The Art and (very Little) Science of Evaluating Risk and Tapering Opioid Medications

Who, Why, When and How

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The Permanente Medical Group
Santa Rosa
Objectives

- Identify common complications and co-morbidities associated with opioid prescribing
- Discuss patient work-up options to ensure medical risk mitigation when prescribing opioids
- Learn to design most appropriate type of taper for particular patients
- Gain skills at trouble shooting taper problems to avoid derailing
“We found a bunch of these clogging your arteries. They’re cholesterol pills.”
Case #1: Complex Comorbidities vs. Iatrogenesis Multiforme

• 55 year old man new to KPNC with axial low back pain since 1980’s.
• New chest wall pain since falling off the toilet. Difficulty urinating, permanently disabled.
Past Medical History:

- 9 knee surgeries
- Hx of melanoma 1991
- Hx of interstitial nephritis requiring dialysis
- Hx of alcohol abuse, in AA since 1983
- Hx. of abusing: carbioprodol, diazepam, codeine, oxycodone
Medications

2 Years Ago: methadone 40 mg QID
400% increase in 2 years
Digression #1: Opioids and Low Back Pain

No evidence of efficacy for opioid medication for axial low back pain past 16 weeks

Axial low back pain is one of the most difficult to treat pain conditions and rarely if ever responds to pharmacotherapy
Comorbidities:

- Hypertension – hydrochlorothiazide, metoprolol
- Hyperlipidemia – on simvastatin
- Depression – on citalopram 60 mg PHQ9=19
- No libido and poor sexual function
- Sleep apnea (refusing CPAP)
- Bladder outlet problem – on tamsulosin
- Chronic nausea – on promethazine
- History of melanoma and interstitial nephritis
Case 1: The Physical Exam

- Alert, oriented and appropriate
- Pale, puffy, slightly feminized features
- Overweight
- Walks with a cane
- Some allodynia generally to light touch
- Examination maneuvers painful
- Exquisitely tender along mid axillary line
- Extreme de-conditioning
The “B.E.S.T” Workup

- Bone Density
- EKG
- Sleep study
- Testosterone, total AM
The Workup:

- Qtc
- Total Testosterone
- SpO2
- T score
Digression: QT prolongation

Center for Substance Abuse Treatment Consensus Panel Recommendations:

• Inform patient of risk
• Clinical history
  structural heart
disease, arrhythmia,
and syncope.
• Obtain EKG
  Pretreatment
  After 30 days
  Annually
• More frequent EKG
  Dose > 100 mg daily
  unexplained syncope or
  seizure

• QTc > 450 and < 500
  More frequent EKG
  Risks vs. benefits

• QTc > 500
  Discontinuation?
  Contributing factors?
  Alternative?

• Be aware of interactions
  SSRI
  antibiotics
  Psychotropics
  antiemetics

An Analysis of the Root Causes for Opioid-Related Deaths
Androgen Deficiency

- Common
- Quick
- Profound
- Reversible (usually)
## Elucidating Risk Factors for Androgen Deficiency Associated with Daily Opioid Use

**Andrea Rubinstein, MD,** Diane M. Carpenter, MPH

*Kaiser Permanente Medical Group, Santa Rosa, Calif; Kaiser Permanente Division of Research, Oakland, Calif.*

<table>
<thead>
<tr>
<th></th>
<th>Odds Ratio</th>
<th>Confidence Interval</th>
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<tbody>
<tr>
<td><strong>Duration of Action</strong></td>
<td></td>
<td></td>
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<tr>
<td>long vs. short</td>
<td>5.78</td>
<td>2.44 -13.67</td>
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<tr>
<td><strong>Dose</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 mg short</td>
<td>1.24</td>
<td>1.07 -1.44</td>
</tr>
<tr>
<td>10 mg long</td>
<td>1.02</td>
<td>1.00 -1.03</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td>1.01</td>
<td>0.99 – 1.04</td>
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</table>

Adjusted Odds Ratios for Androgen Deficiency in Patients with BMI <30, No Diabetes, No Hypertension, and No Hyperlipidemia
Does Opioid Use for Pain management Warrant Routine Bone Density Screening in Men?

<table>
<thead>
<tr>
<th>Testosterone Range</th>
<th>Normal</th>
<th>Osteopenic</th>
<th>Osteoporotic</th>
<th>Total</th>
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<tbody>
<tr>
<td>hypogonadal</td>
<td>11 (50%)</td>
<td>9 (41%)</td>
<td>2 (9%)</td>
<td>22 (27%)</td>
</tr>
<tr>
<td>Non-hypogonadal</td>
<td>34 (58%)</td>
<td>20 (34%)</td>
<td>5 (8%)</td>
<td>59 (73%)</td>
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<tr>
<td>total</td>
<td>45 (56%)</td>
<td>29 (36%)</td>
<td>7 (8%)</td>
<td>81 (100%)</td>
</tr>
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</table>

Fortin JD et. al. Pain Physician 2008; 11:4: 539-541
Risk Benefit Analysis

**Abuse and Diversion**
- Early refills
- Lost or stolen medications
- Escalating dose requests
- Emergency Room Visits
- Hx of substance Abuse

**Medical Risks**
- Endocrine
- Sleep apnea
- EKG changes
- Polypharmacy
- Bone Density
- GI / GU

**Psychological Risks**
- Depression
- Relationship Issues
- Cognitive decline

**Functional Issues**
- Disability
- Inability to manage co-morbidities
- Falls
- MVA
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And of Course…

He is still in pain…
Patient Expectations of Pain Relief with Opioids (20 women and 27 men)

<table>
<thead>
<tr>
<th>Domain (PCOQ)</th>
<th>Patients Criteria (mean)</th>
<th>Reduction obtained</th>
<th>T</th>
<th>Cohen’s d</th>
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<tbody>
<tr>
<td>Pain</td>
<td>50.91</td>
<td>11.93</td>
<td>10.89</td>
<td>3.21</td>
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<tr>
<td>Emotional distress</td>
<td>34.62</td>
<td>-0.43</td>
<td>8.25</td>
<td>2.44</td>
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<tr>
<td>Fatigue</td>
<td>40.62</td>
<td>3.89</td>
<td>10.25</td>
<td>3.02</td>
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<tr>
<td>Interference</td>
<td>49.34</td>
<td>10.04</td>
<td>8.91</td>
<td>2.63</td>
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Taper?
Don’t Taper?
What is an Opioid Taper?

A opioid taper is a progressive decrease in the amount of opioid taken with a goal of leading to reduced risk and or opportunity for greater overall quality of life (for the patient).
When to Taper

When what the drug is doing TO the patient is more than what the drug is doing FOR the patient
Who to Consider for Taper

- Motivated patients
- Young patients
- Patients who say “it’s not working”
- Patients who say “it takes the edge off”
- Patients with diagnosable hyperalgesia
- Patients with declining function despite opioids
- Patients on opioids and complex polypharmacy
- Patients whose underlying pain issue may have resolved
Who not to taper

- Addicted Patients
- Palliative Care Patients
- Psychiatriacally fragile
- Pregnant patients
- Resistant patients?
Rules of Thumb for Tapering

- The longer on opioids the slower you go
- small currency
- Down is easier than off
- Rule of thirds
- Sweet Spot: 5-10%

The best taper is the one that works
## Taper Schedule Design

<table>
<thead>
<tr>
<th>Name:</th>
<th>ms</th>
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**METHADONE**

<table>
<thead>
<tr>
<th>DRUG TO TAPER</th>
<th>PILLS SIZE</th>
<th>dosage</th>
<th># TIMES DAILY</th>
<th>TOTAL DAILY DOSE</th>
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<tr>
<td>METHADONE</td>
<td>10</td>
<td>15</td>
<td>4</td>
<td>600</td>
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**GOAL DOSE**

<table>
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<tr>
<th>INTERVAL</th>
<th>start date</th>
<th>% reduction min</th>
<th>% reduction maximum</th>
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<tr>
<td>0</td>
<td>5/4/2010</td>
<td>10</td>
<td>54.0</td>
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### Tuesday METHADONE Taper Schedule for ms

<table>
<thead>
<tr>
<th>date</th>
<th>% drop</th>
<th>Daily mg</th>
<th>#/DAY</th>
<th># RX</th>
<th>mg change</th>
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<tr>
<td>5/4/2010</td>
<td>10</td>
<td>540.0</td>
<td>54.0</td>
<td>1512</td>
<td>60.00</td>
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<tr>
<td>6/1/2010</td>
<td>10</td>
<td>485.0</td>
<td>48.5</td>
<td>1358</td>
<td>55.00</td>
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<tr>
<td>6/29/2010</td>
<td>11</td>
<td>430.0</td>
<td>43.0</td>
<td>1204</td>
<td>55.00</td>
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<tr>
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<td>32.0</td>
<td>896</td>
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<tr>
<td>9/21/2010</td>
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<td>742</td>
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<tr>
<td>10/19/2010</td>
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<tr>
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<tr>
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<tr>
<td>1/11/2011</td>
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<tr>
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<tr>
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<tr>
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<tr>
<td>10/18/2011</td>
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<td>5.00</td>
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<td>3.0</td>
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<tr>
<td>12/13/2011</td>
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<td>2.5</td>
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<tr>
<td>1/10/2012</td>
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<td>20</td>
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<tr>
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<td>5.00</td>
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<tr>
<td>3/6/2012</td>
<td>33</td>
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<td>1.0</td>
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<td>4/3/2012</td>
<td>50</td>
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<td>5.00</td>
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<tr>
<td>5/31/2012</td>
<td>100</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>5.00</td>
</tr>
</tbody>
</table>
Case 1 Revisited 6 months later

- Pain is no worse on half the dose (320 mg)
- Feels ‘100% better’ physically
- Emotionally better
- Testosterone 222 ng/dl
- In process of getting CPAP
- QTC = 395
- Actively participating in multi-disciplinary pain program
Case 1 Revisited 2 years later

- Off methadone
- On buprenorphine 8 mg daily
- No longer needs cane to walk
- Sleep apnea resolved
- Testosterone is 299 ng/dl
- Walking daily for exercise
- Engaging in volunteer work
Digression: Post Acute Withdrawal Syndrome (PAWS)

- Many people will get recurrences of symptoms similar to withdrawal for weeks to months after discontinuation of opioids
- Risk for returning to opioid based therapy
- Implement a PAWS plan
- Plan:
  - Recognize
  - Reassure
  - Relief
  - Ride it out
  - Do NOT restart opioids during this period if possible
The Buy in:

- Forewarn
- Option to return
- Reassure
- Educate
- Support
- Treatment plan in writing
Troubleshooting the Taper

- **Reassure Reassure Reassure**
- **Adjuvant medications**
  - Clonidine
    - 0.1-0.2 mg BID or TID
  - Immodium
  - Benzodiazepines only at the last 7 days
  - Baclofen?
- **Hold or slow or reverse the taper**
  - 30-50%
  - 60-75%
- **Watch the clock**
- **The lower the dose the slower you go**
Summary

- Drugs are neutral
- Don’t blame the patient or the drug
- The goal is to make the patient better
- Risk benefit assessment is critical
- Design appropriate taper type
- Modify the taper as appropriate
- Goal is not always off…
We have created diseases in patients that they are unable to appreciate or verbalize. In some cases medications have altered the their ability to make rational decisions regarding the risks and benefits of therapy.
Questions and Comments

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