ADDICTION and Substance Use Disorders

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Disclosures & LO's

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Learning Objectives:

1) Identify the common pharmacologic effect between each of the five (?six) families of controlled drugs
2) Describe the basics of safe clinical reasoning with respect to prescribing ANY medication, and ESPECIALLY CRX
3) Outline a prudent approach to the longitudinal prescribing of controlled drugs

Terms

- Tolerance
  - The development of a need to take increasing doses of a medication to obtain the same effect; tachyphylaxis is the term used when this process happens quickly
- Dependence
  - The development of substance specific symptoms of withdrawal after the abrupt stopping of a medication; these symptoms can be physiological only (ie, absence of psychological or behavioral maladaptive patterns)

Substance Use Disorder DSM-V

- Tolerance*
- Withdrawal*
- More use than intended
- Craving for the substance
- Unsuccessful efforts to cut down
- Spends excessive time in acquisition
- Activities given up because of use
- Uses despite negative effects
- Failure to fulfill major role obligations
- Recurrent use in hazardous situations
- Continued use despite consistent social or interpersonal problems

* ? not counted if prescribed by a physician

Severity measured by number of symptoms; 2-3 mild, 4-6 moderate, 7-11 severe

Substance abusing or addictive brains = High Risk Brains **(I am sorry but they just are!!!)**

- Substance use disorder mild (Substance Abuse) = planned binge – type use patterns
  - Higher risk
  - Phase or time of life
  - Behavior not a disease
- Substance use disorder moderate or severe = intermittent, inconsistent, unpredictable, *repeated loss of control* over the use of a euphoria producing drug / "high risk" drug / controlled prescription drug; resulting in *repeated adverse consequences* and *craving* when not using
  - Highest risk
  - Chrinic brain disease, 60% genetic, 30% environment, 10-14% life time prevalence
  - Higher in some groups (major trauma / psychiatric patient / chronic pain patient populations)

Substance Use Disorder Moderate to Severe: predictable ***natural history***

- A cascade of increasing dysfunction and disability in the following domains:
  1. ***Self image***
  2. ***Interpersonal***
  3. ***Social***
  4. ***Financial***
  5. ***Legal***
  6. ***Work***
  7. ***Physical***

SUD: from natural history to ***morbidity and mortality***: the unspeakable toll

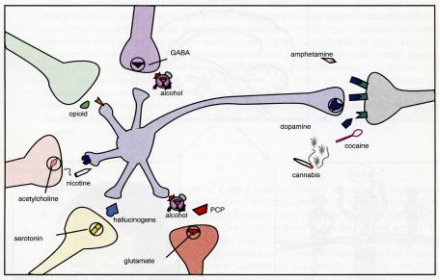
- Tobacco dependence – contributes to 20% USA annual mortality
- Tobacco dependence kills 1/3 and maims 1/3 of users
- Other addictions-
  - ***DEATH***: 700% increased annual mortality risk
  - ***FAMILIES***: 50% divorce, 70% domestic violence, 75% child abuse/neglect, >80% childhood sexual abuse.
  - ***SELF HARM***: 40-50% of successful suicides, 40-80% of level I trauma
  - ***FINANCIAL***: productivity
  - Not to mention all of the other medical complications / organ damage

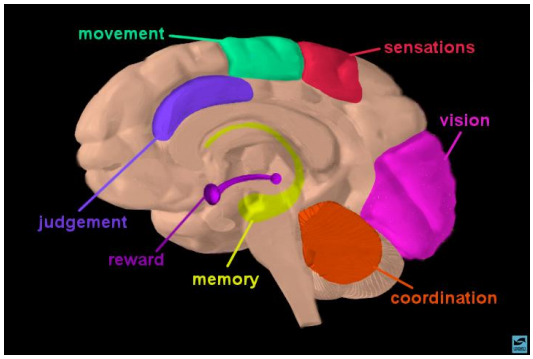
Euphoria Producing Drugs or EPD's

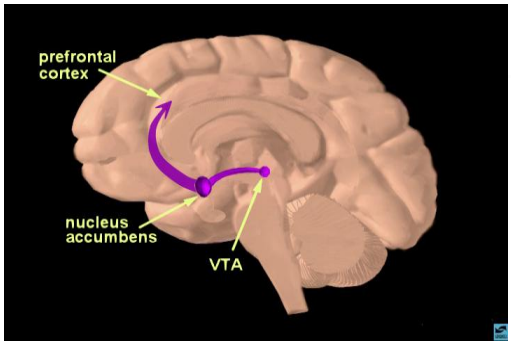
- EPD's include: opioids, stimulants, sedative-hypnotics, cannabinoids, Psychedelics (PCP / ketamine / psilocybin)
- Very different substances
- Totally different primary brain effects
- ALL produce an acute surge of dopamine from the mid brain to the fore-brain
- ***Dopamine surges mediate addictive disease***
- High Risk Medications (***sorry***, but they just are!)

Neuroanatomic substrates

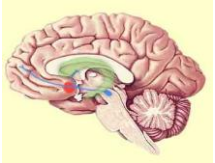
Mesolimbic Dopamine Neuron and Drugs of Abuse





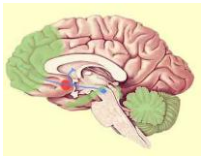


The Pleasure Centers Affected by: Cocaine / Methamphetamine / Ecstasy **& ALL RX stimulants**



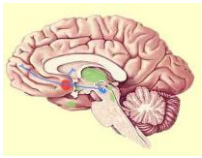
- Cocaine and amphetamines (methamphet / ecstasy / Ritalin / Adderall / Vivanse / Adipex / etc / etc all concentrate in the central link of the reward circuit (the ventral tegmental area and the nucleus accumbens). These areas contain especially high concentrations of dopaminergic synapses, which are the preferred target of these drugs.

The Pleasure Centers Affected by:
Alcohol **& ALL *Benzos, Barbs and Gabapentinoids***



- Alcohol and other sedative-hypnotic drugs affect not only the basic structures of the reward circuit, but also several other structures that use GABA as a neurotransmitter. GABA is one of the most widespread neurotransmitters in several parts of the brain, including the cortex, the cerebellum, the hippocampus, the amygdala, and the superior and inferior colliculi.

The Pleasure Centers Affected by Drugs:
Opioids (from fentanyl to tramadol)



- Opioids act not only on the central structures of the reward circuit (the ventral tegmental area and the nucleus accumbens), but also on other structures that are naturally modulated by endorphins. These structures include the amygdala, the locus coeruleus, the arcuate nucleus, and the periaqueductal grey matter, which also influence dopamine levels, though indirectly. Opiates also affect the thalamus, which would explain their analgesic effect.

The Pleasure Centers Affected by:
Cannabis, "medicinal MJ", synthetics

- The active ingredient in cannabis is THC, which concentrates chiefly in the ventral tegmental area and the nucleus accumbens, but also in the hippocampus, the caudate nucleus, and the cerebellum.
- THC's effects on the hippocampus might explain the memory problems that can develop with the use of cannabis, while its effects on the cerebellum might explain the loss of coordination and balance experienced by people who indulge in this drug.

Controlled drugs ARE Euphoria Producing Drugs: **CRx = EPD's**

- So why do you have to put your DEA # on it?????
- So why do controlled drug RXs cause such a high risk of triggering a relapse of addictive disease?

- So … what does this mean for clinical practice … … …
  - High Risk Brains + High Risk Drugs = ***High Risk Behaviors*** … ***OR IN OTHER WORDS***
  - SUD patients + *chronic* CRX = high risk of problem patient behaviors … causing patient, family, community & Rxer ***harm***.
  - (Hypocritic oath – first do no harm)

So … isn't this just ***obvious***?

(and why spend a lovely day going over it)

- "*Like … don't prescribe long term outpatient addictive and abuse-able medications to patients who are abusers or addicted*"
- Perhaps it is obvious … but haven't you seen it done?
- Several data points: 1992 / 1998 / 2007 / 2016 / today

1992 Inner City Medical Clinic

- "Physician Failure to Record Alcohol Use History When Prescribing Benzodiazepines."

Graham AV, Parran TV: Journal of Substance Abuse 1992. 4:179-185

- ***Little evidence of SUD screening*** in medical records prior to initiating long term benzodiazepine prescription

(FAILURE TO SCREEN FOR CONTRAINDICATIONS)

1998 University Affiliated Large County Teaching Hospital

1. > 7000 Outpatients interviewed for SUD (alcohol problems)
2. Inpatient & Outpatient Medical Record Review for SUD DX
3. Outpatient Medical Record Review for prescribing of CRX: ***patients with SUD DX were THE MOST LIKELY to get OPT CRX***

- Second strongest predictor of receiving a CRX = having SUD documented in the medical record and having a Resident Physician as the doctor
- *Strongest predictor* of receiving a CRX = having a SUD documented in the medical record and having an ***Attending Physician*** as the doctor

This is why this problem goes on and on and on and on over decades

January *2016 – Annals of Int Med*

- *90% of patients **continued to receive** prescription opioids **after** an accidental overdose was recorded in the chart*
- >20% received a higher dose within 6 months
- Opioid discontinuation after overdose was associated with lower risk for repeated OD

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(FAILURE TO RESPOND WHEN CONTRAINDICATIONS EMERGE DURING RXING)

March 2016 - JGIM

- Benzodiazepines are Prescribed More Frequently to Patients Already at Risk for Benzodiazepine-Related Adverse Events in Primary Care.
- J Gen Intern Med. 2016;31(9):1027-1034 March 2016

(ID CONTRAINDICATIONS AND RX ANYWAY)

Controlled drug prescribing trends 1989 - 2019

- 1985-2013 > 500% increase in opioid prescribing in the US
- 2013 – 2024 ~ 50% decrease in opioid prescribing from peak in 2013 (*still **200+%** > than 1980s*)
- 2013-2023 > 30% increase in benzodiazepine prescribing
- 2013-2023 ~40% increase in psychostimulant prescribing

HOW COULD THIS BE? Perpetuation of status quo: FAILURES

1. **HRB's** REALLY REALLY REALLY **want** high risk drugs = RXer-Pt relationship / communication challenge
2. Screening for HRB **poorly & rarely** done & good screens are incompletely / rarely used
3. Un-appreciated contraindications (death/jail/etc)
4. Blurring of basic ethical tenants of doctoring
   Above all, first do no harm … **then** comfort always
5. Lack of knowledge of *SUD dopamine surge nexus*

THIS WOULD ***NEVER*** HAPPEN IN CARDIOLOGY or ID!!!

CRx Prescribing Decisions: ***Remember:*** *Avoid High-Risk Drugs with High-Risk Brains*

- Any prescribing decision involves:
  - Indications – establishing the reason to RX
  - Contraindication – screening for reasons not to RX
  - Clinical reasoning – comparing risks v. benefits
- Contraindication screening requires K,A,S.
  - K=clinically *understanding* contraindications
  - A=*respecting the gravity* of contraindications
  - S=*using screening tools* to ID contraindications **and** communication skills to maintain your boundaries
- ***These*** K,A,S are ***ALL*** needed for safe CRx prescribing

SOLUTIONS: Towards more prudent OPT Prescribing of CRx

- Who **TO** prescribe long term CRx?
  - **Presence** of **Indications** – patient specific and disease specific
    AND
  - **Lack** of **Contraindications**
- Who **NOT TO** prescribe long term CRx?
  - Lack of **indications**
    OR
  - Presence of **contraindications** **(even if indications exist)**

Decisions re: ***possible*** chronic CRX

ASK THE FIVE QUESTIONS: **Universal Precautions**

1. Is there a clear diagnosis?
   1. *In your area of expertise and scope of practice*?
   2. *Of a severity to indicate a potential CRX?*
2. Is there documentation of an adequate work-up?
3. Is there impairment of function or quality of life?
4. Has non-CRX multi modal therapy failed / inappropriate?
5. Are contraindications to CRX therapy ruled out?

- ***Begin CRX therapy AS A TRIAL…Document! Monitor!***
- **Avoid poly-pharmacy *of controlled substances***

Contraindications to ***chronic*** CRX TX

- High Risk Brains (HRB)***:
  - **Current addictive disease = strong contraindication**
  - **Past addictive disease = strong contraindication**
  - **History of diversion = strong contraindication**
- History of significant nonadherence = relative contraindication
- Allergy to C RX medications = relative contraindication
- Severe COPD = relative contraindication (opioids / benzos)
- Obst Sleep Apnea = emerging contraindication (opioids / benzos)

***** Prescribe chronic C RX to HRB's only with expert advice and support (i.e. a methadone or suboxone clinic)**

Prescribing Controlled Drugs: How do you rule out addiction?

- Perform an AUDIT (EMR) and CAGE-AID (in person).
- Ask family or S.O. the f-CAGE (Informed Consent & ROI).
- Consider one or more toxicology tests.
- Inquire of prior prescribers re: use of CRx and Adherence.
- Check the PMP report before ANY CRx (short or long-term)
- If history of current or prior addiction, what class?
  - i.e. sedative hypnotics / opioids / stimulants / cannabinoids

SUD Mod-Severe and long-term CRX

- *Patients who have SUD **have already demonstrated the inability to consistently control their use of euphoria producing drugs**, and that these substances trigger behaviors on the patients' part that produce harm.*
- SUD mod – severe is a life-long diagnosis
- Therefore, ***ruling out current or past H/O SUD*** is an essential step in trying to ensure that a patient is safe when exposed to CRX.

Monitoring strategy when prescribing OPT controlled drugs – ***"universal precautions"***

- Informed Consent Form – AND require / document adherence to it
- Document functional / quality of life improvement – pt and family
- ROI for ANYONE & EVERYONE you think is needed
- Titrate RX to improved function / quality of life
- Referrals / consults / studies / work-up – document adherence
- Monitor medications (opt pharmacy profile printout & PMP).
- Avoid non-planned escalation – "nonadherence"
- Monitor for scams (NO early refills – they are dangerous)
- Periodic toxicology tests, occasional metabolite checks (& levels if high dose)
- Document, document, document! (USE a CRX Flow Sheet)

Prescribing Controlled Drugs: Where troubles come from
The PRESCRIBERS

- The AMA has described mechanisms by which prescribers become involved in RxDA – "the 4-D's + 1 +1"
  - Dated
  - Duped
  - Disabled
  - Dishonest
  - Defiant
  - Distracted

Prescribing Controlled Drugs
The Doctors (PRESCRIBERS)

- Beyond the 4 D's + 1 + 1 – the CWRU experience
  - Medication mania
  - Confrontation phobia
  - Hypertrophied enabling

(makes it is SO hard to say "I am sorry but no")

Diagnosing Aberrant RXer-Pt Relationships

- Assess Behavior
  - The "HEART SINK" Patient interview
- Differential Diagnosis
  - Borderline personality disorder
  - Somatiform disorder
  - Addiction with your CRX (Scams)
  - Family disturbances
  - Criminal intent – "a true capitalist!"

Passik SD, et al. *Oncology*. 1998;12:517-22.
Portenoy RK, Savage SR. *J Pain Symptom Manage*. 1997;14:S27-35.
Passik SD, Weinreb HJ. *Adv Ther*. 2000;17:70-83.
Portenoy RK, Payne R. In: *Substance Abuse: A Comprehensive Textbook*. 3rd Edition. Baltimore, MD: Williams & Wilkins; 1997:563-89.

Prescription Drug Abuse
Scams

- Strategies to increase frequency, number, potency of controlled prescriptions
- Efforts to increase drug supply by stressing/pressuring the doctor-patient relationship

Prescription Drug Abuse
Scams #1

- Spilled the bottle
- The dog ate it
- Lost the prescription
- Washed in laundry
- Medications stolen
- Left somewhere
- The Pharmacist "shorted" me
- "Oh by the way"
- Etc, etc, etc … … …

Dealing with Scams
Principles

- Cops v. Docs attitudes
- No offense but...
- Learn to recognize common scams
- Just say no and mean it – "say no when you mean no and yes when you mean yes"
- Avoid being "coy" – when "no becomes yes"
- Turn the tables

Giving Bad News

- Prepare the patient to receive the news:
- Tell the Bad News (no early refills, need to change RX, etc)
- Use the ***OPEN*** mnemonic:
  - **O**ptimism Statement
  - **P**artnership Statement
  - **E**licit the Patient's Response
  - **N**o More talking, just listen
- Allow space / time for reaction / emotion
- Use ***PEARLS*** statements

Giving Bad News: ***"I am SO sorry … but no"***

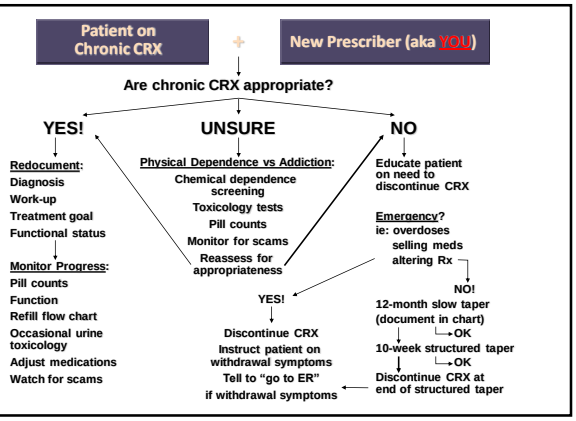
- *"Unfortunately, I have some difficult news for you."*
- "Based on what you have been nice enough to tell me, and your PMP report, I can not continue to RX …"
- THEN Use PEARLS Statements: **P**artnership / **E**mpathy / **A**pology / **R**espect / **L**egitimization / **S**upport
- Then "this can be really hard to hear … I am wondering what your thoughts are?
- Allow space / time for reaction / emotion
- Answer questions, use more PEARLS statements
- Then close

Additional "**words that make a difference**"

- "I wish things were different … and I know that you do too, but they aren't …"
- I thought you had one DX, but now I know you have two DX (including SUD) … and I ***must*** change the TX plan.
- I don't want you sick … but I ***must*** have you safe, and continued prescribing is not safe

Avoid Common Pitfalls

- "But I really, really need the _____"
- "Don't you trust me?" / "I thought we had a good relationship" / "I thought you cared about me?"
- "If you don't give them to me, I will drink / use drugs / hurt myself / go to the street / lose my job / my children will starve!! / … / … / …"
- "Can you just give me enough to find a new doc?"
- "You did this to me" / "I will go into withdrawal"
- ***Remember*** … it is unsafe and thus not allowed … and "I am so sorry … and still want to work with you"



Prescribing Controlled Drugs
Solutions

- Improve skills to ID a **H/O or CURRENT SUD**
- Approach these patients as if they have a relative, if not absolute, **contraindication** to long-term controlled prescriptions!!!!!
- Aggressively pursue skills in DDx and management of:
  - Acute vs chronic vs malignant pain
  - Anxiety vs depression
  - Insomnia

Prescribing Drugs
Solutions (cont'd)

- Use an Informed Consent Form with ***ANY/ALL*** chronic CRX
- Carefully **document** in progress note the rationale, diagnosis, anticipated time course, and symptom endpoint when initiating a controlled drug prescription
- Use a Chronic CRX Monitoring Flow Chart
- Establish a cross-coverage prescription policy
- Do not prescribe CII-CIV to family or close associates

Prescribing Controlled Drugs
Solutions (cont'd)

- Know the pharmacology and abuse potential of all drugs prescribed
- Medical letter, AHFS > PDR, industry reps
- Careful prescription writing and management habits
- Recognize and deal with scams
- ***GET COMFORTABLE PRESCRIBING BUPRENORPHINE-NX IF YOU PRESCRIBE OPIOIDS FOR CHRONIC PAIN (and maybe acute pain)!!!***

Prescribing Controlled Drugs
A Question of Balance

- Implementing RxDA solutions can help ***YOU & ME***
  - Avoid being DATED / DUPED / DISTRACTED
  - Increase comfort with prescribing controlled drugs
  - Markedly decrease ill-advised prescribing
  - Achieve better balanced and improved patient care
  - Maintaining better Prescriber-Pt Boundaries in this high(est) risk area for boundary confusion.