Addiction: Case Study of Opioid Use Disorder

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PINE REST CHRISTIAN MENTAL HEALTH SERVICES

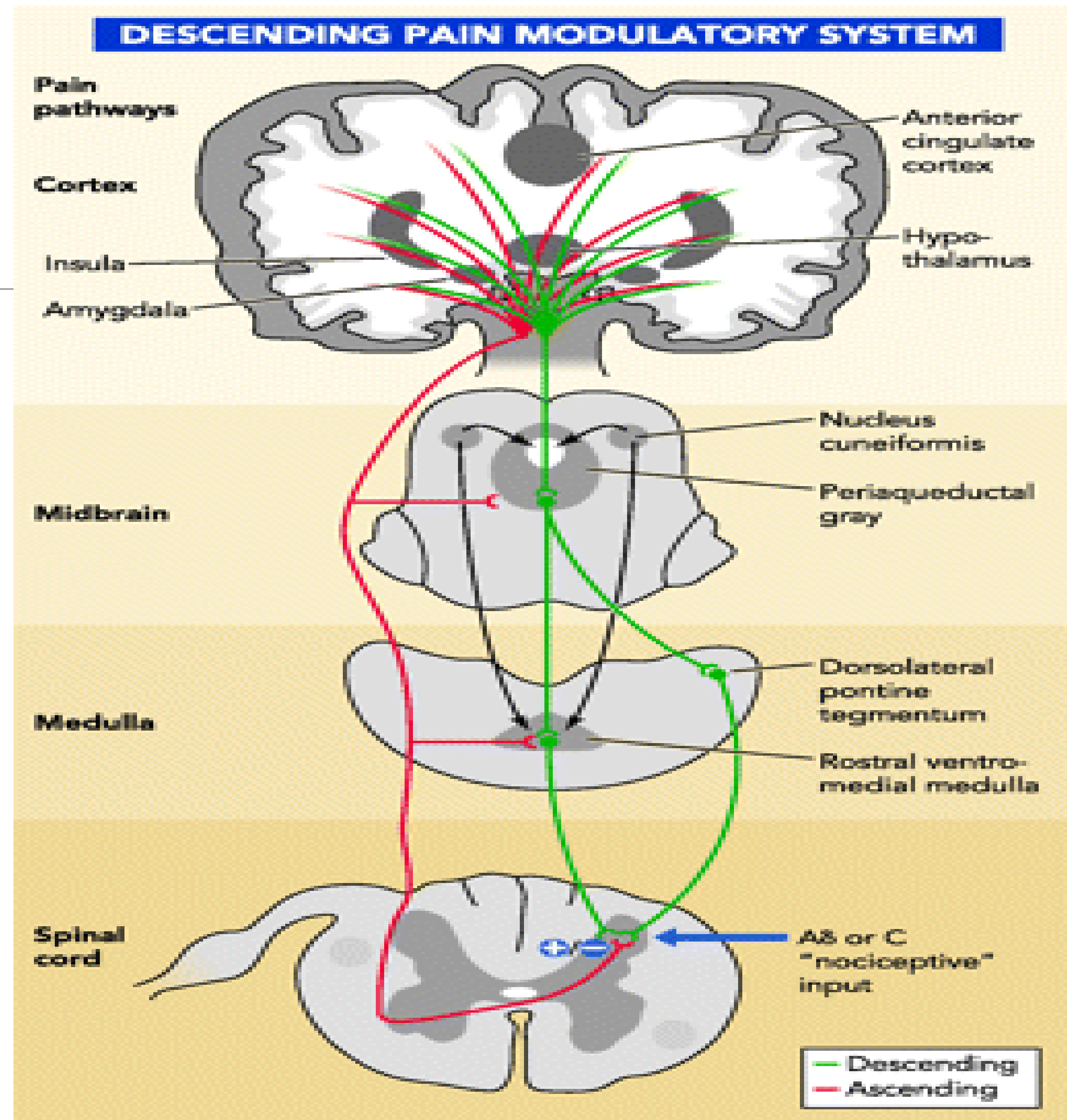
Agenda

- Neurobiology of substance use disorders
- Role of environment
- How to recognize and diagnose SUD in your patients
  - Risk Factors/ Opioid Risk Tool
  - Use of MAPs, pain agreement urine drug screens (practical use)
- Evidence-based treatments
- Team-based care for individuals with SUD

Frank

- 37 year-old white male.
- Hx of AA at age 29, fx pelvis and left femur,
- Chronic left hip pain; opioid use: fentanyl patch, and tramadol p.o., walks with a cane
- Married, 2 sons (5 and 7 y.o.), on disability.
- He misses an appointment

Opiates



American Physiology Society

Frank

- Wife is a paralegal, calls to say that Frank spent last night in jail, where he remains.
- DUI; BAC was 0.13, UDS + for THC, opiates fentanyl and tramadol don't show up as opioids.
- Will be released on probation "hopefully tomorrow."
- Court date set for 6 weeks.
- Wife explains, "Perhaps he has not been totally honest with you."

Pain Modulation and Addiction

- Pain modulating system not working well in patients with Opiate Use Disorder (OUD).
- Patients with OUD may have **more intense** pain experience.

Oud/Addiction

- **A disease**
  - Primary, neurophysiologic, chronic
- **Factors**
  - Genetic, psychosocial, environmental

Addiction

- Chronic brain disease
- Incurable
- Progressive
- Relapsing…

- And can be fatal

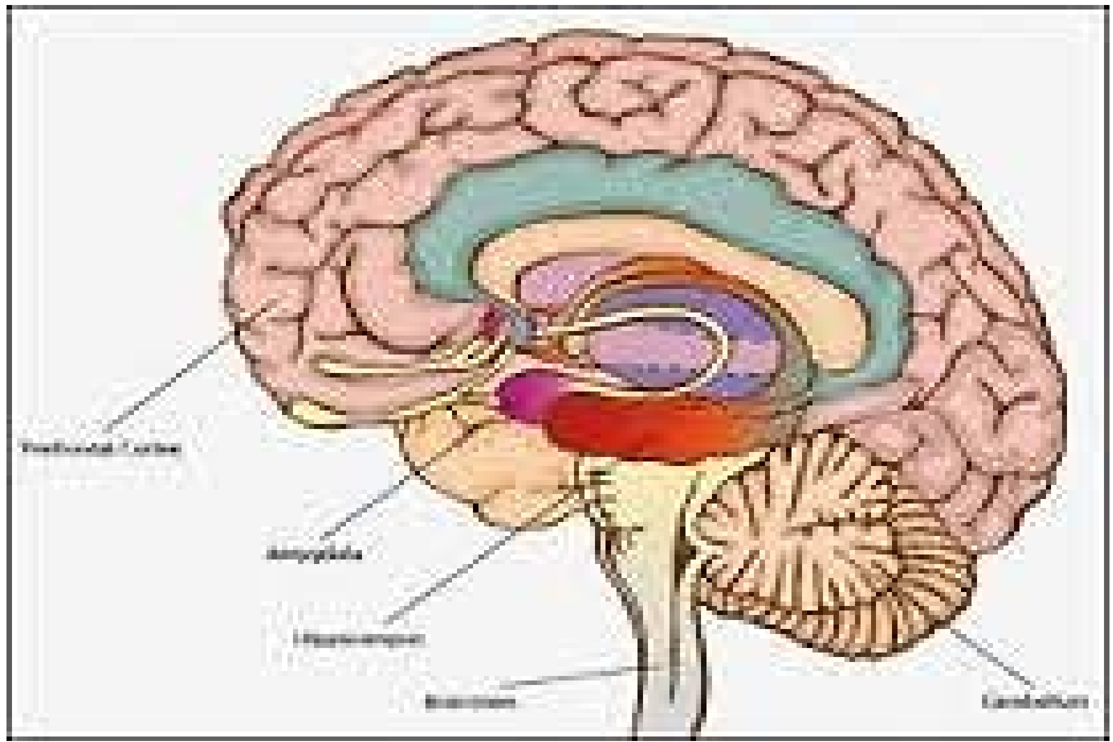
prefrontal cortex

nucleus accumbens

VTA

WWW.DRUGABUSE.GOV

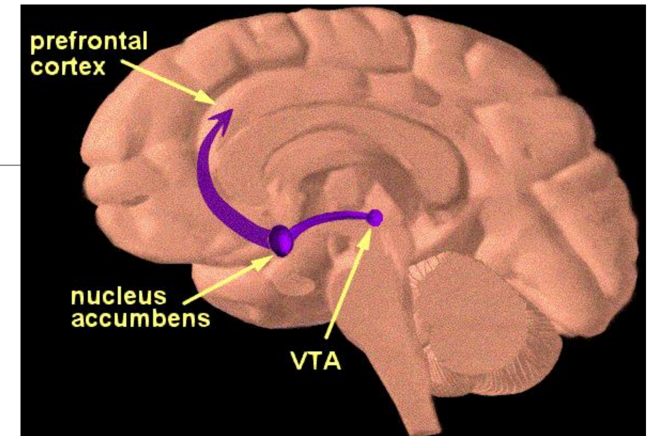
Limbic system: Amygdala/Hippocampus



Frank

- Patient visits three days later, states he will be spending time in jail, wife threatening divorce.
- Has been using heroin for 2 years and at times trades the tramadol and fentanyl for heroin.
- You find needle tracks (old and new) in his antecubital fossa bilaterally.

Pain: Normal patient



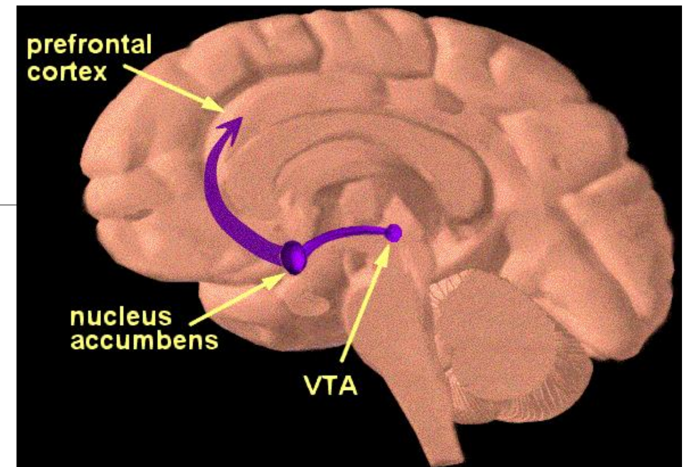
Francis' prefrontal cortex

- Anterior cingulate gyrus
- Orbitofrontal cortex

What to do about pain?

- *Ice/heat to painful areas/NSAIDS, etc.*
- *Make appointment with pain specialist for injections*
- *See PCP to readjust opioids or non-opioid meds and modalities*
- *See chiropractor, continue physical therapy*

Pain: OUD Patient



Frank's prefrontal cortex

- Anterior cingulate gyrus
- Orbitofrontal cortex

What to do about pain?

- *Overuse opiates and buy more from neighbor*
- *Buy heroin, add alcohol or cannabis*
- *Call the doctor and tell him/her that "the dog ate my pain pills"*
- *Report to the ER and tell them pain has worsened after an acute injury*

Locus coeruleus

Coupe sagittale

Withdrawal

- Tachycardia
- Hypertension
- Fever
- Dysphoria
- Restlessness
- Irritability
- Insomnia
- Craving
- Yawning
- Pupillary dilation
- Lacrimation
- Rhinorrhea
- Piloerection
- Abdominal cramping
- Nausea
- Vomiting
- Diarrhea

Withdrawal

- Tremor
- Sweating
- Chills
- Flushing
- Bone aching
- Joint aching

Pain in OUD patients

- Increased pain in opioid withdrawal
- May well be self-limited

- *Addicted patients alternate between intoxication and withdrawal states thus activating the sympathetic nervous system and increasing pain experience*

Substance use disorder defined

- Taking substance in larger amounts and for longer than intended
- Persistent desire or unsuccessful effort to cut down or quit and not able to do so
- A great deal of time and effort spent in activities to obtain the substance
- Cravings or strong desire to use substance

Substance use disorder impact

- Important social, occupational and recreational activities given up or reduced
- Unable to carry out major obligations at work, school or home
- Continued use despite knowledge of having persistent or recurrent physical or psychological problems
- Continued use in physical hazardous situations

Substance Use disorder terms

- **Withdrawal**
  - Characteristic syndrome when the substance is decreased or stopped. The substance is used to avoid withdrawal
- **Tolerance**
  - Need for markedly increased amounts to achieve intoxication

SUD criteria DSM-5

- 2-3 criteria mild SUD
- 4-5 criteria moderate SUD
- 6-7 criteria severe SUD

Misuse/addiction risk factors

- History of substance use disorder
- Young age
- Family history of SUD
- Legal issues
- Mental health history
- Trauma history: sexual/emotional/physical
- Depression

Opioid Risk Tool

- Use when evaluating using opioids in a patient in chronic pain treatment
- Six categories
- Scores risk as low, moderate and high

Source: Webster, L. R., & Webster, R. M., 2005, Pain Medicine, 6 (6) 432-442.

Other red flags

- Reports of lost or stolen prescriptions
- Appearance at office without appointment and in distress
- Family reports overuse or intoxication
- Failure to comply with non-drug pain therapies
- Fails to keep appointments

MAPS: Automated Prescription Service

- In Michigan use MAPS website to get prescription information from the MI Dept. of Community Health
- https://michigan.pmpaware.net/login
- Click on “create an account”
- SAMHSA site for **SUD Treatment Options**

www.findtreatment/samhsa.gov

OUD/Pain patient

- Trust issues
- Fear
- Loss of control
- New environment/new people
- Painful physical therapy
- Issues with family members/poor support system
- Legal issues

Opiate use disorder consequences

Prescription opiates are being supplanted by heroin use in U.S.

Heroin

- Estimated 225,000 pounds smuggled across US border with Mexico in 2014.
- Eight cartels/$300 billion yearly

Carfentantyl

- 10,000 times more potent than morphine
- Half-life 7 ½ hours
- Usual doses of naloxone do not work
- Buprenorphine may not be protective
- May become aerosolized and affect responders
- Costs $3.75/gram

Source: Mark Weiner, MD, University of Michigan

Motivational interviewing basics

1. Express empathy: reflective listening
2. Develop discrepancy: compare patients goals and their present behavior
3. Avoid arguments and confrontation
4. Roll with resistance
5. Support self-efficacy and optimism

SOAPE glossary

Summary

Reinforce patient-physician relationship in midst of this chronic illness.

- "We need to work together on this."
- *"This requires a team effort and **you and I** are two members of the team."*

SOAPE glossary

Optimism

Remember the patient may well expect failure

- "Most people with this disease can't quit by themselves."
- "… with help you will do well…"
- "… no one deserves the pain and humiliation this disease brings…"
- "… treatment works…"
- "… you can expect improvement in most areas of your life…"

SOAPE GLOSSARY

Absolution

Guilt, shame and weakness are paralyzing and can lessen the patients ability to take on sobriety.

- "Your drinking problem is not your fault, it's a disease and it is our responsibility to work together toward your recovery."
- "Recovery is likely."

SOAPE glossary

Plan

- Judging patient's level of willingness is very important now.
- Ask to speak to members of the patient's family to get their perspective.
- Assess the individual's risk of serious withdrawal

SOAPE glossary

Explanatory Model

- Assess what the patient understands about OUD.
- "What is your idea of a person with SUD?"
- "This is an illness that responds to medical intervention and treatment, but **not** to willpower alone."

SBIRT

- Nonjudgmental attitude, empathetic and friendly.
- Persistent and direct questions
- Challenge rationalizing
- With patients consent question friends or family members
- Ask single question about *nonmedical use of opiates or sedative-hypnotics*
- Follow up with more detailed questions

OUD / Pain

- Reinforce to patient with OUD (and chronic pain) that physical and mental rehab for both must be faced simultaneously
- Without this we may have a poorer outcome

OUD is a lifelong chronic condition and patients must be followed as we do for other chronic diseases.

Addiction

- Detox alone has limited utility long term
- Opiate use disorder is chronic and relapse is frequent (85% in 6 months)
- Neuronal adaptations take place in the CNS creating tolerance, dependence and craving, some of which may be permanent

Methadone maintenance

- Federally licensed
- Toxic overdose is much more likely when methadone is used to treat pain
- Potent tool in *Medication Assisted Treatment (MAT)* for OUD
- Stigma still remains
- Number of methadone clinics limited
- Difficult to access in rural areas

Methadone maintenance

- Decrease in illicit opiate use
- Decrease in other drug use
- Decrease in criminal activity
- Decrease in needle sharing
- Improvements in pro-social activities
- Improvements in mental health

Buprenorphine

- An opiate partial agonist
- Binds to the *mu* receptor with great avidity
- Has a ceiling of activity whereby increasing the dose does little to increase its opiate effect and toxicity

Buprenorphine

- **Suboxone, Zubsolv, Bunavail, generic:** buprenorphine and naloxone used most commonly
- **Generic:** Buprenorphine alone used in pregnant women.
- Naloxone is added to discourage diversion as it will cause severe withdrawal if used IV, but is not absorbed sublingually or orally.

Buprenorphine

- Patients are counseled to avoid sedating drugs, alcohol, cannabis, etc.
- A psychosocial program of recovery is required by the DEA
- A patient can remain on buprenorphine preparations for as long as one remains on methadone

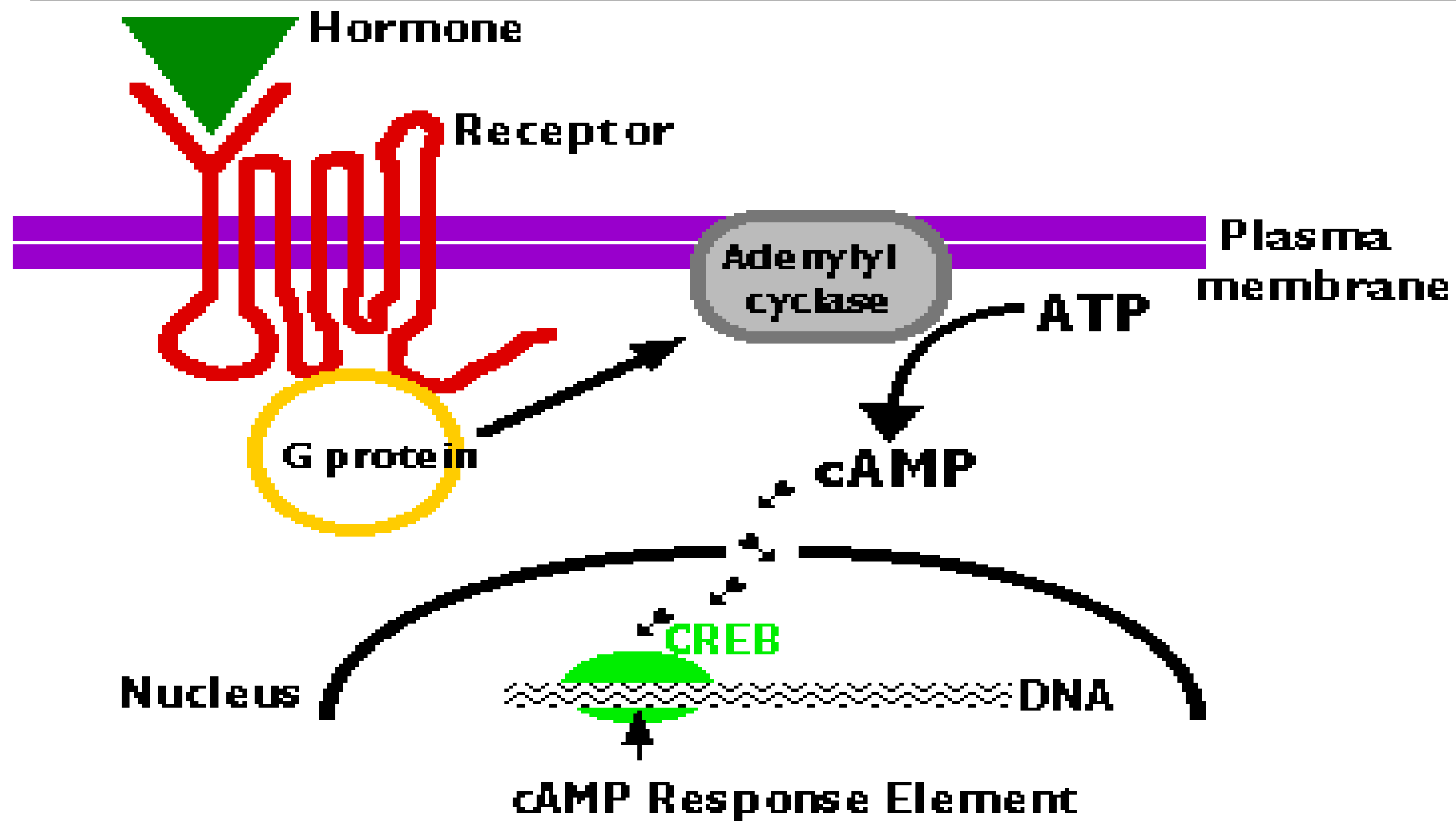
Vivitrol/Naltrexone

- FDA approved for treatment of both alcoholism (2006) and opiate addiction (2010).
- Vivitrol is an opioid receptor ***antagonist***, i.e. will block the binding of opiates to receptors (no "buzz"). It's not a controlled substance.
  - *Vivitrol monthly injection*
  - *Naltrexone 50 mg pill daily*
- No abuse potential
- No diversion potential

Vivitrol/Naltrexone

- In opiate addiction, the patient on Vivitrol/Naltrexone will not experience the sought after euphoria
- They may also not experience any euphoria when thinking about using
- These processes can diminish the craving for alcohol and opiates in addicted patients

Opiate Receptor



Frank

- Discuss withdrawal management at a specialized facility. Private insurance vs. Medicaid.
- High risk of relapse (85%)
- Consider MAT
- You are willing to start him on buprenorphine/naloxone
- Other options: methadone or naltrexone

Addiction

- **Institute a Recovery Program**
- Discuss with an addiction specialist
- Introduce to a treatment program
- Keep a list of local NA meetings
- Be willing to stay engaged with the patient
- Formulate treatment agreement with patient that speaks to patient’s continued recovery from addiction while pain is treated

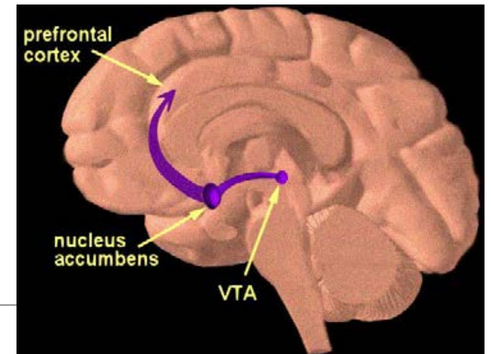
Pain patient

- Establish clear treatment goals
- Remind patient that they will not be completely pain free
- Patient is responsible for improvement in function

Addiction recovery

- **Treatment agreement**
- Observe patient taking meds
- Urine drug screens
- Attendance at 12-step meetings.
- Engage patient’s family and home environment
- Engage patient’s PO

Frank



- You refer him to an addiction therapist.
- Starts an IOP 3 hours/3 days a week.
- You give him a list of NA meetings.
- He must start attending immediately and start looking for a sponsor.
- Have him sign a release for his therapist, wife, pain specialist, physical therapist, probation officer and all other physicians he is seeing.

Addiction recovery

- Complete cooperation with non-pharmacologic and non-opiate treatments.
- Cooperation with counseling, physical therapy, treatment of mood disorders.
- Complete abstinence from other addictive substances.
- Strict use of meds as prescribed and no use of other people's meds.

OUD patient

- Encourage free exchange of information among all providers and with the patient.
- The patient must consent to be held accountable by a team of people including possibly a ***Narcotics Anonymous*** sponsor.

Psychological interventions

- Deep relaxation, Biofeedback
- CBT
- Guided imagery
- Treat mood disorders
- Family/Relationship therapy
- Functional Rehabilitation/PT

Frank

- Have your designated staff check a MAPs every visit.
- Check UDS in office or at your favorite lab. Must report for UDS on same day.
- His lawyer presents his negative UDS results and his treatment plan plus proof of compliance to the judge at trial.
- He is sentenced to three years in “Sobriety Court.”

Case managers

- Very important role in keeping patient engaged in own care
- Opportunities and needs of addicted pain patient missed by others may be recognized by case workers
- Addicted pain patient will be held accountable for honest assessments of their pain and function

Case managers

- Keeping the patient on track
- If patient chooses to participate in AA, NA monitor attendance and impact
- Keeping appointments and bringing all meds to appointments
- Reporting problems
- Continued education of patients concerning their disease and responsibilities

Frank

- You have been reassessing his pain and he is seeing physical therapy and starting low impact yoga.
- Using NSAIDS prn.
- Will see an orthopedic surgeon for advice. Will sign a release to the surgeon.
- He and his wife are seeing a marriage counselor at church.

Modalities

- The goal should be to remain engaged with patient regarding pain while continuing to encourage and support recovery from addiction.
- Must constantly reinforce the patient's active role in treatment.
- See patient frequently, at least monthly
- Ask about their recovery program

Patient

- You continue to follow monthly.
- He sees you at 7 months without his cane and walking with a mild limp.
- Marriage is much improved. Kids are getting therapy.
- Wife goes to Al-Anon.
- His wife and NA sponsor are helping him find a job.

Treatment

- Medications work better if patients are working on themselves.
- Stabilization of psychiatric disease
  - Individual Counseling, Supervised Groups, Relational Counseling
  - Medications
  - Behavioral Modification
- 12 step programs
  - Changing behavior in a supportive environment
  - Growing up
  - Changing thinking patterns
  - Doing life differently

The addicted pain patient

- Ries, K. R., et al, Principles of Addiction Medicine, ASAM, Wolters Kluwer
- SCOPE of Pain Boston University School of Medicine
- Fishman, S. M., Responsible Opioid Prescribing,
- TIP 43, Managing Chronic Pain in Adults With or in Recovery from Substance Use Disorders, SAMHSA.