, etc.

Dichotomy of Care

- If Substance Use Disorder Dominates:
  - Patient enters the health care system through a Chemical Dependency Program
  - Usually, unless severe, any psychiatric symptoms are not addressed.
  - After discharge, the patient’s mood may remain low or feelings of anxiety persist which increases the potential for relapse

Dichotomy of Care

- If Psychiatric Disorder takes priority:
  - Patient seeks help through a mental health clinic or hospital
  - Counseling and medication are aimed at improving the psychiatric symptoms
  - The Chemical Dependency issues are not addressed
  - After discharge, the compulsion to use substances will remain & risk for relapse is high

MODELS OF CARE
The Parallel Model

- The patient receives treatment for the psychiatric disorder in one system and treatment for the substance use disorder in another system at the same time.
- This model can work, but increases the odds of poor adherence since the patient has to:
  - adjust to two different treatment philosophies
  - Develop relationships with at least two different teams
  - Attend services at different geographic locations
- Treatment expectations vary between agencies

The Sequential Model

- Focuses on stabilizing the most acute disorder first, then addressing the other disorder.
- Since psychiatric & CD symptoms often overlap, it is sometimes not easy to distinguish between primary and secondary disorders

The Integrated Model

- Generally viewed as the most effective model and involves the dual-diagnosis patient receiving treatment by the same treatment team that addresses both disorders as well as related problems.

Relationships Between Chemical Dependency and Psychiatric Illness

MANY POSSIBLE PATTERNS OF INTERACTION

1. Chemical Dependency Increases the Risk of Developing a Psychiatric Illness

- The odds of a chemically dependent individual having a psychiatric illness are higher than would be expected among the general population (4.5 times).

- Epidemiologic Catchment Area Survey (1990)

2. Psychiatric Illness Increases the Risk of Developing a Chemical Dependency

- Patients receiving psychiatric care show higher than expected rates of chemical dependency (2.7 times).
- Rates of substance use disorders are especially high among clients with antisocial personality disorder, borderline personality disorder, bipolar disorder, or schizophrenia.
3. Psychiatric Symptoms May Affect the Onset, Duration, or Response to Treatment of Chemical Dependency

- Psychiatric impairment has a strong correlation with relapse to drug use among opiate addicts.
- Patients who have both chemical dependency and antisocial personality disorder drop out of treatment at a higher rate and have a poorer prognosis than other diagnostic groups.

4. Chemical Dependency affects Adherence to Psychiatric Treatment and Clinical Outcome

- Psychiatric patients with an additional chemical dependency disorder show much worse treatment adherence rates and higher rates of relapse and hospitalization in a psychiatric facility. As a result, clinical outcome is worse.

5. Psychiatric Symptoms may Arise as a Direct Result of Chronic Substance Misuse or Withdrawal

- Drugs and alcohol may directly impair mood, cognitive functioning, or behavior.
- Depression, mania, anxiety, panic, paranoia, delusions, and hallucinations are some of the specific symptoms that may result from chronic use of substances or as part of an acute or protracted withdrawal syndrome.

6. Symptoms of Psychiatric Illness may Result as the Indirect Consequences of Chemical Dependency

- Depression and/or anxiety can result from:
  - Disturbed family and interpersonal relationships
  - Increased health problems
  - Job problems/loss of dignity
- Chemical Dependency can produce Antisocial Behavior
  - Selling drugs, stealing to support an addiction, aggressiveness

7. Over time, Symptoms of Chemical Dependency and Psychiatric Illness may Become Linked or Interrelated

- In some cases, it may be difficult to distinguish which disorder is primary and which is secondary.
- Many of those with chronic disorders come to treatment with a very complex set of symptoms and problems.
- Specific symptoms may vary from one episode of an illness to another.

8. The Dual Disorders Can Develop Independently at Different Times

- Alcoholics or drug addicts who have been sober for many months or years can still develop an episode of psychiatric illness such as MDD.
- Individuals with a psychotic or anxiety disorder may abuse or become dependent on alcohol or other drugs while their psychiatric symptoms are in remission.
- A psychiatric disorder can mask chemical dependency, and chemical dependency can mask a psychiatric disorder.
Six Guiding Principles in Treating Patients With Co-Occurring Disorders

1. Employ a Recovery Perspective
   - Main Features
     - Recovery is a long-term process of internal change
     - These internal changes proceed through various stages
   - Principles for Practice
     - Develop a treatment plan that provides for continuity of care over time.
     - Devise treatment interventions that are specific to the tasks and challenges faced at each stage of recovery.

2. Adopt a Multi-Problem Viewpoint
   - Patients have an array of mental health, medical, substance abuse, family, and social problems
   - Treatment should address immediate and long-term needs for housing, work, health care, and a supportive network.

3. Develop a Phased Approach to Treatment
   - Engagement
   - Stabilization
   - Treatment
   - Aftercare

4. Address Specific Real-Life Problems Early in Treatment
   - Co-occurring disorders arise in a context of personal and social problems, with a corresponding disruption of personal and social life.
     - E.g., housing, legal matters, family problems, work

5. Plan for the Patient's Cognitive and Functional Impairments
   - Patients often display cognitive and other functional impairments that affect their ability to comprehend information or complete tasks.
   - Use relatively short, highly structured treatment sessions that are focused on practical life problems.
6. Use Support Systems To Maintain and Extend Treatment Effectiveness
   - Self-help groups
   - Family
   - Faith community

TREATMENT GUIDELINES

Practice Guidelines
1. Establish & maintain a therapeutic alliance with the patient
2. Manage the patient's psychiatric &/or substance use symptoms and monitor the status of these over time
3. Provide education regarding the disorder(s) and treatment
4. Determine the need for medications and other specific treatments
   Practice Guidelines for the Treatment of Psychiatric Disorders (Am. Psychiatric Assoc)

Practice Guidelines
5. Develop an overall treatment plan
6. Enhance adherence to the treatment plan
7. Help the patient and family adapt to the psychosocial effects of the disorder(s)
8. Promote early recognition of new episodes and help identify factors that precipitate or perpetuate these episodes

Practice Guidelines
9. Initiate efforts to relieve and improve family functioning
10. Facilitate access to services and coordinating resources among different service providers

PROFESSIONAL ENABLING
Professional Enabling

- Professionals who lack knowledge or skill, or who carry negative attitudes and perceptions about certain conditions or patients, may directly or indirectly perpetuate or exacerbate a person's chemical dependency or psychiatric illness
- Passive Enabling
  - Ignoring a problem (CD or MH)
- Active Enabling
  - Giving inappropriate advice or treatment

Professional Enabling

1. Failure to gather an accurate and detailed history of alcohol and other drug use, as well as of psychiatric symptoms
2. Failure to address the chemical dependency or the psychiatric illness in the treatment plan
3. Waiting for the person with a chemical dependency to “hit bottom” or to ask for treatment

Professional Enabling

4. Assuming that the patient must acknowledge a psychiatric illness in order to benefit from treatment
5. Giving oversimplified advice, such as telling a substance abuser to stop drug use without suggesting a professional treatment program, or advising a patient with serious depression to attend meetings without considering other options such as medication or psychotherapy

Professional Enabling

6. Assuming that major or multiple problems must exist before the patient can be considered chemically dependent or psychiatrically ill. (There is a range of severity)
7. Viewing the chemical dependency as merely symptomatic of a psychiatric illness or viewing psychiatric symptoms as merely caused by chemical dependency
8. Excluding the family from the assessment or treatment processes when their involvement is indicated

Professional Enabling

9. Assuming recovery is in motion simply because a patient stops using alcohol or other drugs
10. Assuming that each of the dual disorders requires treatment by separate clinicians or in separate programs
11. Taking a rigid stance against the use of medications to treat psychiatric illness

TREATMENT ADHERENCE ISSUES
**Difficulty Engaging & Maintaining Treatment**

- Time in treatment is one of the best predictors of successful treatment outcome
- Common Problems:
  - Failure to attend the initial assessment
  - Early dropout
  - Inconsistent attendance
  - Failure to take medications as prescribed

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**Consequences of Poor Adherence**

- Worsening of psychiatric symptoms
- Return to substance use
- Increased risk of rehospitalization
- Increased risk of adverse medical or psychosocial consequences

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**Strategies to Improve Adherence**

1. **Strategies to Improve Adherence**

   - Prepare the patient for treatment participation
     - Discuss expectations and hopes for treatment
     - Pros, cons, and limitations of treatment
     - Internal barriers or external roadblocks to participation
     - Types of treatment (group, individual, etc)
     - Negotiating a contract that patient agrees to follow

   2. Focus on enhancing the patient’s motivation to change
      - Motivation is best viewed as a “state” that can be changed rather than a “trait” that cannot be changed
      - Normalize the ambivalence to change
      - Accept varying levels of readiness to change
      - Anticipate motivational problems at various phases of treatment
      - Help the patient learn from previous motivational struggles

   3. Attend to the therapeutic relationship
      - Express empathy and concern
      - Convey a genuine desire to help the patient
      - Encourage discussions of your counseling and your relationship with the patient in order to identify and work through impasses
Strategies to Improve Adherence
4. Facilitate the transition between levels of care
   • Many patients fail to follow through with next level of care
   • Discuss differences between levels of care
   • Identify barriers for the patient’s continued participation
   • Use motivational strategies

Strategies to Improve Adherence
5. Focus on the treatment process
   • Intensity of treatment may need to be changed based on:
     • Response of the patient
     • Changes in motivation to engage in the work of recovery
     • New problems that develop
     • Positive changes that occur
     • Provide feedback & explore reactions to feedback
     • Find out what the patient likes or dislikes about treatment

Strategies to Improve Adherence
6. Elicit the support of the family or significant others
   • Discuss family or relationship issues that concern the patient
   • Discuss ways to engage the family in treatment
   • Discuss ways to contain negative emotions during joint sessions
     • While families can be a great source of support, they can also add to the patient’s stress

Strategies to Improve Adherence
7. Monitor major symptoms of psychiatric illness or chemical dependency
   • Symptoms such as low motivation, anhedonia, depression, poor impulse control, poor judgment, mood impairment, or psychosis can impact on the patient’s ability to adhere to treatment
   • Strong cravings or obsessions to use substances, or repeated close calls due to exposure to high-risk people, places, or events impact treatment
   • Catching ‘early’ warning signs can lead to reducing the risk of relapse to either disorder

Strategies to Improve Adherence
8. Monitor medication use, side effects, and potential problems
   • Elicit an agreement that medications will not be stopped without first discussing with prescriber or counselor
   • Facilitate medication changes when they are ineffective or only partially effective
   • Prepare the patient to deal with pressures from others to stop taking medications
   • Discuss the potential interactions between alcohol, illicit drugs, nonprescribed drugs, herbal supplements, and medications

Strategies to Improve Adherence
9. Incorporate systems changes in clinical care
   • Provide easy entry and re-entry for dropouts
   • Offer flexible appointment times
   • Call or send a written note to remind patient of scheduled sessions or med checks
   • Reach out as soon as patient misses sessions
   • Facilitate the use of other services (case management, social services, housing, etc.)
   • Develop a philosophy to address adherence problems
Overview

- Many chemical dependency and psychiatric disorders are chronic, persistent, and relapsing or recurrent illnesses
- Relapse to alcohol and drug use can precipitate or exacerbate a psychiatric relapse
- Patients may use alcohol or drugs to relieve psychiatric symptoms, and when they stop, the psychiatric symptoms reemerge
- Impaired judgment associated with certain psychiatric symptoms, such as mania or psychosis, can result in relapse to alcohol or drugs

Factors Associated with Poor Outcome

- Low acceptance of illness
- Low desire to change
- High severity of the disorder(s)
- Poor adherence to medications or other types of treatments
- Lack of social or family supports
- Poor coping skills

Positive Effects of Treatment

- Cessation or reduction in substance use
- Reduced medical costs following treatment
- Reductions in violent and nonviolent criminal behaviors, re-arrests, and re-incarcerations
- Improved psychological functioning, including reduced suicidal thoughts and behaviors
- Improved family functioning
- Decreased dependence on welfare
- Reduction in high-risk behaviors associated with HIV transmission and acquisition
- Improved employment rates

Relapse Risk Factors

- Affective variables (mood states)
  - For example, anger, anxiety, boredom, depression, emptiness, loneliness
  - It is not necessarily the mood in and of itself, but the patient's inability to cope with it that contributes to relapse
- Behavioral variables
  - Poor coping, stress management, or problem-solving skills

Relapse Risk Factors

- Cognitive variables
  - Faulty beliefs about one's ability to manage high-risk relapse factors
  - Lack of awareness and acceptance of one's illness
  - Lack of knowledge and understanding of one's illnesses and treatment
  - Poor decision-making skills
Relapse Risk Factors

- Environmental variables
  - Availability of substances
  - Social pressures to engage in substance use or stop psychiatric medications
  - Lack of a support network
  - Homelessness
  - Poverty
  - Stress associated with major life changes

Relapse Risk Factors

- Lifestyle factors and health care practices
  - Persistent problems or symptoms
  - Lack of structure or regularity in daily life
  - Lack of goals or direction
  - Smoking cigarettes (nicotine can decrease the blood level of many psychotropics thus raising the patient's risk of becoming symptomatic)

Relapse Risk Factors

- Personal vulnerability
  - Some individuals are more sensitive to stress and ordinary life experiences than others because of their biological/psychological makeup

- Physiological variables
  - Post-acute withdrawal symptoms
  - Intense cravings for substances
  - Physical pain and illness

Relapse Risk Factors

- Psychiatric and psychological variables
  - Psychiatric illness or symptoms
  - Personality traits
  - Poor motivation
  - Failure to comply with a treatment program

- Relationship variables
  - Loss of a significant relationship
  - Experiencing rejection or severe criticism
  - Family problems
  - Lack of a social support system or one that is a negative influence

Relapse Risk Factors

- Spiritual variables
  - Excessive guilt and shame
  - Lack of meaning or purpose in life
  - Lack of a belief in the need for help and support from others or a Higher Power

- Treatment participation and related variables
  - Poor adherence to treatment
  - Insufficient or wrong type of medications
  - Inappropriate advice or interventions
  - Lack of access to proper treatment
  - Failure to respond to early warning signs of relapse

CLINICAL INTERVENTIONS TO REDUCE RELAPSE RISK
Interventions

- Identifying and Coping with Relapse Risk Factors
  - Some patients have so many relapse risk factors that addressing each is impossible.
  - Global approaches such as social skills training, cognitive reframing, assertiveness training, and stress management may be needed to teach skills that can be generalized to address any potential problem.

- Clinical Aids for High-Risk Factors and Warning Signs
  - Client manuals on recovery
  - Relapse Prevention Workbooks
  - Dual diagnosis workbooks
  - Lists of warning signs or dangerous situations

- Resisting Social Pressures to Use Chemicals
  - Avoiding high-risk situations in which social pressure will be strong or in which the patient feels especially vulnerable
  - Developing and practicing refusal skills
  - Challenging faulty beliefs such as “I can’t have fun unless I use alcohol or drugs with these people; they won’t accept me”

- Managing Emotions
  - Difficulty managing negative emotional states such as anxiety, anger, depression, loneliness, or boredom is the most common relapse precipitant
  - Building a Social Support Network
    - Patients who have supportive family and social support systems are more likely to experience a better recovery than those who do not

- Managing Pressures to Stop Taking Psychiatric Medications
- Coping with Cravings or Desires to Use Substances
  - Teach patients to identify cues or precipitants
- Using an Inventory or Symptom Review
- Building Structure into Daily Life
- Coping with Emergencies
Medications Used
In Addiction Treatment
Through the Continuum

Continuum of Treatment
• Management of Overdose
• Management of Withdrawal
• Relapse Prevention: MAT

Benzodiazepine Overdose
• Romazicon (Flumazenil) 0.2 mg IV administered slowly over 30 seconds-wait 30 seconds- If desired LOC is not obtained further dose of 0.3 mg IV to be given over 30 seconds.
• Further doses of 0.5 mg can be administered over 30 second intervals up to cumulative dose of 3 mg.

Benzodiazepine Overdose
• Rare cases pt. has only partial response may require additional doses up to 5 mg.
• Caution: Do not use (except in cases of imminent death) in mixed overdoses involving BZ’s and cyclic antidepressants due to potential for emergence of seizures. If seizures do occur treat with IV BZ’s, Dilantin, or Barbiturates.

Opiate Overdoses
• Narcan (Naloxone) 0.4 mg IV (preferred), SC, or IM q 2-3 minutes until desired improvement is achieved.
• If no response by 10 mg diagnosis needs to be questioned.
• May need to be repeated every 1-2 hrs. depending on type of opiate used.

DETOXIFICATION
• The term ‘detoxification’ implies a clearing of toxins.
• However, for individuals with physiologic substance dependence, detoxification is defined as the management of the withdrawal syndrome
  • It is the process by which a substance on which an individual is physically dependent is gradually eliminated from the body
GOALS OF DETOXIFICATION
1. To provide a safe withdrawal from alcohol or other drug(s) of dependence and enable the patient to become free of nonprescribed medications
2. To provide a withdrawal that is humane and that protects the patient's dignity
3. To prepare the patient for ongoing treatment of his or her dependence
   - Source: Center for Substance Abuse Treatment (CSAT) (1995) TIPH 4

GENERAL PRINCIPLES OF MANAGEMENT

Initial Nursing Assessment
- Purpose:
  - to determine the need for medication and medical management
- Includes:
  - Evaluation of predicted withdrawal severity
  - Presence of medical comorbidity
  - Presence of psychiatric comorbidity

Helpful Information to Predict Severity of Withdrawal
- Amount and duration of alcohol or other drug use
- The severity of the patient's prior withdrawal experiences (if any)
- The patient's medical and psychiatric history

Strategies for Pharmacologic Management
- Two general strategies (either or both may be used):
  - Suppress withdrawal through use of a cross-tolerant medication
    - A longer acting medication typically is used to provide a milder, controlled withdrawal
    - Examples: Methadone, buprenorphine, chlorpromazine
  - Reduce signs and symptoms of withdrawal through alteration of another neuropharmacological process
    - Examples: clonidine, propranolol, ibuprofen

MANAGEMENT OF ALCOHOL WITHDRAWAL
**Clinical Picture**

- The clinical manifestations of alcohol withdrawal begin 6 to 24 hours after the last drink, sometimes arising before the blood alcohol level has returned to zero.
- Early withdrawal signs:
  - Anxiety, sleep disturbances, vivid dreams, anorexia, nausea, headache
  - Tachycardia, elevation of blood pressure, hyperactive reflexes, diaphoresis, hyperthermia
  - Tremor – best brought out by extension of the hands or tongue

**Clinical Picture**

- Alcohol withdrawal seizures can occur at various times, but most occur within 48 hours
- Alcohol withdrawal delirium (DTS) typically begins 48 to 72 hours after the last drink
  - Signs of sympathetic hyperactivity (tachycardia, hypertension, fever, diaphoresis) often are profound and are hallmarks of delirium
  - Mortality rate is 1% - 5% and increases with delayed diagnosis, inadequate treatment, and concurrent medical conditions

**Pathophysiology**

- Dependency develops as a cell or organism makes homeostatic adjustments to compensate for the primary effect of a drug
  - Goldstein & Goldstein, 1981
- The primary effect of alcohol on the brain is depressant
  - With chronic exposure, there are compensatory adjustments with down-regulation of inhibitory systems and up-regulation of excitatory systems
  - The withdrawal symptoms last until the body readjusts to the absence of the alcohol and establishes a new equilibrium

**Pathophysiology**

- Neurotransmitter systems affected:
  - GABA
    - Mediates effects such as sedation, muscle relaxation and a raised seizure threshold
  - Chronic alcohol intake leads to an adaptive suppression of GABA activity
  - Norepinephrine
    - Chronic alcohol intake leads to upregulation of receptors
  - Discontinuation of alcohol leads to rebound overactivity of noradrenergic systems
    - Tachycardia, hypertension, tremor, diaphoresis & anxiety
  - Other systems affected: Calcium channels, glutamate receptors, cAMP systems

**Hallucinations**

- In mild withdrawal, patients may experience perceptual distortions of a visual, auditory, and tactile nature
  - Lights may seem too bright or sounds too loud
  - Paresthesias may be experienced
- In severe cases of withdrawal, these misperceptions may develop into frank hallucinations
  - Visual hallucinations are most common (hallucinosis)
  - Frequently evolve some type of animal life
  - Auditory hallucinations begin as unformed sounds (clicks or buzzing) and may progress to accusatory voices of friends or relatives
  - Tactile hallucinations: bugs/insects crawling on the skin

**Withdrawal Seizures**

- Usually begin within 48 hours and may occur before the blood alcohol level has returned to zero.
- Most are generalized major motor seizures
- Risk appears to be in part genetically determined
  - Increased in patients with a history of prior withdrawal seizures
**Alcohol Withdrawal Delirium**
- In 90% of patients, withdrawal does not progress beyond relatively mild symptoms.
- Delirium tremens (DTs) generally appear 48 to 72 hours after the last drink.
  - Development of tachycardia, tremor, diaphoresis, fever
  - Global confusion and disorientation to place & time
  - Believes himself to be in a location other than the hospital
  - Misidentifies staff as personal acquaintances

**Alcohol Withdrawal Severity Scales**
- Clinical Institute Withdrawal Assessment – Alcohol (CIWA)
  - Most extensively studied and best known
  - Shortened version:
    - CIWA-A Revised or CIWA-Ar
      - Well documented reliability, reproducibility, and validity
      - Requires two to five minutes to complete
      - A score of 9 or less indicates mild withdrawal
      - A score of 10 to 18 indicates moderate withdrawal
      - A score above 18 suggests severe withdrawal
      - High scores are predictive of the development of seizures and delirium

**PHARMACOLOGIC MANAGEMENT**
- The cornerstone of pharmacologic management of withdrawal is the use of benzodiazepines (Mayo-Smith et al. 1997)

**Benzodiazepines**
- Are pharmacologically cross-tolerant with alcohol and have the similar effect of enhancing the effect of GABA-induced sedation.
  - A specific benzodiazepine receptor site has been identified on the GABA receptor complex.
- The provision of benzodiazepines alleviates the acute deficiency of GABA neurotransmitter activity that occurs with sudden cessation of alcohol intake.

**Benzodiazepines**
- Trials of different benzos indicate that all are similarly efficacious in reducing signs and symptoms of withdrawal.
  - Longer acting agents may be more effective in preventing seizures
    - E.g., chloralhydrate, diazepam, clonazepam
  - May also contribute to an overall smoother withdrawal course, with a reduction in breakthrough or rebound symptoms
  - May also pose a risk of excess sedation in elderly and significant liver disease
  - Shorter acting agents are preferrable (lorazepam or oxazepam)
- Phenobarbital is still used by some programs
  - Long-acting barbiturate with well-documented anticonvulsant activity, inexpensive, & low abuse liability
Benzodiazepines

- Should be administered orally or, when necessary, intravenously
  - For most agents, IM absorption is extremely variable
  - Lorazepam can be administered IM or SL
    - Has good absorption by these routes

Other Agents

- Beta adrenergic blocking agents
  - E.g., atenolol & propranolol
- Centrally acting alpha adrenergic agonists
  - E.g., clonidine
- Both these agents reduce the autonomic nervous system manifestations of withdrawal
- These agents do not have known anticonvulsant activity

Carbamazepine

- Has been shown to be equal in efficacy to benzodiazepines
  - No significant toxicity
  - Associated with less psychiatric distress and a faster return to work
  - Does not potentiate the CNS and respiratory depression
  - Does not inhibit learning
  - Has no abuse potential

Neuroleptic Agents

- Less effective than benzos in preventing delirium
  - Actually increases the rate of seizures
  - Haloperidol has least effect on seizure threshold
- Widely used to calm agitated patients

Thiamine

- Alcoholics are at risk for thiamine deficiency.
  - Leads to Wernicke's Disease and the Wernicke-Korsakoff Syndrome
- Wernicke's: illness of acute onset characterized by the triad of
  - mental disturbance
  - paralysis of eye movements (weakness or paralysis of abduction [CN-VI])
    - Invariably is bilateral, but rarely symmetric
    - Accompanied by diplopia, strabismus and nystagmus
  - ataxia
    - Affects gait and stance

Thiamine

- Delay in provision of thiamine increases the risk of permanent memory damage.
- The provision of intravenous glucose solutions may exhaust a patient's reserve of B vitamins, acutely precipitating Wernicke's disease.
Agents No Longer Recommended
- Magnesium
- Phenytoin
  - No evidence of effectiveness in preventing recurrent withdrawal seizures

Management of the Patient With Delirium
- Admission to ICU
- Management of fluids and electrolytes
- Use of cross-tolerant sedative-hypnotics
  - Have not been shown to reverse the delirium or reduce its duration
  - The goal is to sedate the patient to a point of light sleep
  - To control agitation
  - Massive doses may be needed
  - Hundreds or even thousands of milligrams of diazepam or its equivalent over the course of treatment (Kaiser, 1998)

Benzodiazepine Detox
- Past treatment approach has been to slowly taper patient off the benzodiazepine over a 4-12 week time period.
- This approach appears to be effective if the patient has a physical dependence only.
- Patients who are chemically dependent on BZs however, are rarely able to tolerate this approach.

Benzodiazepine Detox
BZ withdrawal has the potential for serious medical complications and can be lethal:
1. Withdrawal Seizures
2. Withdrawal Delirium
Need to develop a detox protocol which can safely get pts. off BZ’s in a short period of time.

Benzodiazepine Detox
- New approach: Use of Anticonvulsant medication combined with substituted long acting benzodiazepine.
- Taper Benzodiazepine (Klonipin or Librium) over a 3 to 5 day period. Starting dosage depends on amount of BZ being abused.
- Start anticonvulsant medication (Depakote ER 500 mg hs or bid, Tegretol 200mg bid or tid) and continue on med for 4-8 weeks.
Overview
- Methadone (Dolophine) was commonly used for detox beginning in 1970's.
- As heroin potency began to decline in the 1990's withdrawal symptoms began to decrease in intensity.
- Clonidine (alpha 2 noradrenergic agonist) was then useful in treating withdrawal.

Overview
- Over the last 10 years the potency of street heroin has progressively been increasing and in many areas the concentration is over 50%.
- At this concentration the heroin can be inhaled or smoked to produce a high. Resulted in a significant increase in heroin use especially in young people.

Overview
- Clonidine's effectiveness alone for opiate detox treatment has diminished.
- Return to use of Methadone. Dosage: 20-40 mg to start tapered by 5 mg daily. Often combined with clonidine 0.1-0.2 mg to start and Phenobarbital 30-45 mg to start tapered along with the Methadone.
- New approach—Use of buprenorphine as detox agent in place of Metadone.

The Opioids
- Drugs Derived Directly from the Opium Poppy
  - Morphine
  - Codeine
- The Semisynthetic Opioids
  - Heroin (diacetylmorphine)
  - Hydromorphone (Dilaudid)
  - Oxycodone (Percocet, OxyContin)
  - Hydrocodone (Loricit, Vicodin)
- The Synthetic Opioids
  - Methadone
  - Fentanyl
  - Propoxyphene (Darvocet)
  - Meperidine (Demerol)
Opioid Withdrawal
- The opioid abstinence syndrome is characterized by two phases:
  - Acute Withdrawal
  - Protracted Abstinence Syndrome
- Current pharmacotherapeutic strategies are based on this duality.
- Opiate withdrawal alone is not life threatening. Exception: Withdrawal may be fatal to fetus in pregnant women going thru opiate withdrawal.

Acute Withdrawal
- The patient typically experiences a range of symptoms for various lengths of time.
- Symptoms include:
  - Vital Sign Changes
    - Tachycardia, Hypertension, Hyperpyrexia
  - CNS Changes
    - Restlessness, Irritability, Insomnia, Craving, Yawning
  - Eye & Nose Changes
    - Pupillary dilation, Lacrimation, Rhinorrhea
  - Skin Changes
    - Piloerection
  - GI Changes
  - N/V/D

Chronic Dependence & Protracted Abstinence
- The time required for return to baseline ranges from one week to about six months
- Symptoms include:
  - Changes in Vital Signs
  - Decreased sensitivity of the respiratory center to CO2
  - Irritability, insomnia, craving
- Treatment: clonidine 0.1 mg bid or tid, trazodone/doxepin 50-150 mg hs for sleep, and Seroquel 25 mg bid or tid for severe anxiety.

Clinical Picture
- Clinical phenomena associated with opioid withdrawal include neurophysiologic rebound in the organ systems on which opioids have their primary action (e.g., 1990)
  - The severity varies with the dose and duration of drug use.
  - Route of administration is important.
  - Injection drug use is associated with significantly higher withdrawal symptom scores than with inhaled opioid use (Deuchs & Smith, 1999).
  - The time to onset depends on the half-life of the drug being used.
    - E.g., Withdrawal may begin 4 to 6 hours after the last use of heroin, but up to 36 hours after the last use of methadone

Clinical Picture
- Neuropyschologic studies of opioid withdrawal have supported the clinical picture of increased CNS noradrenergic hyperactivity (Jaffe, 1990)
- Therapies to alter the course of opioid withdrawal (e.g., clonidine) are designed to decrease this hyperactivity, which occurs primarily at the locus ceruleus.

Pharmacologic Therapies
- Slow Methadone Detoxification
  - The strategy is to stabilize heroin addicts on methadone, then slowly decrease the methadone dose.
- Clonidine Detoxification
- Buprenorphine Detoxification
Opiate Dependence, Detoxification and The Role of Buprenorphine

What is buprenorphine?
- Partial μ-opioid agonist
- High receptor affinity and receptor occupancy: 95% occupancy at 16 mg
  [Greenwald et al. 2003]
- Blockade or attenuated effect of the use of additional opioids
- Lower intrinsic activity than full agonists:
  - Favorable safety profile due to “ceiling” effect
  - Lower street value
  - Lower abuse potential
  [Walsh and Swanberg, 2009]

Bioavailability
- Has poor oral bioavailability
  - Sublingual administration is the primary route of administration
- High lipid solubility
  - Expected to be active by the intranasal route

Pharmacologic benefits: “Less Bounce To The Ounce”
- Slow receptor dissociation:
  - Longer duration of action
  - Milder withdrawal
- Lower physical dependence liability than full agonists
- Limited development of tolerance
- Ceiling effect on respiratory depression
  - Increased safety against overdose

Rapid onset of effect
- Readily absorbed sublingually:
  - 5-10 min. for tablet to dissolve
- Rapid onset of action: 30-60 min
- Peak plasma levels at 1-2 h
- Peak subjective/physiologic effect at 1-4 h
- Distribution
  - 96% protein bound (α and β globulin)

Interactions with other opioids?
- Opioid antagonists:
  - Incomplete reversal by naloxone
- Opioid agonists:
  - Blockade effect, limiting the effects of additional opioid use
  - Potential for precipitated withdrawal when taken too soon after a full agonist
- Due to mild antagonist properties of buprenorphine daily opioid use needs to be below 40 mg of Methadone, 320 mg of oxycodone (or equivalents of other opiates), or below 20 bags of street heroin daily.
Getting started

- General approaches:
  - Manage withdrawal syndrome and cravings:
    - Provide a long-acting opioid and taper the dose
  - Manage signs and symptoms:
    - E.g., clonidine, ibuprofen, immudium
    - Non-benzodiazepine sedative
  - Combination of the two approaches

Benefits of buprenorphine

- Less severe physiologic withdrawal than full μ-opioid agonists:
  - Improves program completion
  - Forms positive patient alliances
  - Encourages future patient return
  - Can be used to withdraw from short-acting opioids or long-acting opioids
  - Allows a wide range of continuing treatment options

Objectives of medical withdrawal

- Short-term interventions:
  - To alleviate withdrawal discomfort
  - To prevent complications
  - To interrupt a pattern of heavy and regular opioid use
  - To facilitate post-withdrawal treatment linkages

“Must haves” for medical withdrawal

- Assessment
- Supportive care:
  - Counseling
  - Safe environment/patient trust
  - Provision of patient information
  - Monitoring
  - Medications
  - Post-withdrawal ongoing support
    - Continuing counseling and psychosocial support
    - Naltrexone treatment
    - Maintenance treatment

Examples of ≤10 day inpatient medical withdrawal schedules

<table>
<thead>
<tr>
<th>Buprenorphine dose (mg) – sublingual tablet</th>
<th>Day</th>
<th>10-day schedule</th>
<th>7-day schedule</th>
<th>3-day schedule***</th>
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*Adapted from Vignos, 1980
**Adapted from Theo et al., 1997
***Adapted from Chou et al., 1994

As seen in Drug and Alcohol Dependence Supplement, Volume 70, Issue 3, Supplement 1-2/04

Protocol for Detoxification from Opiates Using Buprenorphine

- Day 1: No Buprenorphine
- Day 2: 10 a.m. 4mg
  4 p.m. 2mg
  10 p.m. 2mg
- Day 3: 6 a.m. 2mg
  12 N 2mg
  6 p.m. 2mg
- Day 4: 6 a.m. 2mg
  4 p.m. 2mg
- Day 5: 6 a.m. 2 mg

-Livingrin Foundation – Medical Manual
PHARMACOLOGIC INTERVENTIONS FOR ALCOHOLISM

Use of Medications to Prevent Relapse in Alcoholics

Drugs Used To Deter Alcohol Consumption

Alcohol-Sensitizing Agents
- Alter the body’s response to alcohol, making its ingestion unpleasant or toxic
  - Disulfiram (Antabuse) & carbamide [not avail. in US]
- Inhibits aldehyde dehydrogenase (ALDH)
  - If alcohol is ingested after this enzyme is inhibited, blood acetaldehyde levels rise
    - The disulfiram-ethanol reaction (DER)
- The DER varies in intensity both with the dose of disulfiram and with the volume of alcohol ingested

Pharmacokinetics of Disulfiram
- Absorbed almost completely after oral administration.
- Metabolized rapidly to diethyldithiocarbamate (DDC)
  - Active metabolite
- This is degraded to diethylamine and carbon disulfide
  - Detection of carbon disulfide in breath provides a measure of compliance
- Disulfiram & DDC inhibit ALDH by binding to it irreversibly.
  - Renewed enzyme activity requires the synthesis of new protein
Pharmacokinetics of Disulfiram
- Inhibits dopamine beta-hydroxylase (DBH)
  - Results in increased dopamine levels
  - Exacerbation of psychotic symptoms in schizophrenics
- Daily dose is 250 – 500 mg/d
  - Some patients require in excess of 1 Gm/d to reach blood levels sufficient to produce DER
    - Faulty bioactivation in some individuals can yield too low a concentration of the active metabolite.
- DDC is being studied as a transdermal and sustained-released formulation

Symptoms of DER Syndrome
- Warmness and flushing of the skin
  - Especially upper chest and face
- Increased heart rate, palpitations, decreased BP
- Nausea & vomiting
- Shortness of breath
- Sweating, dizziness, blurred vision
- Confusion
- MOST REACTIONS LAST ABOUT 30 MINUTES AND ARE SELF-LIMITED
  - Occasionally can be severe and include marked tachycardia, hypotension, bradycardia, cardiac arrest secondary to vagal stimulation associated with retching or vomiting

Measures to Enhance Compliance
- Provide the patient with incentives
- Contract with the patient and a significant other to work together to insure compliance
- Provide regular reminders and other information to the patient
- Use behavioral training and social support
- Warn about the side effects including the need to avoid OTC preparations containing alcohol.

Opiodergic Agents
- Naltrexone (ReVia) & nalmefene (Revex)
  - Opioid antagonists
- Naltrexone was approved by the FDA in 1985 for the treatment of opioid dependence and in 1994 for the treatment of alcohol dependence
- Nalmefene is approved in the US only as a parenteral formulation for the acute reversal of opioid effects (e.g., during surgery)
- Vivitrol (sustained-release [depot] formulation of naltrexone approved in 2005

DRUGS THAT CAN DIRECTLY REDUCE ALCOHOL CONSUMPTION
Several neurotransmitter systems appear to influence the reinforcing or discriminative stimulus effects of ethanol
Agents Affecting Other Neurotransmitter Systems

- Acamprosate (Campral)
  - An amino acid derivative
  - Affects both GABA and Glutamate neurotransmission
  - Glutamate being the one that is important for its therapeutic effects in alcoholism
  - Decreased the desire to drink
  - Decreased the degree of anxiety symptoms
  - May be more useful in combination with disulfiram.


Naltrexone/Acamprosate Combination Treatment

- Several studies lend support to the perspective that there may be a subset of alcoholic patients who do not respond to either medication alone but will respond to combination treatment with both medications.

Topiramate

- Topiramate potentiates GABA and inhibits excitatory glutamate transmission-results in decreased dopamine release in response to alcohol consumption.
- Several studies have reported reduction in drinking and increased abstinence with its use.

Topiramate

- Not FDA approved for use in alcohol dependence but may be used off-label.
- Initiate dose of 25 mg daily and increase dose over several weeks to 300 mg daily in divided doses.
- Excreted renally-dosage may need to be reduced with impaired renal function.

Factors in the Production of Mood Disturbances

- Heavy alcohol intake
- Acute and protracted withdrawal
- Alcohol-induced damage to the CNS
- Damage to the CNS from indirect effects of alcohol (e.g., head trauma or thiamine deficiency)
- Social, economic, and interpersonal losses
- Antecedent psychiatric disorders

PHARMACOTHERAPIES FOR POSTWITHDRAWAL AFFECTIVE DISTURBANCES
Benzodiazepines
• Alcohols are vulnerable to the development of dependence on the benzodiazepines
• Dependence on both alcohol and benzos can increase depressive symptoms
• The combination of alcohol and benzodiazepine dependence may be more difficult to treat than the alcoholism alone
Other Anxiolytics
• Buspirone (BuSpar)
• Propranolol (Inderal)
• Dopaminergic Blockers: Atypical Antipsychotics

Interventions for Opioid Addiction

Naltrexone
• Long-acting opioid antagonist
• Provides complete blockade of opioid receptors when taken at least three times a week
• Total weekly dose of about 350 mg.
• Treatment retention rates are 20-30% over 6 months.
• Factors for poor retention:
  ◦ Does not provide narcotic effect
  ◦ Cravings may continue during treatment

Naltrexone (continued)
• Initiated following acute withdrawal from opioids
  ◦ Seven to 10 day opioid free period
• Initial dose generally 25 mg (1st day) — GI side effects
  ◦ Then 50 mg daily or 100mg every other day or 350 mg weekly (in 3 divided doses)
• Most serious side effect is liver toxicity
• If patient uses an opiate while on Naltrexone, it will have no effect.
• VIVITROL: Monthly injection — 350mg
• Surgical implant also available

Naltrexone
• Blockade produced is competitive. Can be overcome by using increasing amounts of the opiate.
• Relatively fine line between the amount of opiate it takes to overcome the blockade and the lethal dose.
• Usage has been most successful in populations who are highly motivated and are not likely to try to overcome the blockade (individuals with a good support system, professionals, etc.).

Naltrexone
• Multiple studies have supported its efficacy in opiate addiction treatment.
• Most common side effects are headache, mild nausea, and GI complaints.
• Duration of use is variable (weeks to months).
METHADONE

- May only be prescribed in the community for opiate addiction treatment by physicians' affiliated with an CSAT accredited Methadone Maintenance Treatment Program.
- Federal and State regulations govern its utilization within these programs.
- Specific criteria must be met in order to be admitted to a program.

METHADONE

- Rationale for long-term methadone maintenance:
  - Ability to relieve protracted abstinence syndrome
  - Block heroin euphoria
  - Psychosocial stabilization
  - Reduced criminal activity
  - No serious side effects
    - Mainly constipation, sweating, drowsiness, decreased sexual interest/performance
  - Safe during pregnancy
  - Today's high-purity street heroin has required even higher methadone doses to achieve cross-tolerance

Methadone-Benefits

- Produces tolerance to other opiates.
- Can be given in a single daily dose (24 hour half life).
- Reduces opiate cravings.
- Prevents emergence of opiate physical withdrawal symptoms.
- Requires patient to be involved in ongoing formal treatment.

Methadone-Benefits

- Results in increased employment, improved physical and mental health, and improved social functioning.
- Pt's involved in MM programs have a significantly reduced rate of seroconversion to HIV disease.
- No long term physical or mental complications have been identified.

Methadone-Dosing

- Initiation of medication. Most pt's are started on 30 mg daily with the dosage increased by 5-10 mg per week until urine drug screens are negative for other opiates.
- Minimum effective Methadone dose (to produce sufficient tolerance) is 60 mg per day.
- Most patients will require MM doses of 90-120 mg daily, some even higher.

Methadone-Issues

- Patients need to go to MM clinic daily to get their medication. May limit social activities.
- Patients remain physically dependent on Methadone.
- MM patients are often discriminated against in housing and other social programs.
Methadone-Issues

- Patients are often not welcomed at community self-help support groups (i.e. NA) due to their use of Methadone.
- Side Effects: Most common problems are chronic constipation and excessive sweating.
- Duration of treatment: Felt to be long term in most cases.

Some Principles of Medical Management of Methadone Patients

Select Appropriate Patients

- Minimum age of 18 years (generally)
- At least one year of physiologic dependence on a narcotic
- Meets criteria for opioid dependence

Achieve Adequate Steady-State Dosing

- Begin induction dosing phase
- Establish maintenance-phase dosage
- Avoid drugs that potentiate methadone dose or induce withdrawal
- Evaluate need for detoxification or continued maintenance

Prevent Relapse

- Educate patient and family about potential for relapse
- Encourage involvement in Narcotics Anonymous and Nar-Anon
- Monitor patient for symptoms of opioid intoxication or drug-seeking behavior
- Adjust dosage according to needs

Evaluate & Treat Medical Conditions

- Infectious Disease
  - Reduce risk of contracting and transmitting disease
  - Educate family and involve them in preventive efforts
- Pain Management
  - Consider non-narcotic agents first
  - Evaluate cross-tolerance in narcotic analgesia
  - Avoid narcotics that induce withdrawal
Drugs That Interact with Methadone

<table>
<thead>
<tr>
<th>Induction</th>
<th>Inhibition</th>
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<tr>
<td>Rifampin</td>
<td>Fluconazole</td>
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<tr>
<td>Penthotoin</td>
<td>Cimetidine</td>
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<tr>
<td>Ethyl Alcohol</td>
<td>Erythromycin</td>
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<tr>
<td>Barbiturates</td>
<td>Fluoxetine</td>
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<tr>
<td>Carbamazepine</td>
<td>Ketoconazole</td>
</tr>
<tr>
<td>St. John's Wart</td>
<td>Nefazodone</td>
</tr>
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</table>

Opioids bind to different receptors

- Opioids exert their effects by binding to the opioid receptor
- Various receptor subtypes involved in different systems:
  - μ (mu), δ (delta), and κ (kappa)
- μ-opioid receptor mediates:
  - Analgesic effects
  - Euphoria
  - Some side effects:
    - Respiratory depression
    - Sedation
    - Dependence

What determines opioid effects?

- Receptor affinity
  - How tightly the drug binds to the receptor
- Dissociation
  - How fast the drug leaves the receptor
- Intrinsic activity
  - How much the drug stimulates the receptor

Receptor Pharmacology

- Full agonists – bind to the μ receptor producing an almost linear increase in biologic effect:
  - Methadone, morphine, heroin
- Partial agonists – bind to the μ receptor but have a 'ceiling' effect on receptor activation:
  - Buprenorphine
- Antagonists – bind to the μ receptor and do not produce a biologic response but able to block agonist effects:
  - Naloxone, naltrexone, nalmefene

Receptor Pharmacology

- Graph showing the response versus dose for full agonists, partial agonists, and antagonists.
### Opioid receptors – activity levels

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<th></th>
<th>μ</th>
<th>κ</th>
<th>δ</th>
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<td>Morphine</td>
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<td>Methadone</td>
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<tr>
<td>LAAM</td>
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</tr>
<tr>
<td>Buprenorphine</td>
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<tr>
<td>Nalorphene</td>
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### Pharmacologic benefits
- Slow receptor dissociation:
  - Longer duration of action
  - Milder withdrawal
- Lower physical dependence liability than full agonists
- Limited development of tolerance
- Ceiling effect on respiratory depression
  - Increased safety against overdose

### Urine Testing
- Buprenorphine and its glucuronide metabolite appear in the urine for 1-2 days
- Norbuprenorphine and its glucuronide metabolite appear for 1-4 days
- Urine testing for opiates typically screens for morphine.
  - These tests do not cross-react with buprenorphine or norbuprenorphine

### Pharmacodynamic drug interactions
- CNS depressants and sedatives (eg, benzodiazepines):
  - All opioids have additive sedative effects when used in combination with other sedatives
    - Increased potential for respiratory depression, heavy sedation, coma, and death
  - Despite favorable safety, use caution with concomitant psychotropics (eg., benzodiazepines)

### Understanding precipitated withdrawal
- Buprenorphine displaces full opioid agonists:
  - Higher receptor affinity
  - Lower level of receptor activation
  - Patients may experience some withdrawal symptoms

### Buprenorphine may interact with opioid receptors to act as an agonist (morphine-like) or as an antagonist (naltrexone-like)
How to prevent precipitated withdrawal

- Withdrawal more likely when:
  - Level of physical dependence is high
  - Short time since last opioid use (short- vs long-acting opioids)
  - Initial dose of buprenorphine too high

- Prevention:
  - Administer 1st buprenorphine dose when objective signs of withdrawal are present

When does a buprenorphine-precipitated withdrawal occur?

- Generally commences ~30-90 min after 1st dose
- Generally peaks with 90-180 min after 1st dose
- Minor symptoms may continue after 2nd or 3rd dose
- Symptoms may also persist with continued heroin/opioid use

Disadvantage of buprenorphine:

- It can be abused because it is an opioid that is reinforcing.

- Solution:
  - Combination product of buprenorphine and naloxone (Suboxone)
    - By reducing the abuse liability of buprenorphine, it can be made acceptable for use by clinicians outside of OTPs.

Suboxone

- Combination buprenorphine/naloxone
  - Naloxone has relatively poor sublingual bioavailability
  - Results in a predominant buprenorphine effect when tablet is taken by the therapeutic route (sublingually)
  - Abuse via the parenteral route results in a predominant naloxone effect

Suboxone

- The optimal combination is a 4:1 ratio of buprenorphine to naloxone
  - Formulations available:
    - 2/0.5 mg buprenorphine/naloxone
    - 8/2 mg buprenorphine/naloxone

Screening Patients for Outpatient Buprenorphine Treatment

Pros
- Compliant
- Appointments
- Medications for other medical/psychiatric conditions
- Employed
- Limited legal problems
- Intact family/support system

Cons
- In MMT
- Extensive legal problems
- Non-compliant
- Limited/no support
- Extensive psychiatric problems
- Multiple substance use problems
Selecting treatment modalities

- Consider:
  - Patient expectations of treatment
  - Patient goals
  - Stages of change
  - Current circumstances
  - Available resources
  - Past history of treatment outcome
  - Evidence regarding safety, efficacy and effectiveness
  - Informed consent

Objectives of Maintenance Treatment

- To reduce mortality from overdose and infection
- To reduce opioid and other illicit drug use
- To reduce transmission of HIV, HBV and HCV
- To improve the general health and well-being of patients
- To reduce drug-related crime
- To improve social functioning and ability to stay in work

Objectives of OBT with Buprenorphine

- Help to destigmatize opioid dependence treatment
- Reduce barriers for patient entry into treatment
- Move addiction treatment into mainstream medicine

Choosing Maintenance Medications

- No evidence that certain patients respond better to buprenorphine/methadone
- The choice between methadone or buprenorphine depends upon:
  - Overall response to each treatment
  - Many patients express a clear preference
  - Access to treatment setting (e.g., doctors office vs Opioid Treatment Program)
  - Ease of withdrawal
  - Patient (and clinician) expectancy

Choosing Subutex or Suboxone

- It is expected that patients maintained on buprenorphine will be given the tablet or strip containing the combination of buprenorphine and naloxone.
- For a patient taking a long acting full opioid agonist, monotherapy tablets could be considered for the first 2 days of induction.

Induction

- Accurate history
- Objective signs of withdrawal
- Day 1:
  - Initial dose 4 mg
  - Second dose of 4 mg after assessing initial response
- Day 2:
  - First day’s dose plus 2-4 mg as indicated by patient’s response
- Day 3:
  - Target 16 mg according to patient’s response
Always dose to desired clinical effect

- Variability in patient metabolism of buprenorphine requires individualized dosing
- Majority respond to 4-24 mg daily
- No maximum recommended dose
  - Use of illicit opioids decreases and treatment retention improves with increasing dose (Ling, 1998)
- No maximum or minimum duration of treatment

Methadone → Buprenorphine Transfers

Generally not recommended in stable patients

Reasons to transfer

- Patient preference
- Side effects from methadone
- Desire to stop additional heroin use
- Escalating doses of methadone
  - Rapid metabolizers
  - Tolerance
- Patient wishes to reach abstinence
  - May be easier to stabilize on buprenorphine first and taper dose
- Ease of dosing, easier access to treatment

Avoiding Precipitated Withdrawal

- To reduce risk of precipitated withdrawal:
  - Transfer from doses of methadone <30 mg
  - Check patient has not used opioid since last methadone dose
  - Commence with low dose of buprenorphine (2-4 mg)
  - Delay first dose of buprenorphine until mild-moderate objective signs of opioid withdrawal are evident

Buprenorphine is generally well tolerated but…

- Common side effects may include:
  - Headache
  - Constipation
  - Nausea
  - Anxiety
  - Rhinitis
  - Sweating
  - Insomnia
  - Pain

Not all patients are suitable

- Contraindication for buprenorphine treatment:
  - Hypersensitivity to buprenorphine or naloxone
  - Age < 16 years
  - Access to specialty treatment services may be required:
  - Pregnancy
  - Unstable dual diagnosis/psychiatric co-morbidity
  - Unstable polydrug use (especially benzodiazepines and CNS depressants)
  - HIV/HCV with acute hepatic dysfunction
Reducing/Discontinuing Buprenorphine

- Abrupt discontinuation produces a mild to moderate withdrawal syndrome
  - Subjective symptoms of withdrawal begin within the first 3 days, peak between days 3 and 5, and return to baseline in 10-14 days.
  - Autonomic signs of opioid withdrawal (e.g., chills, gooseflesh, tremors, rhinorrhea, lacrimation) are generally less pronounced
- Taper dose over 5 – 10 days.

Special populations - Pregnant women

- Active opiate addiction can mimic the early stages of pregnancy.
- Screen all women for pregnancy.
- MMT is the treatment of choice for pregnant opiate addicted women.
- Neonates born to a mother maintained on methadone will be physically dependant on opioids.

Special populations - Pain patients

- BUP has analgesic properties like any mu agonist, but it must be dosed q. 6 hrs.
- Single day BUP dosing is not adequate analgesia for acute/chronic pain.
- The role of BUP in chronic pain is still under investigation.
- Pain management for patients taking BUP

Special populations - MMT patients

- BUP is roughly equal to 60 mg methadone.
- Transfer from MMT to BUP is generally not recommended for stable patients.
- Transfer from methadone to BUP can be difficult due to the long t1/2 of methadone.
- Patients need to be on ≤ 30 mg and wait at least 24 hours after last methadone dose.
- Patients should be exhibiting objective signs of opiate WD before induction.
- Start with low BUP doses (4mg)

Patients who continue to use despite treatment

- Inadequate Suboxone dose
- Readiness to change
- Living environment
- Comorbid psychopathology

PHARMACOLOGIC INTERVENTIONS FOR COCAINE ADDICTION
Cocaine Addiction Treatment

- Use of high dose vitamin preparations. Contain amino acid precursors to Dopamine, Norepinephrine, and Serotonin to address hypothesized Neurotransmitter depletion.
- Cocaine Withdrawal (approx. 2 weeks)
  - Use of Dopamine agonists:
    - Bromocriptine (2.5 mg qid then taper over 2 weeks).
    - Amantidine HCL 100 mg bid or tid for 14 days.

Cocaine Addiction Treatment

- Tricyclic Antidepressants
  - Desipramine 150-200 mg daily for 6 months
- Anticonvulsant Medications (Anti-kindling effect) for 3-6 months.
  - Depakote 500-1000 mg daily
  - Tegretol 200 mg bid or tid
  - Topiramate 25 mg/d then increase by 25 mg/d weekly until 200 mg/d. Continue this dosage for weeks 8-12 then taper to zero on week 13.

Nicotine Dependence

- Nicotine Replacement Medications:
  - Nicotine patch, gum, nasal spray, and inhaler.
- Other Medications:
  - Bupropion (Wellbutrin SR, Zyban) Dosage is 300 mg daily and should be continued for at least 4-8 weeks following completion of nicotine substitution tapering. Approved by FDA in 1997.

Nicotine Dependence

- Topiramate (Topamax) has recently been shown in several studies to be useful as an adjunctive medication in smoking cessation. Side effects can include parasthesias and weight loss.
- Varenicline (Chantix) approved by FDA in 5/06. Reportedly acts by reducing the pleasure of smoking and reducing withdrawal. Attaches to nicotine receptors in brain pleasure centers and blockades the binding of nicotine. Also slows the release of Dopamine which may reduce craving.
Varenicline
- Dosage titrated upward over a weeks period of time to 1 mg twice daily.
- FDA initiated Black Box warning in 2009. Monitor patients for possible serious neuropsychiatric events including behavioral changes, hostility, agitation, depression, suicidal ideations as well as worsening of psychiatric symptoms in patients with preexisting psychiatric conditions.

Varenicline
- Some patients will experience problems with ongoing severe nightmares as a result of its usage which may necessitate it being discontinued.

Nicotine Dependence
- Nicotine Vaccine (Dr. Hatsukami -2005). NicVax-Triggers the production of antibodies that bind nicotine in the blood and keep it from reaching the brain. Initial study in 68 smokers showed favorable results.

Countertransference: The Source of Our Conflict and Blunders When Working With Patients

HISTORY
The concept of countertransference has undergone considerable evolution since its inception

FREUD
- Narrow definition
- Referred to the clinician's transference to the patient or the clinician's response to the patient's transference
- Caused by unresolved conflicts from the clinician
Contemporary Perspective

- Countertransference is a jointly created reaction in the clinician with two parts:
  - Contributions of the clinician's past
  - Feelings induced by the patient's behavior

Evolution of the Concept – 3 Stages

1. Countertransference is an obstacle to treatment and a sign of possible professional incompetence.
2. Countertransference is unavoidable but must be tightly controlled. The implication was, “It exists, but it shouldn’t.”
3. Acknowledgement of the ubiquity of CT but viewed as a potentially valuable clinical tool.

Categories of Countertransference

- **Objective Countertransference**
  - Induced by the patient and which the clinician feels, without the temptation to act on it.
  - Expected to be induced in any clinician
- **Subjective Countertransference**
  - An irrational response to the patient rooted in the clinician's fixations.
  - A true transference based upon pathological configurations within the clinician.

COUNTERTRANSFERENCE

- All instances in which clinicians act out feelings toward patients that are unresolved characterological or cultural conflicts or biases within themselves, whether or not induced by corresponding feelings in the patient.

Clinician Errors

- **Technical**
  - Usually occur in the first two or three years of a clinician's practice
- **Countertransference**
  - Primary source of errors for the experienced clinician
Procedure for the Communication of Countertransference Feelings

Processing of Clinician’s Feelings
1. Observe the full emotional impact the patient is having.
2. Be fully aware of counter-destructive impulses and wishes
3. Reduce the intensity of feelings without attempting to eliminate them
4. Discover whether the main source is subjective or objective
5. Determine what the patient needs in the way of an intervention
6. Observe carefully the effects of the intervention

Some Caveats
- All of the clinician’s emotional reactions to the patient should be internally treated and neutralized so that they are fully under control before any intervention is made.
- When a negative feeling is induced, the patient’s interest is safeguarded when the clinician processes his feelings.

DIAGNOSIS AND TREATMENT OF COUNTERTRANSFERENCE

Resolving the Denial – Part 1
- “What kind of countertransferences am I prone to?”
- “How can I categorize them so I will be forewarned and sensitized to certain patients or certain kinds of material?”
- “Are they so strong that I should clearly avoid certain patients because I know that they will push buttons in me that will be counter-productive to a successful therapeutic outcome?”

The question is no longer, “Do I have countertransferences?”
Resolving the Denial – Part 2

• "What clues do I have to tell me when a countertransference is rearing its ugly head?"
• "What should I do when I discover such a clue?"

Answering These Questions....

"What kind of countertransferences am I prone to?"

• To find the answer we look at the parts of our mothers, fathers, and siblings that we did not like or caused us problems.
  ◦ Was your mother intrusive, passive, complaining?
  ◦ Was your father rejecting, angry, competitive?
  ◦ Did you hate a sibling?

"What clues do I have to tell me when a countertransference is rearing its ugly head."

• A feeling of distaste about a patient's appearance
• Making a mistake in scheduling/forgetting an appointment
• Becoming anxious during a session
• Finding your mind wandering
• Feeling drowsy

Categorizing Countertransference

• Erotic
• Sadomasochistic
• Narcissistic
• Characterological
• Cultural

"What clues do I have to tell me when a countertransference is rearing its ugly head."

• Having a dream about a patient
  ◦ A signal that the patient represents some figure from your past.
• Slips of the tongue made during a session
• Ending the session too early/too late
• Ignoring non-payment issues
• Giving the patient a great deal of extra time
• Socializing with a patient
**Erotic Countertransferences**
- Usually the most difficult for a clinician to be aware of, manage, and utilize.
- It is common for patients of both sexes to be seductive toward their clinicians.
- Clinicians may fail to understand or empathize with patients because of their own unresolved erotic conflicts.

**Sadomasochistic Countertransferences**
- The danger is always that the clinician will become involved in a power struggle with the patient.
- Sometimes the clinician has a need to dominate, manipulate, or control the patient.
- Or the clinician may have an unconscious need to be dominated, controlled, or manipulated by the patient.

**Sadomasochistic Countertransferences**
- A clinician may use the patient as a vehicle for proving his own skills and powers as a clinician.
  - May conduct the treatment in a way that disregards their patients’ real needs and desires.
- Clinicians may insist that their patients accept their interventions without question, as though they were the law, and become irritated when their patients do not accept them as such.

**Narcissistic Countertransferences**
- Involve the acting out of feelings of low self-esteem, rage, depression, or dependency.
  - Have a need to be always right.
  - To be the “perfect” clinician.
  - Try to impress patients.
  - Sometimes have the attitude that they are “gods” who are going to remodel the patient in their own image.
  - They will have an agenda for the patient that will usually be in opposition to the patient’s needs.

**Characterological Countertransferences**
- Refer to being emotionally blocked in some way or another.
  - Narcissistic clinicians may be resistant to confronting their patients’ grandiosity or rage.
  - The worst are those stemming from character disorders in which symptoms are ego-syntonic and never recognized and worked through.
Cultural Countertransferences
- One of the more prevalent and potentially harmful forms of cultural CT comes about when clinicians identify themselves with a cause, a religion, or a mass movement.
  - They will often become self-righteous
  - They will feel justified in transferring, resisting, and acting out aggressive feelings without feeling any guilt.

Countertransference Reactions to Patients with Antisocial Personality/Traits

3 Common Reactions
- Disbelief
- Collusion
- Condemnation

Disbelief
- May surface as denial that the patient is really “that bad.”
- Rationalizing behaviors as being due to such problems as drug abuse or adolescent rebellion
  - May cause clinician to deny the presence of psychopathic features
  - May view the patient as depressed or misunderstood

Collusion
- One of the most problematic forms of countertransference.
- In the belief that they are helping the patient, clinicians’ acting out may commit illegal acts or otherwise behave unethically
  - Lie on behalf of the patient
  - Falsify records
  - Seduced into sexual relationships
  - Helped patients to escape

Condemnation
- Often manifested in expressions that a patient is totally untreatable and that no effort should be made to establish a treatment relationship.
- Most often a knee-jerk reaction to hearing some history of antisocial activity.
“Confronting and resolving our countertransferences can reduce their negative impact to a tolerable minimum. It is our way of healing ourselves so we can heal our patients.”

-Richard C. Robertiello, MD

Confidentiality of Information

- Clinicians do not communicate, directly or indirectly, information that a person has shared within the context of a professional relationship.
- If the clinician knows that he/she is unable to assure the patient of confidentiality of information, he/she must inform the patient of this fact before the patient has shared personal information.

Examples of Breaches

- Talking about patients in public
- Calling out patients’ names when phone calls for them come in
- Discussing patients in the waiting room
- Discussing patients with those without a need to know.

Code of Ethics

- Provides the clinician with guidelines about appropriate professional behavior
- Provides the patient with guidelines to recognize proper clinician behavior

Limit-Setting

- A clinician should not offer professional services to a family member or friend
- A clinician should not treat patient problems that are beyond his skill level
- At no time should a clinician meet with a patient on a personal/social basis
- A clinician should not initiate, encourage, or maintain an overt/covert relationship with a patient
Other Ethical Concerns

- The clinician must be aware of racial or sexual prejudices and act accordingly.
- The clinician must confront a fellow clinician if he discovers that his/her colleague has a drinking problem or a substance abuse problem.
- A clinician must report patient abuse if observed in a colleague.

Confidentiality Issues

- **Confidentiality** means that statements, actions, and communications of the patient are kept private within the confines of the therapeutic relationship.
- Confidentiality is essential to the patient’s trust in the clinician.

What Can Be Disclosed (With Consent)

- Whether the patient is or is not in treatment
- The patient’s diagnosis
- The services offered to the patient
- A brief description of the patient’s progress
- A short statement as to whether the patient has relapsed

Case Example

You are chatting with a new patient and he informs you that he has decided to seek treatment at your facility on the recommendation of a friend who is currently in outpatient. The new patient tells you that he was motivated to begin treatment because he has seen how much his friend has been helped. Meaning to encourage the new patient, you mention that his friend has certainly made a lot of progress and you have heard that he continues to be completely abstinent.

Protecting the Patient

- When patients enter treatment – no matter who they are – we must respect their privacy and adhere to complete confidentiality.
- Patients reveal very personal and private information which is documented in the patient’s clinical chart.
- The Federal Non-Disclosure Rule forbids even identifying a person as a patient.
What To Say

- A good rule is to say nothing about any patient even when you know that the person making an inquiry already knows that the patient is in treatment.
- The best response is to inform the inquiring party that federal law prevents you from answering the question.

Case Example

While driving home, you realized that you still had a list of patients’ names in your pocket. Since it wasn’t part of a chart, you weren’t worried about it. You fold it and lay it on the seat next to you. As you’re driving, you see your neighbor who asks for a ride. She knows where you work and is always trying to find out who is in treatment. As you are driving, you hear her shriek as she exclaims, “I knew that boy was using drugs. His mother told me he was on vacation with his father!” She was reading your list of patients.

Dual Relationships

- Patients and staff can also be neighbors, co-workers, members of the same church or social club, etc.
- All dual relationships must be reported immediately to your supervisor as soon as you become aware that someone you know is in treatment.
- You are not permitted to make any contact or discuss any issue not relating to the patient’s treatment.

ETHICAL PRINCIPLES

- You respect the dignity and worth of each patient and strive to protect individual human rights.
- You do not permit patients’ skills to be misused.
- You accept the responsibility for the consequences of your actions. When you are wrong, you promptly admit it.

Ethical Principles

- You avoid relationships that may create a conflict of interest.
- You try to prevent distortion or misuse of your findings.
- You present material objectively, fully, and accurately.
- You know that your work bears a heavy responsibility because your recommendations and actions may alter the lives of others.
1. You accurately represent your competence, education, training, and experience.

9. You recognize the differences among people of different races, sexes, cultures, creeds, ethnic backgrounds, and socioeconomic statuses.

10. You follow all guidelines and regulations of your profession and your facility.

11. You recognize that personal problems may interfere with your professional effectiveness. You refrain from becoming engaged in an activity where your personal problems may have an influence. If you have serious problems, then you have a responsibility to seek appropriate professional assistance.

12. You do not condone practices that you perceive as being inhumane or unjust.

13. You respect the confidentiality of all information obtained within the context of your work.

14. You reveal such information only with the written permission of the patient, except when the patient is a clear danger to self or others.

15. You discuss information obtained in professional relationships only for professional purposes and only with persons clearly concerned with the case.

16. You ensure that appropriate provisions are made for maintaining confidentiality in the storage and disposal of any patient records.

17. You recognize your own needs and are cognizant of your potential to influence patients and other staff.

18. You understand that sexual intimacies with patients are unethical.

19. You make every effort to avoid relationships that could impair your professional judgment or increase the risk of exploitation. This includes socializing with patients who you know outside the facility.

20. You cooperate fully with other professionals.

21. You do not condone or participate in any form of sexual harassment.

That’s All, Folks!

QUESTIONS AND COMMENTS