

Pain Management Wrap-Up Chronic Care

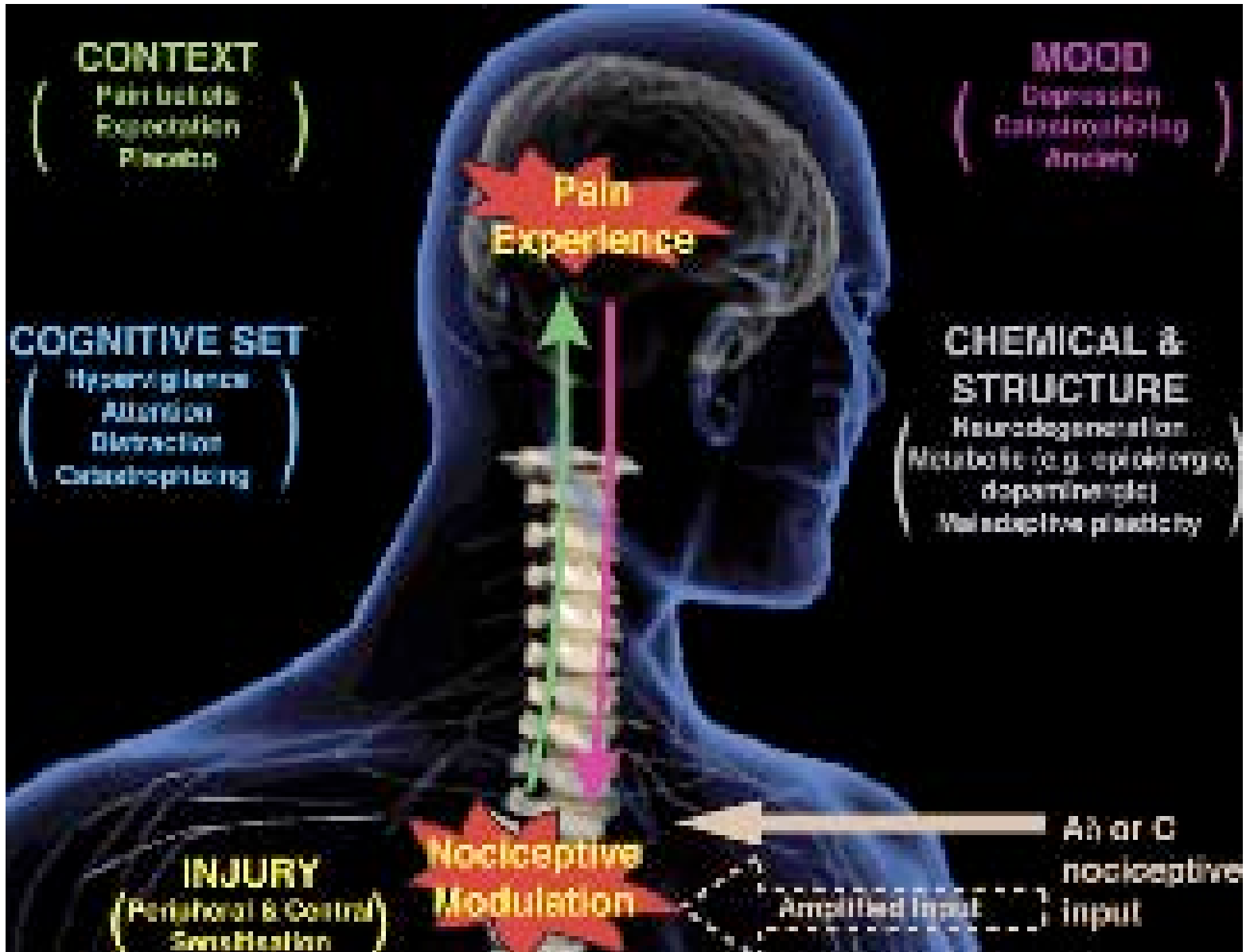
David Tauben, MD

Medicine

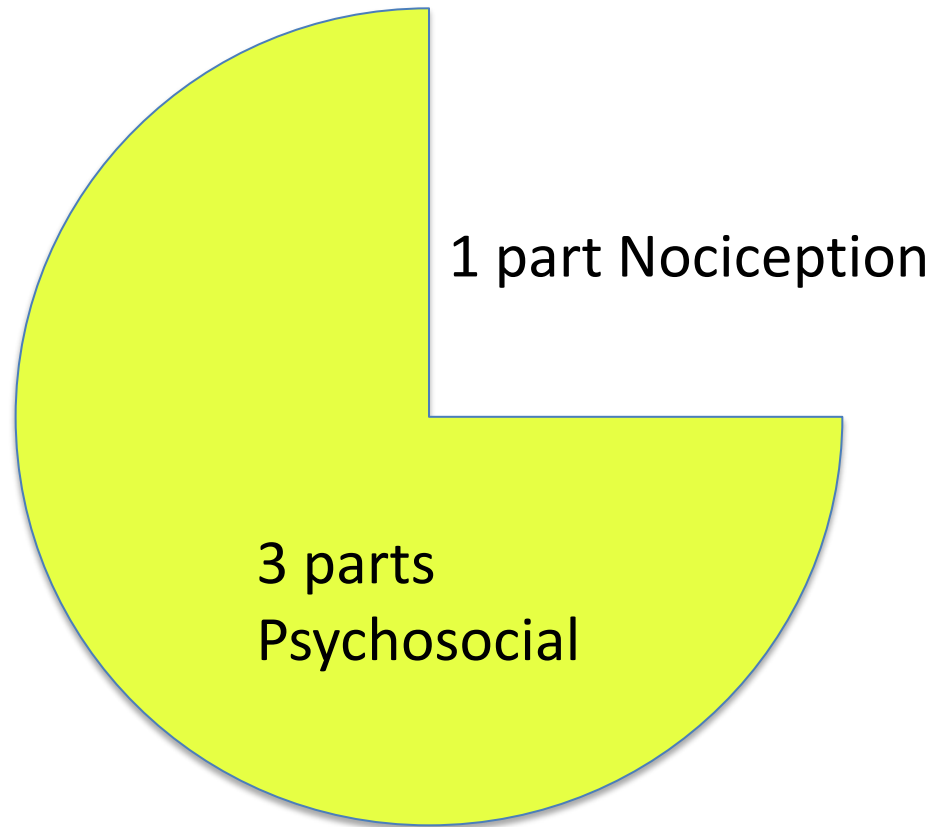
Anesthesia & Pain Medicine

Objectives

- Understand that Pain is Complex
- Know how to select Rx based on Pain “type”
- Be aware that Rx only reduces pain \leq 30-50%
- Recognize that “Chronic Pain” *IS NOT prolonged* “Acute Pain”
- Be able to:
 - Convert any opioid to “Morphine Equivalent Dose”
 - Set up a correctly dosed PCA
 - Conduct an Opioid Trial
 - Interpret a UDT



The Experience of Pain



NATIONAL EVERYTHING AWARENESS DAY



Acute Pain ≠ Chronic Pain

- Chronic Pain changes the brain
- Chronic opioids change biopsychosocial response
 - Tolerance
 - Withdrawal
 - Opioid induced Hyperalgesia
 - Depression
 - Disability
- Chronic use entails more complex concerns
 - Addiction and Physiologic dependence
 - Risks increase with duration and dose
 - Adverse effects
 - Aberrant behavior

3 Pain Types

- Incidental
 - Activation of nociceptors without tissue damage
- Nociceptive
 - Injury (trauma, inflammation, tumor, etc) with maintained activation of peripheral pain receptors
 - Complex hypernociceptive milieu
- Neuropathic/Central
 - Typically initiated by peripheral tissue or nerve injury
 - Injury is no longer required to maintain pain
 - Symptoms: Paresthesias
 - Signs: Allodynia, Cumulative summation

Pharmacologic options: by Pain Type

- Nociceptive Rx:
 - Acetaminophen & other NSAIDs (Cox 1-3)
 - Corticosteroids
 - Opioids
 - TCAs (probably)
 - AEDS (maybe)
- Neuropathic Rx:
 - TCA and SNRI Antidepressants
 - Antiepileptics
 - Opioids

Best Rx can do is 30-50% improvement in VAS/NRS report

Need “brain retraining” with non-medication treatment

Evaluate 6 Pain Treatment Domains

1. Pain Intensity (VAS/NRS)
2. Physical Functioning
3. Emotional functioning
4. Global improvement
5. Symptoms and adverse effects
6. Disposition: compliance/adherence

Opioid dose conversions

- Equivalency Dosing

Morphine 30 mg*

Codeine 200 mg

Fentanyl (TD) 12.5

Hydrocodone 30 mg

Hydromorphone 6 mg

Oxycodone 20 mg

Oxymorphone 10 mg

* MS IV = PO MS x 2

- Methadone in MEDs

- Pharmokinetically
“Logarithmic”

Methadone Dosage

- <30 mg = 3-4 x
Morphine

- 30-40 mg = 4-6 x MS

- 40-60 mg = 10 x MS

- >60 mg = 12 x MS

WA AMDG Opioid Calculator

www.agencymeddirectors.wa.gov

MED dose converter

AMDG on-line tool

www.agencymeddirectors.wa.gov

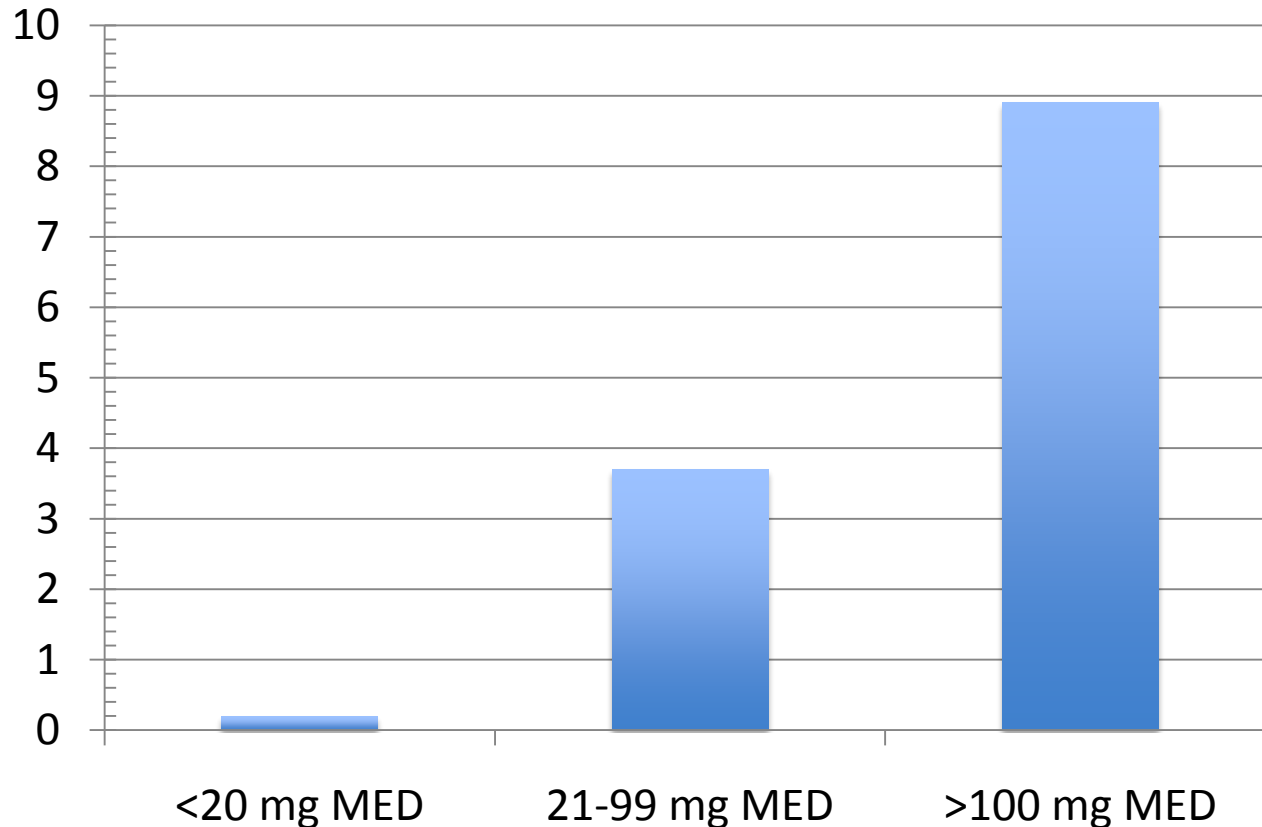
| OPIOID DOSE CALCULATOR | | |
|--|--|------------------------------|
| Optional: | Patient name: | |
| | Today's date: | March 7, 2010 |
| Instructions: | Fill in the mg per day* for whichever opioids your patient is taking. The spreadsheet will automatically calculate the total morphine equivalents per day. | |
| Opioid (oral or transdermal): | mg per day*: | Morphine equivalents: |
| codeine | | 0 |
| fentanyl transdermal (in mcg/hr) | | 0 |
| hydrocodone | | 0 |
| hydromorphone | | 0 |
| methadone | | 0 |
| up to 20mg per day | | 0 |
| 21 to 40mg per day | Since doses at or below 40mg per day are below the threshold for pain management consultation no opioid conversion calculations are necessary for this dosing range (assuming no other opioids are being taken). | |
| 41 to 60mg per day | | 0 |
| >60mg per day | 80 | 960 |
| morphine | | 0 |
| oxycodone | | 0 |
| oxymorphone | | 0 |
| TOTAL daily morphine equivalent dose (MED) | | |
| = | | 960 |
| <p>* Note: All doses expressed in mg per day with exception of fentanyl transdermal, which is expressed in mcg per hour</p> | | |
| <p>If this value is less than 120mg Morphine Equivalent Dose (MED), please follow Part I of the AMDG Interagency Guideline on Opioid Dosing for Chronic Non-cancer Pain. Referral for pain management consultation is recommended before exceeding 120mg MED daily. See www.agencymeddirectors.wa.gov/guidelines.asp</p> | | |
| <p>If this value is greater than 120mg MED, please follow Part II of the AMDG Interagency Guideline on Opioid Dosing for Chronic Non-cancer Pain. See www.agencymeddirectors.wa.gov/guidelines.asp</p> | | |

Transition to Chronic Opioid Therapy

- Occurs at ~ 90 days
- Make **explicit**:
 - Likely committed to *life-long* opioids
 - Side-effect management:
 - Driving risks
 - OD risks
 - Abstinence syndrome
 - Sleep apnea
 - Hypogonadism
 - Informed consent “agreement”
 - Urine Drug Test

Dose Limits for Non-Palliative Care

Increase in risk of overdose per year compared to MED dose



Dunn KM, Saunders KW, Rutter CM, Banta-Green CJ, Merrill JO, Sullivan MD, Weisner CM, Silverberg MJ, Campbell CI, Psaty BM, Von Korff M, Opioid prescriptions for chronic pain and overdose. *Ann Intern Med.* 2010;152:85-92

Washington State Agency Medical Directors Group: Interagency Guideline on Opioid Dosing for *Chronic Non-cancer Pain**

www.agencymeddirectors.wa.gov/guidelines.asp



- ‘Take a breath’ at **90 mg MED**
- ‘Take 5’ before exceeding **120mg/day MED** dose threshold:
 - No pain management consultation needed if the prescriber is documenting sustained improvement in both *function and pain*.
 - *Consider specialty consultation if frequent adverse effects or lack of response is evident to address:*
 - *Evidence of undiagnosed conditions*
 - *Presence of significant psychological condition affecting treatment*
 - *Potential alternative treatments to reduce or discontinue use of opioids*
 - *Risk and benefit of a possible trial with opioid dose >120 mg/day MED*

*Does **NOT** apply to Palliative and End of Life Care

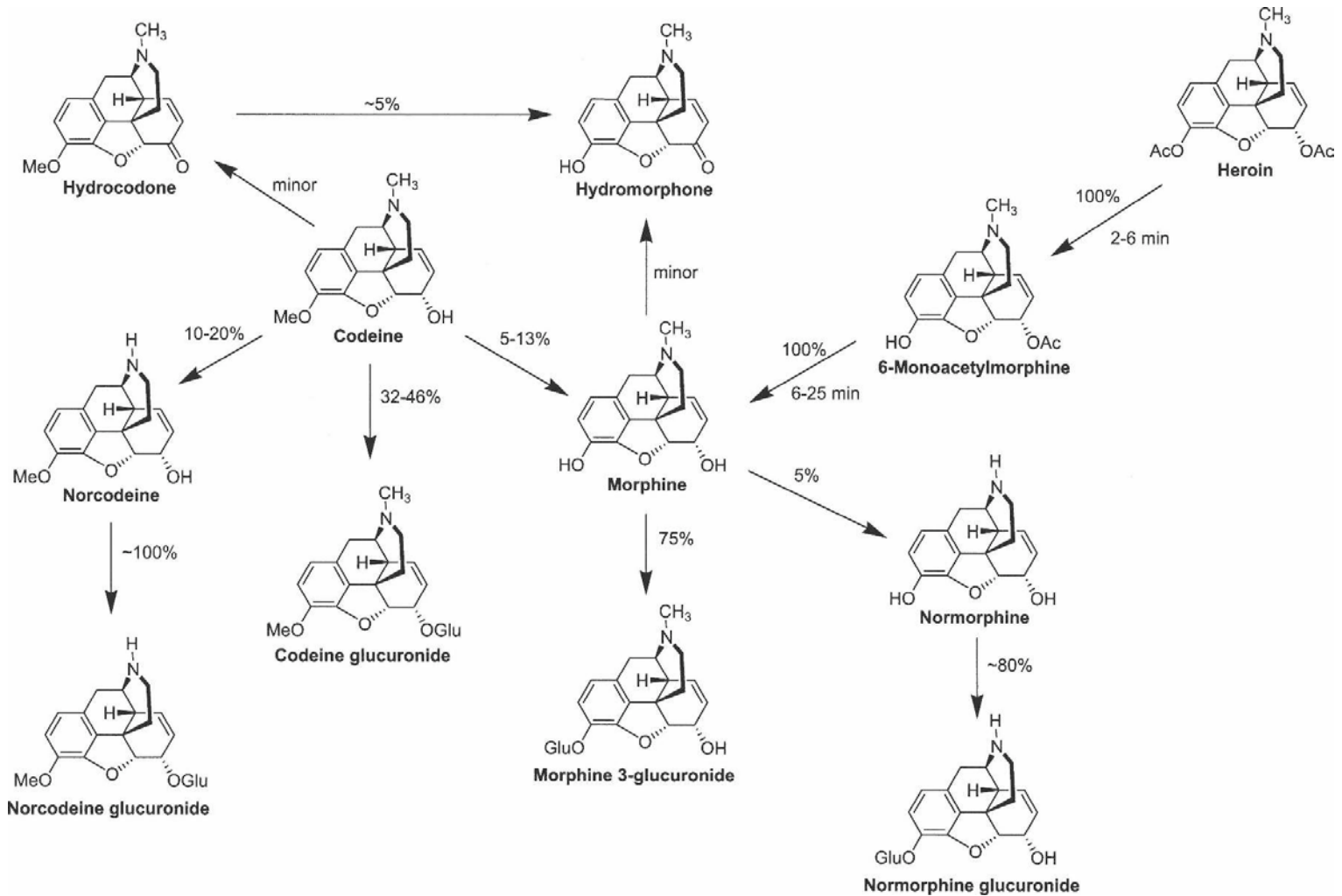
Opioid Trial

- Intention to assess “opioid responsiveness”
 - Analgesia
 - Activity
 - Adverse effect
 - Aberrant behavior
- Intention to discontinue (or reduce) when benefits \leq risks
- Opioid “Rotation”
 - When side-effects occur
 - Possibly when “Opioid Non-Responsive”

“The man (or woman) who is going down the wrong path who turns around first is making the most progress”

C.S. Lewis

“Natural” Opiates: Metabolism



Monitoring

- Urine Drug Testing
 - “NIDA-5”: Misses oxycodone, methadone, benzodiazepines!
 - Dipstick vs. Gas Chromatography (GC): “confirmation testing”
 - Metabolic pathways
 - Codeine → Morphine
 - Codeine → Hydrocodone → Hydromorphone
 - Morphine → Hydromorphone
- Interpretation of negatives/positives
 - Compliance measurement

Problem 1: MED Conversion

- Oxycontin[®] 40 TID $120 \times 1.5 = 180$
 - + Fentanyl 75 mcg $+ 75 \times 2.5 \cong 180$
 - + Hydrocodone 7.5/750
2 QID $+ 7.5 \times 8 \times 1:1 = 60$
- = 420 MED

Problem 1a: PCA Set-up

Oxycontin[®] 40 TID
+ Fentanyl 75 mcg
+ Hydrocodone 7.5/750
2 QID

= 420 MED

- Morphine IV PCA:
(PO dose = IV dose)
3
- Total IV MED = 140
 - Basal/hr = total/24 hr:
5.6 (round down) = 5mg/hr
 - Dose: 5 mg x 2 = 10 mg
- Hydromorphone PCA
 - Hydromorphone = MS
4
 - Basal/hr: 5/4= 1.25 mg/hr
 - Dose: 0.2 mg x 10 = 2 mg

Problem 2: Opioid Trial

- Short-acting Rx options:
Hydrocodone \pm compd, Oxycodone \pm compd, Morphine, Hydromorphone
- Long-acting Rx options:
MS ER, Oxycontin[®], or Methadone, occas. Fentanyl topical
- Measure/Record:
 - A: Analgesia
 - A: Activity
 - A: Adverse Effects
 - A: Aberrant Behavior
- Duration:
 ≤ 90 days
- Calculated MED:
 ≤ 120 mg
- Assessment:
Benefits > Risks ?
- Taper schedule if indicated:
 $\cong 10\%$ reduction per week

Problem 3: Interpreting UDT

- Rx'ing Oxycontin[®] and hydrocodone
- Find: Benzodiazepine, Amphetamines, Oxymorphone, Hydromorphone
- What's aberrant?
 - Benzo and Amphetamines
- What do you do now?
 - Confirm amphetamines by reflex testing (low specificity); determine significance/source of benzo