Addiction Therapy-2014

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Coupling 12 Step Program and Fellowship with Molecular Neurobiology

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DOMINION DIAGNOSTICS

Jellinek Definition of Dependence

Focused on a predictable course of a disease with potential subtypes based on:

- The clinical course
- Hypothesized causes
- Evidence of physiological damage

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Substance Dependence (DSM-IV)

- Tolerance *
- Withdrawal *
- Loss of control in limiting intake
- Inability to / Persistent desire to cut down or control
- Great deal of time spent obtaining, using, or recovering from (compulsion to seek and take drug)
- Important activities given up or reduced
- Use despite problems caused or exacerbated by use
  - (* Diagnosis with physiological dependence)

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NCADD & ASAM Definition

Addiction is a primary chronic disease with genetic, psychosocial and environmental factors influencing its development and manifestations:

- The disease is often progressive and fatal
- It is characterized by continuous or periodic
  - Impaired control over substance use
  - Preoccupation with the drug
  - Use of substances despite adverse consequences
  - Distortions of thinking, most notably denial

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AA Sayings: Description of Illness

- I didn't get into trouble every time I drank,
  but every time I got in trouble I was drinking
- You can always tell an alcoholic,
  but you can't tell them much
- Instant A..hole, just add alcohol
- My best friend became my worst enemy
- I did my drinking from Park Avenue to park bench

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AA Sayings: Pathophysiology

- I'm a normal person, minus two drinks
- One drink is too many and a thousand is not enough
- Insanity is defined as doing the same thing over and over again, expecting different results
- Alcoholics heal from the outside in, but feel from the inside out
- Alcoholism is the only disease that tells you, you don't have it
- Death, insanity or recovery

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Set Points in Self-Administration

- On Signal
  - Description of thoughts, feelings and behaviors that result in “thought of using” or “craving”
- Ah Signal - Euphoria
  - “the high” - The feeling of enjoyment and satisfaction (satiation) “I’ve had enough” is when enough is enough
- Off Signal - Dysphoria
  - Description of thoughts, feelings and behaviors that send a signal of “I’ve had too much”

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Neurobiological Basis of Powerlessness

Sensitivity of system (% difference) to notice or measure changes in signal strength

Sensitivity = degree of change necessary to be recognized as a signal

- Signal differential (+ or -) units of measurement
- Difference between on and off signals

If change in signal strength < differential sensitivity

- Below threshold for noticing = no signal
- Above threshold = recognized as signal and response occurs
  - Examples = temperature differential of thermostats (+/- F)

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Neurobiological Basis of Powerlessness

Degree of Sensitivity – inherited + acquired

Sense of self- control depends upon measuring changes in neuronal circuitry

- If you are in control, you can measure change
- If you are in control, you can respond to changes

Sense of “out of control” or “loss of control”

- Control = Executive functioning : decisions and judgment
- If you can’t measure changes, you can’t respond to changes and take action to correct
- If executive function impaired, make poor decisions
- Once aware of poor decision making, try harder to control

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Neurobiological Basis of Powerlessness

Powerlessness = Can't control outcome

Step One : Admit you are powerless over alcohol and our lives had become unmanageable

- Widened differential in "on, ah, and off" signals
- Lack of sensitivity of neuronal circuits
- Lessened self control of dose changes over time
- Inability to reliably predict and control outcome of decisions

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Neurobiological Basis of Powerlessness

Powerlessness = Can't control outcome

Alcoholics and Addicts have a "control disability"

- As control efficiency worsens, efforts to control increase
  - CAGE questionaire
- As self directed attempts become more "reliably unreliable"
  - Alcoholics and addicts compensate by becoming control freaks
  - Over-reliance upon self inflates ego
  - As belief in self's ability to control decreases - awareness of control problem increases

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Neurobiological Basis of Surrender

Step Two: Came to believe that a power greater than ourselves could restore us to sanity

- A power greater than ourselves = other than ourselves
- Other than = outside of ourselves = external

Calibration: External point of reference against which you compare yourself to

- You cannot calibrate yourself
- You need to request re-calibration from someone or something external to oneself

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Neurobiological Basis of Spirituality

Step Three: Made a decision to turn our will and our lives over to the care of God as we understood Him

GOD = Group Of Drunks

Good Orderly Direction

Turn it over

There is a God and I'm not it

If God is your co-pilot, switch seats

If God seems far away, who moved?

AA works for people who believe in God.
AA works for people who don't believe in God.
AA NEVER works for people who believe they ARE God

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Treatment = Avoid Agent of Illness

- Focus on the agent as the cause of problems
  - One drink is too many and a thousand is not enough
  - Don't drink or use between breaths
  - Remember your last drunk
  - Sobriety, then serenity
  - First things first
  - An ounce of prevention is worth a gallon of relapse
  - Life starts when you stop
  - Don't drink, don't think and go to meetings
  - If you play on the railroad tracks, it's not the caboose that kills you
  - Poor me, poor me, pour me another drink

SLIP = Sobriety Loses Its Priority

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Time Course of Healing

- Act as if
  - Behave in desired manner even if you don't feel like doing so
  - The "Two Way Street"
  - Favorable response sends signals via metabolotropic receptors
- Slow but sure Give time, time
  - Expectation of rate of recovery is faster than rate of disappearance of neuroadaptation
  - Knowing your status in relationship to recovery – "I'm supposed to feel this way"
- You can't speed up your recovery, but you sure can slow it down
  - Lack of recovery efforts and practice of recovery skills does not send signals to reshape brain
  - Continuation of old thoughts, feelings, behavior (dry drunk) maintains signals through pathways that remember association with drugs
  - Re-exposure to small doses may maintain neuroadaptation and create primary and reinstatement

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Emotional Stress : Relapse Triggers

- Anger is but one letter away from danger
- HALT = Hungry, Angry, Lonely Tired
- FEAR = frustration, Ego, Anxiety, Resentment

- It's a shame we can't forget our troubles the same way we forget our blessings
- Behave in desired manner even if you don't feel like doing so ("two way street")
- Don't let unpleasant people rent space in your head
- The road to resentment is paved with expectation

- Guilt is the gift that keeps on giving
- Sorrow shared is halved; joy shared is doubled
- Nothing is so bad, a drink won't make it worse
- The flip side to forgiveness is resentments
- Don't quit before the miracle happens

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Cue Induced Relapse Triggers

- Cue Induced Sayings
  - If you hang around long enough in a barber shop, you'll get a haircut
  - If you don't want to slip, stay away from slippery places
  - Don't hang around wet places and wet faces
  - Lead us not into temptation, I can find it myself
  - We are only as sick as our secrets
  - Stick with the winners
  - Seven days without an AA meeting makes one weak
  - Don't try to clear away the wreckage of the future
  - Nothing is so bad, a drink won't make it worse

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Focus on the First Drink : Priming

- Keep the plug in the jug
- First things first
- Keep your sobriety first to make it last
- If you play on the railroad tracks, it's not the caboose that kills you
- Remember you last drunk
- Think through the drink
- Before engaging your mouth, put your mind in gear
- Are you walking towards a drink or away from one?
- SLIP = Sobriety Loses Its Priority

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Progression of the Disease

- Fact: Dose of drug and severity of addiction worse after reinstatement
  - It's as if disease had progressed during abstinence
    - It took 10 years for me to get to a fifth a day.
      20 sober years later, I returned to a fifth a day in one week
- Mechanism of Action
  - Similar to antibody memory effect of immunity
  - Short interval for neuroadaptation and dependence to re-occur compared to its rate of initial development
  - Re-exposure to the drug sends signals to memory areas triggering gene expression for return of neuroadaptation
  - Specific anatomical sites and neuronal pathways involving memory circuits and neurotransmitter glutamate

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Inhibitory Deficits in Addiction

- Increased impulsivity
- Adverse life events can increase impulsivity
  - Conflicts, incarceration, homelessness, etc.
- Problems with reversal learning
  - Addicts don't know they are doing it wrong
  - Perseverate doing the wrong thing
  - "Doing the same thing over and over expecting different results."
- Inferior frontal gyrus gray matter deficits
- Drugs damage frontal lobe inhibitory systems
  - Can we strengthen these systems with medications and/or therapies?

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Impulsivity and Addiction

- I want what I want when I want it
- Think through the drink
- The 7 T's – Take Time to Think The Thing Through
- Before engaging your mouth, put your mind in gear
- Remember when
- This too shall pass
- Have a good date, unless of course you have made other plans
- If I think, I won't drink. If I drink, I can't think
- One day at a time
- Slow but sure

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One Day at a Time

Break intervals into smaller and smaller units

- Counteracts projection into future
  - Thought of never being able to use again, makes me want to use more
- Smaller intervals increases sensitivity
  - Overwhelmed = too long an interval
- Breaks connection between thoughts of using and behavior of using
  - In active addiction, thoughts of using = attempt to use = use
  - In active recovery, urges and cravings are NOT followed by use
  - Extinguishment of signal (thoughts of using) from behavior results in symptom improvement over time
- Establishes recovery dose response relationship
  - If you get through it, your chances of getting through it again go up

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Distortion in Thinking

- There are none too dumb for the AA program, but many are too smart
- Don't intellectualize – utilize
- Decisions aren't forever
- We are only as sick as our secrets
- Use the 24-hr plan
- AA = altered attitudes
- We have a thinking problem, not a drinking problem
- My best thinking got me here
- There are two days in every week which we have no control over – yesterday and tomorrow. Today is the only day we can
- Minds are like parachutes – they only work unless they're open
- If you turn it over and don't let go of it, you will be upside down

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Recovery: Changing Your Brain

- Increase dose and frequency of recovery activities
  - 90 meetings in 90 days
  - 20/20: Come 20 minutes before the meeting, stay 20 minutes after
  - Keep coming back, it works if you work it
- Insert pause in between thought and feeling
  - Call your sponsor before, not after, you pick up a drink
  - Help is only a phone call away
  - The 500 pound phone
  - Easy does it, but DO it

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Recovery: Problem Solving Tools

- Change response of thought into action
  - Act as if
  - You are not required to like it, you're only required to Do it
  - Identify, don't compare
  - The first step in overcoming mistakes is to admit them
- Recalibrate by talking to others
  - Take the mess to your sponsor, take the message to the meeting
  - The smartest thing an AA member can say is , help
  - Write a gratitude list and count your blessings
  - Ask us how we did it, then do what we did

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Recovery Dose Equivalency

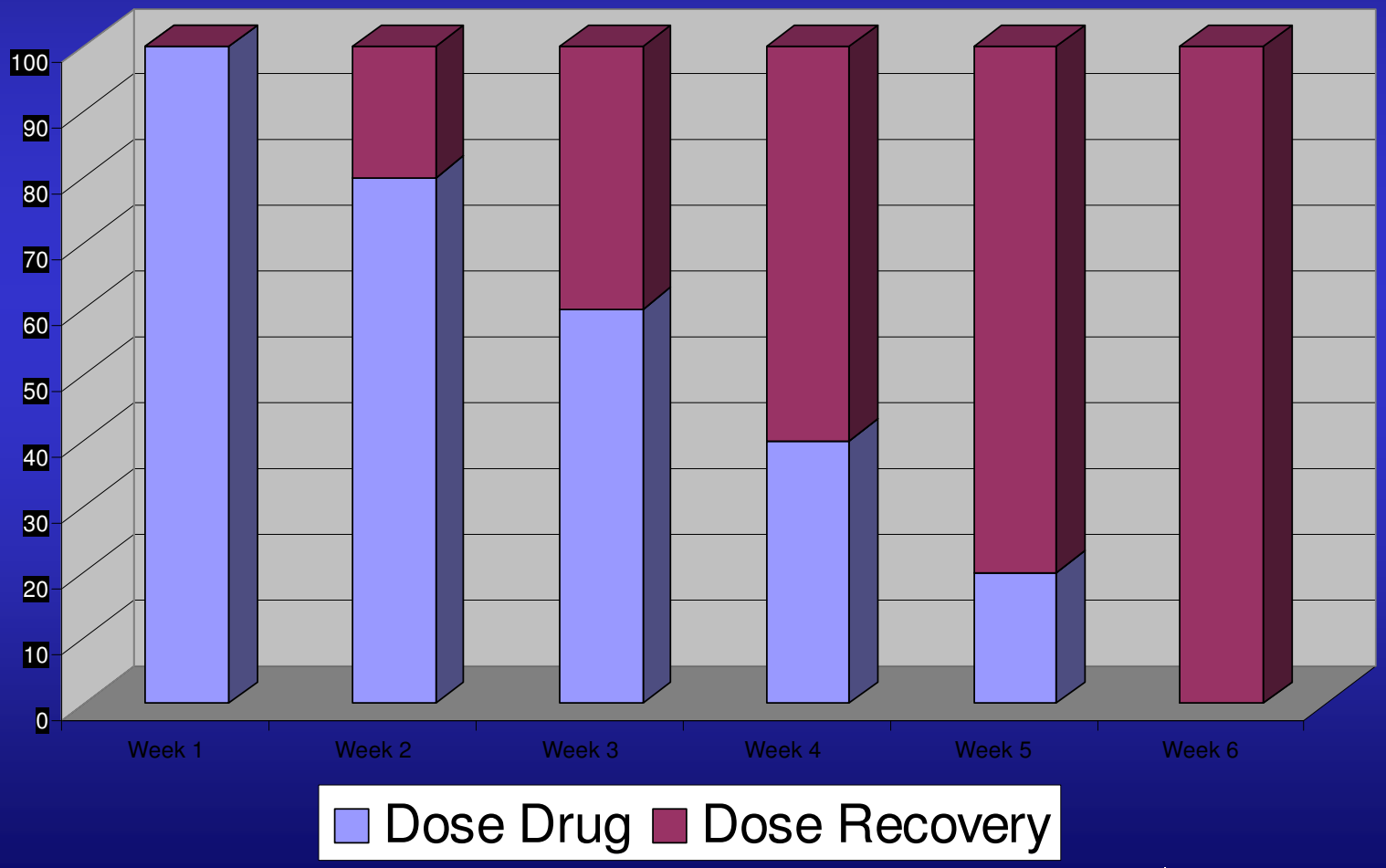
Concept of “dose equivalent” = reduction of withdrawal symptoms by non-drug techniques = social setting detoxification, supportive care

- Need to try non-pharmacological approaches
  - Change setting – go for a walk, exit strategies, re-arrange living environment
  - Asking for help
    - Calling sponsor
    - Speaking about feelings
  - Exercise
  - Attending meetings
  - HALT techniques
  - Hot baths / showers
  - Massage
  - Meditation, visualization
- Other pharmacotherapies
  - NSAID
  - Mood stabilizers
  - Antidepressants
  - Sleeping aids (often unnecessary when buprenorphine dose is adequate)

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Detox Schedule

Rate Dosage Adjustment + Recovery Skill Acquistion



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Spirituality as necessary for recovery

- Epigenetic mechanism
- Mindfulness – watching yourself and letting go
- Dose equivalency of recovery
- Recovery tools and induction of brain changes
- Neuroplasticity and recovery
- Paradox, pleasure and pain
- Neurobiology of recovery and pet scans of internal reward satisfaction
- Loss of contextual placement = loss of sensitivity of person in relationship to places and things

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Direct Instruction: How It Works

- To thine own self be true
- Spirituality is the ability to get our minds off ourselves
- Humility is our acceptance of ourselves
- Formula for failure: try to please everyone
- We'll love you, until you learn to love yourself
- HOW – Honesty, Open-mindedness, Willingness
- ISM = I, Self, ME
  Incredibly Short Memory
  I Sabotage Myself

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Role Modeling and Expert Quide

- Stick with the winners
- Sponsors: have one, use one, be one
- Pass it on
- Share your happiness
- My sponsor says I'm trying. Very Trying
- You can't give away what you don't have
- Get to a meeting early and go to the meeting after the meeting
- It's easy to talk the talk, but you have to walk the walk
- When all else fails, follow directions
- AA is a education without graduation

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Spirituality : Outside of Self

- Where you go, there you are
- Spirituality is the ability to get our minds off ourselves
- Faith is spelled a-c-t-i-o-n
- It isn't the load that weigh us down – it's the way we carry it
- Principles before personalities
- When you do all the talking you only learn what you already know
- Religion is for those who fear Hell, spirituality is for those who have been there
- There is a God and I'm not it
- There are not atheists in foxholes
- AA never opened the gates of heaven to let me in, AA did open the gates of hell to let me out
- There is not chemical solution to a spiritual problem

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IMPLICATIONS FOR TREATMENT

- Education about Neurobiology
  - Understand AA/NA slogans
    - Your disease talking
    - Thinking through the drink
    - Progression of disease
  - Improve behavioral strategies
    - Handling of urges and cravings
    - HALT techniques
    - Emotional control techniques
  - Increase acceptance of disease
    - Adolescents and need for total abstinence
  - Breakdown denial
    - Specifics of drug effect rather than consequences of “yets”
  - Cross tolerance and dependence
  - Use of medications for treatment
  - Risks of combined drug and medications

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Addiction Therapy-2015

Florida, USA

August 3 - 5, 2015

Addiction Therapy – 2015 Website:

addictiontherapy.conferenceseries.com