

Alcohol and Other Drug Use/Abuse/Dependence November 06, 2009

DEFINITIONS (we look at each of these in regards to primary, secondary and tertiary treatment)

- **USE:** Refers to non-therapeutic consumption of psychoactive drugs. For example, drinking moderately at a party when you have to drive home (sipping each drink over an hour - 1½ oz. per...this is b/c alcohol reaches its peak in about an hour...so you don't want to drink 3-4 drinks quickly then you are over the unsafe level of alcohol in the blood at 0.8). Alcohol is absorbed primarily from the stomach, so eat some food with your drink. Mix the alcohol with other substances to mix the drink (not straight shot).
- **ABUSE:** Abuse refers to the consumption of psychoactive drug(s) with biological, psychological, social, environmental and/or legal consequences (American Psychiatric Association, 2000). For example, a patient is admitted with a diagnosis of a compound fracture of the left ulna resulting from an accident caused by driving under the influence. Other examples include, drinking or even occasional consumption of substances, such as marijuana, in people who have a history of major depression. Even smoking if you have COPD is abuse. Using psychoactive drugs increases the risk of exacerbating an existing depressive state or of precipitating a depressive episode. FYI: Alcohol causes the most health problems besides cigarettes!
- **SUBSTANCE DEPENDENCE:** Dr. V says this is a neurobiological illness that has a genetic underpinning. A maladaptive pattern of substance use, leading to clinically significant impairment or distress, as manifested by **three (or more) of the following, occurring at any time in the same 12-month period:**
 - (1) Tolerance, as defined by either of the following (d/t body handling the drug more efficiently):
 - (a) A need for markedly increased amounts of the substance to achieve intoxication or desired effect
 - (b) Markedly diminished effect with continued use of the same amount of the substance. If this changes and you only need a little drug/alcohol to get the effect this means there is pretty bad liver damage. Fatty liver then hepatitis then cirrhosis...bad news.
 - (2) Withdrawal, as manifested by either of the following (occurs when taking a substance for at least a week):
 - (a) The characteristic withdrawal syndrome for the substance
 - (b) The same (or closely related) substance is taken to relieve or avoid withdrawal symptoms
 - (3) The substance is often taken in larger amounts or over a longer period than was intended. If you only asked one question and they answered that this is occurring (a loss of control), is a classic symptom of addiction.
 - (4) There is a persistent desire or unsuccessful efforts to cut down or control substance use (more loss of control)
 - (5) A great deal of time is spent in activities necessary to obtain the substance (e.g., visiting multiple doctors or driving long distances), use the substance (e.g., chain-smoking), or recover from its effects.
 - (6) Important social, occupational, or recreational activities are given up or reduced because of substance use.
 - (7) The substance 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 substance (e.g., current cocaine use despite recognition of cocaine-induced depression or continued drinking despite recognition that an ulcer was made worse by alcohol consumption)...remember Tracy E from Fat City?
- **CHEMICAL DEPENDENCE:**
- **ADDICTION:** a broad term used to cover a variety of activities (gambling, shopping, alcohol, drugs)
- **PREVENTION** refers to health care activities related to interventions aimed at persons who currently do not have the disease or are in the early stages of the disease rather than the treatment of disease. Prevention activities include reduction of risk; promotion of health behaviors that prevent occurrence of disease and reduce harm and early detection and treatment to prevent the development of additional consequences of the disease. Dr. V is very interested in focusing on folks who are at risk for addiction.

FACTORS THAT INFLUENCE ATTITUDES

- Family background (if I have an alcoholic father this affects my attitude toward alcoholics. It is important to be forgiving of the addicts and have compassion)
- Early experiences (if you live in an environment where there is a lot of abuse/dependence, this can affect attitude)
- Other life experiences
- Clinical experiences

Incidence of AOD problems

- USA is one of the world leaders in AOD problems (more money to spend on drugs, more leisure time)
- Approximately 10 million people reported heavy alcohol use in the past month (5%)
- Approximately 15% of drinkers progress to alcoholism
- 36% reported using illicit drugs sometime in their lives
- Key is the fact that over 40% of hospital admissions are related to AOD abuse
- Adolescent substance abuse
- Deaths US Per Day: 1000 Smoking; 300 Alcohol; 150 Second Hand Smoke; 100 Other Drugs
- Risk Factors for Substance Abuse and Addiction
 - Family History – Genetic predisposition (ask about family history!)
 - Pre-existing mental illness (a lot of times people self-treat, especially bi-polar folks)
 - Poverty, Peer Pressure (peer pressure a big issue for kids who have trouble fitting in)
 - Parental drug use, parental attitudes
 - Divorce, parental rejection, family instability (we are now intervening with kids earlier to help them deal with behaviors and gain some control...think of the adolescent/child unit at Sutter Psych)
 - Historical/Social factors: example the sexual revolution, historical trends, signs of the time, new drugs, new methods of use

Historical Perspective

- Mind-altering drugs have been used by humans since before recorded history
- The earliest psychoactive drugs were alcohol, opium, marijuana, coca and psychedelic mushrooms
- Ancient cultures saw wine as a gift from god, Osiris gave ETOH to the Egyptians as did Dionysus to the Greeks, and Jewish peoples have long used wine in religious celebrations.
- Heavy drinking was recognized as a problem by the Egyptians in 1500 BC where hieroglyphics advise moderation
- 6,000 years ago the Sumerians living in what is now Iran used opium calling it the “joy plant” using it for pain relief, diarrhea, and euphoria
- The Chinese emperor Shen_Nung in 2737 BC wrote about Cannabis and its medicinal uses
- Eight centuries ago the Inca prized the use of coca leaves more than silver and gold, nobility carrying their precious supply in ornate bags
- Coffee (caffeine was originally found in Ethiopia about 600 AD, is called the wine of Islam. Coffee is to Arabia what Tea is to China
- Alcohol was forbidden by the Koran, after the 6th century opium was acceptable sub. to control pain & treat grief
- Khat (a stimulant) was also a permissible substitute, was used during long prayers to help people stay awake
- In the middle ages other psychedelics were discovered such as plants which contained belladonna, henbane, mandrake root and jimson weed. These drugs caused a disorientation and delirium. They were often used by medicine men and women accused of witch craft.
- During the Renaissance and Enlightenment Tobacco use, distilled alcohol, and opium smoking spread. Governments controlled trade for economic gain
- Nineteenth Century saw refinements with the synthesis of heroin from opium, new synthetic drugs, more wide spread use, government control, and criminality
- Twentieth Century wider distribution, better refining, newer synthetics, wide spread illegal use
- Today and Tomorrow
 - After a decline in the 1980's the use of illegal drugs in the 1990's has increased, especially marijuana, methamphetamines, MDMA, LSD, and heroin. Despite these increases in use of illicit drugs, Alcohol and Tobacco remain the most dangerous drugs of use and abuse
- Potency
 - **Drugs are more dangerous today because we know how to refine them to make them more potent, grow them to increase the content of the psychoactive substances, and because we have new and improved ways to deliver them more quickly to the brain**
- Improved Delivery
 - Opium poppy became opium, than morphine, than the syringe was invented, and heroin was developed. Heroin was first manufactured to create a substance that could kill pain, without the problems of tolerance and addiction

- Heroin actually crosses the blood brain barrier more efficiently, is not as good a pain killer (shorter half life), but because its absorption in the brain is so fast it causes more euphoria resulting in compulsive heroin use – addiction.
- Cocaine was first chewed limiting its absorption
- Cocaine was then processed into a white powder that was sniffed (1970's)
- Cocaine was further refined in the 1980's to a rock that was then cooked, and the vapor's smoked. This development directly led to the cocaine epidemic of the 1980's
- The marijuana of the 1960s was far less potent than the marijuana grown today. Better growing methods as given us plants that are 14 times more potent
- Cigarettes first became an addiction problem after the development of the cigarette rolling machine which resulted in using increased amounts, and greater distribution

Psychoactive Drugs

- Classification
 - Uppers: stimulants, such as cocaine, amphetamines, Ritalin, caffeine and nicotine
 - Downers: depressants such as opioids, sedative-hypnotics and alcohol
 - Inhalants: Organic solvents, volatile nitrites, nitrous oxide
 - All arounders: Psychedelics, marijuana, MDMA, LSD,
 - Psychiatric Medications: anti depressants, anti psychotics, anti anxiety drugs
- Etiology of AOD dependence
 - Complex
 - Unique configuration of factors within each person
 - Progress in our understanding
- Neurobiological: Nerve Cells and Neurotransmitters
 - Understanding the precise ways messages are transmitted by the nerve cells and how neurotransmitters work has changed the way we view and treat addiction.
 - Neurobiobehavioral
 - Highly regarded area of theory and study; also very complex
 - Role of neurotransmitters (play a strong role in relapse...meds are available to help deal with cravings)
 - New information
 - Neural sensitization
 - Learned changes in the emotional brain
 - Failure in the frontal/prefrontal cortex (decisions are made by emotional part of brain)
 - Loss of control – key feature in all addictions
 - Brain chemistry changes same across addictions
 - Priming-action of drug to induce craving (binge-drinking is a way people prime their addiction)
 - Repeated exposure → Kindling (kindling their addiction earlier...they may also have a genetic predisposition)
 - Initiation of addictive process
 - Emotional brain- limbic system
 - Activation of brain's "pleasure pathway (medial forebrain bundle) – dopamine is the transmitter...it is artificially enhanced by the addictive process. This is why they become dysphoric in the recovery stage...it takes a long time for the dopamine levels to readjust in the body.
 - Neural response to drug exposure is rapid with rebound below baseline before returning to it
 - All addictive drugs increase dopamine activity within the limbic system
 - Environmental stimuli (cues) associated with drug seeking provide a powerful stimulus for activating learned neurochemical patterns (it's a combination of environment and limbic system)
- Psychological (work in concert with neurobiological to bring on the problem earlier)
 - Oral stage of development
 - Linked with psychological traits such as depression, anxiety, antisocial personality disorder, and dependent personality
 - Human tendency to seek pleasure and avoid pain
 - Negative childhood experiences, e.g., physical and sexual abuse associated with low self-esteem and difficulty expressing emotions. You have to deal with the abuse issues in order to have lasting recovery from addiction.

- Sociocultural
 - Background
 - Nationality and ethnicity
 - Gender differences (women are at higher risk b/c our alcohol goes directly to our organs and causes increased damage earlier..it is not metabolized the same way as in men)
 - Community vulnerabilities (advertising is one way communities are vulnerable to abuse, also drug-dealing, poverty)
- Dynamics of AOD dependency
 - Use of defense mechanisms
 - Denial (I can quit anytime, I don't have a problem)
 - Rationalization (If you wouldn't get so mad at me I wouldn't drink)
 - Projection
 - Omnipotence (need example)
 - Dependence(need example)
 - Crisis creation (create crisis to take the heat off themselves)
 - Diversion strategies (will divert the problem to your anger regarding the situation, trying to take the attention away from the abuse problem)
 - Victim stance (I'm doing the best I can, and no one is supporting me!)
 - Offensive stance (They start to pick on things you're not doing so great..and making that the issue to put others on the defensive...this takes attention away from the abuser's behavior.)
- Specific characteristics of abuse or dependence, physical effects, behavioral changes, and medical consequences (SEE HANDOUT!...major ones are CNS depressants, opioids and stimulants--biggest problem wit stimulants is suicidal ideation.) KNOW S/S OF WITHDRAWAL!!! 2 hr mark in stream.
- Depressants
- Alcohol (prototype)
- Barbiturates
- Benzodiazepines
- Alcohol (see handout)
- Key characteristics
- Withdrawal
- Special considerations
- Key points in alcohol withdrawal syndrome
- Mild withdrawal
- (see handout)
- Key points in alcohol w/d syndrome (cont.)
- Moderate withdrawal
- Key points in alcohol w/d syndrome (cont.)
- Severe withdrawal: more of a concern...by the time they get to the ER, they are often in severe withdrawal from depressants. They have all symptoms of moderate withdrawal, plus hallucinations, seizures...DTs is the big concern. Need to do a really good interview b/c if they progress to DTs, it is irreversible...it has to run its course. It occurs in about 20% of chronic alcoholics. Treat the withdrawal b/f it reaches DTs, they won't get them. It is a medical emergency! 5% of people who go into DTs actually die. They are thrashing about...have to be strapped down. Delirious, screaming. Dr. V gave an example of a pt on the M/S floor with the DTs. If she had known he was an alcoholic, she could have prevented it...seizure precautions, on a depressant such as librium or valium and reducing the amount over several days. Monitor this via vital signs...(if BP dropping too fast this is too high of a dose...if going up then not getting enough).

Addressing alcohol withdrawal syndrome

- Assessment is key
 - Last drink
 - Current drinking pattern
 - Amount currently consumed
 - Gather above data on all other psychoactive drugs consumed
 - History of w/d including shakes, seizures, hallucinations

Assessment of alcohol withdrawal (cont'd)

- Detoxification
 - Compatible medication
 - Stabilizing (loading) dose
 - Gradually taper dose over several days (usually 3-5)
 - Carefully monitor v/s (every 15 minutes while awake)
 - V/S dictate detoxification regime

Detoxification

- Follow w/d protocol for your setting
- Examples are chlordiazepoxide (Librium), clonazepam (Klonopin), diazepam (Valium)
- Phenobarbital effective-when physical dep. On alc & sed/hyp

Stimulants

- Amphetamines
- Cocaine, crack, free base
- Nicotine

Opioids (opiates, narcotics)

- Heroin
- Morphine
- Meperidine
- Codeine
- Opium
- Methadone

Hallucinogens

- Marijuana
- Phencyclidine

Other psychoactive drugs

- Inhalants (gases, solvents, aerosols, nitrites)
- MDMA – Methylendioxyamphetamine (aka: Ecstasy, XTC, E, Adam, etc.)
- Inhalants
 - 896,000 Americans have used inhalants
 - They are quick acting, readily available, and cheap
 - Inhalants cause disorientation, hallucinations, and intoxication similar to being drunk
 - Neurological damage can include hearing and visual impairment, loss of coordination and memory, and learning disabilities (can damage more quickly than other substances)
 - The low status of inhalants as a drug problem compound the difficulty of getting users into treatment
 - Warning signs for inhalant use
 - Chemical odor on body or cloths
 - Red, glassy, or watery eyes, dilated pupils
 - Slow thick, or slurred speech
 - Staggering gait, disorientations, and lack of coordination
- GHB – Gamma-hydroxybutyric acid (aka: liquid Ecstasy, scoop, goop, etc)
- Club drinks: Adrenalin Rush, Stamina, Dark Dog, Red Bull

Social and family problems

- Isolation
- Abuse/neglect
- Stigma
- Secrets
- Codependency (easy to spot...taking responsibility for other people when they should be taking responsibility for themselves...enabling is the same thing)

Culture (cultural groups...see book for examples)

- Varying manifestations of problems
- Dictates definitions

Time-related symptoms of alcohol withdrawal syndrome

-minor withdrawal symptoms: insomnia, tremulousness, mild anxiety, GI upset, headache, diaphoresis, palpitations, anorexia, 6-12 hours after cessation

Alcohol Hallucinosi: Visual, auditory, or tactile hallucinations (12-24 hrs) generally resolve within 48 hours.

Withdrawal seizures: Generalized tonic-clonic seizures. 24-48 hours after drinking

Alcohol withdrawal delirium (delirium tremens): hallucinations (predominately visual), disorientation, tachycardia, hypertension, low-grade fever, agitation, diaphoresis...48-72 hours (peak at 5 days).

Developmental issues

- Stage of development influences intervention approaches (look at what is developmentally motivating)
- Specific examples

Nursing process

- Guides thinking and direction of the nurse
- Prevents errors by its systematic nature
- Assessment (see handout)
- Screening: Pyramid approach or cut to the chase (see handout). Will cut to the chase in the ER b/c you need to treat immediately. Use pyramid in Med/Surg.
- Screening: CAGE, MAST, etc.
 - CAGE is used when you suspect they have a problem. Answer YES is a red flag.
 - Cut Down: have you ever had someone suggest you need to cut down on your drinking?
 - Annoyed: Have people been annoying you about stopping your abuse?
 - Guilty: Have you ever felt guilty for behaviors related to drinking?
 - Eye Opener: Do you need something to get going?
- Screening: Breathalyzer and urine drug screen
- Level of prevention (look at your level of prevention and move forward...that's what she said?)
- Maslow's hierarchy of needs...this is why you have to cut to the chase in the ER. Treat the withdrawal and deal with addiction issues later when crisis has passed.
- Assessing status of drug use...need to know if they are going to go into withdrawal or may be suicidal.
- Assessing for alcohol, depressant use...withdrawal is very dangerous!
- Outcome goals for alcohol/depressant use:
 - **Short-term:** Stabilize w/ depressant drugs; develop trust; meet needs; address presenting problems
 - Sometimes they give the depressant to help mask the symptoms of withdrawal...sometimes people will seek detoxification as a form of abuse (b/c they get drugs to detox). You give Ativan to those people so you can see breakthrough symptoms (Ativan is short-acting). This will enable you to see if they are really in withdrawal. Also, don't want to give elderly anything that will accumulate, and Ativan won't accumulate b/c it is short-acting.
 - **Long-term:** Pursues treatment and recovery; addresses needs of long-term recovery. Dr. V said there will be relapses during long-term treatment...this is to expected.
- Planning
 - Determine resources...may not be in an alcohol-specific setting, so determine the resources that are available.
 - Collaborate with client and family...b/c systems theory says that the system doesn't want change...the way the family operates can push pt back into using again, so family needs to get straightened out as well.
- Implementation
 - Operationalization of plan – concrete activities. Put plan into action.
- Evaluation
 - Identified goals (did you get them to contemplate their situation? did they state that they have a problem? etc...)
- Treatment of CNS depressant withdrawal
 - Assess severity
 - Monitor v/s longer period of time
 - Collaborate with MD or NP or Clinical Nurse Specialist with addictions expertise
 - If appropriate, begin detoxification regimen
 - Treatment of CNS depressant w/d (cont)
 - Continue to monitor
 - Refer to long-term treatment
 - Self-help groups
 - Residential treatment
 - Outpatient treatment

Pharmacologic treatment for chemical dependency

- Antabuse therapy (inhibits the metabolism of alcohol, to yield the toxic product acetaldehyde). It is aversion therapy! If you use alcohol you get very sick/vomit. Pt has to be motivated to take the Antabuse...maybe their environment has a lot of drinking so it's going to be hard for them to abstain.
- Pharmacologic treatment for craving
 - Cocaine: Norpramin (desipramine); Tegretol (carbamazepine); need to be in support program while taking this.
 - Alcohol: ReVia (Naltrexone) – competitive antagonist at a morphine-like (mu opioid) receptor in the brain; blocks receptors & reduces craving : Acamprosate (Campral) – stimulates brain receptors for glutamate and indirectly modify dopamine activity in the limbic system
 - Heroin
 - Dolophine (Methadone) – mimics morphine at opiate receptors
 - LAAM – longer acting than methadone
 - ReVia (Naltrexone)
 - Subutex and Suboxone - sublingual (buprenorphine)...this drug is also for alcoholics...it is able to be prescribed now by general practitioners...NPs are trying to get permission to prescribe this to increase # of people treated.
- Pharmacology for Nicotine Dependency (need a triple tx: Wellbutrin/antidepressant, support group, nicotine patch)
 - Bupropion – Zyban (Wellbutrin)
 - Dose 150 – 300 mgs QD start one week before quit date, no make up missed dose
 - Antidepressant and dopamine stimulation
 - SE – dry mouth, insomnia, HA, rhinitis, rash, shakiness
 - Contraindications – seizure, allergic, Anorexia, MAO inhibitors, hx severe head trauma, active addiction alcohol or other drugs
 - Reduces withdrawal symptoms of irritability, frustration, anger, anxiety, difficulty with concentration, restlessness, depressed mood, craving
 - May use in conjunction with nicotine patch
 - Often used after previous quit attempts
- Other treatment modalities for addictions
 - Motivational interviewing
 - Solution focused therapy
 - Assertiveness training (Dr. V thinks this is super important...it is a process of learning skills to be assertive. This can decrease a person's stress, improve self-confidence and self-awareness.)
 - Relapse prevention
 - Group therapy
- Goals of long-term recovery
 - Longer periods of abstinence
 - Seek healthy coping with stress
 - Assume responsibility for behavior
 - Engage drug-free social support system
- Prevention strategies
 - Family strategies: open honest communication; flexibility; level of prevention
 - Community strategies: zoning; networking; monitoring youth; community education
 - Local and state governments
 - Federal government
- Criminal justice system
- International scene
- Integrated approach
- Apply nursing process to case study (see case study)

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