Pain and Addiction Challenges in 2013

IntNSA Webinar Series

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Pain and Addiction Clinical Challenges in 2013

International Nurses Society on Addictions

WWW.PCSS-O.ORG

2013 Webinar Courses on Addiction Medicine
Disclosures
• Anthony Dekker, DO, presenter, has disclosed that he does not have a conflict and has no business affiliations to pharmaceuticals. The program is supported with an educational grant from the Centers for Substance Abuse Treatment (CSAT) a division of the Substance Abuse and Mental Health Services Administration (www.samhsa.gov). The opinions of Dr Dekker are not necessarily the opinions of the Indian Health Service, the HHS, the USPHS or the Department of Defense.

Opioids: a Public Health Crisis
• In 2009, 39,147 Americans died from drug poisonings
  • Nearly 14,800 deaths involved prescription opioid analgesics

Past Month Nonmedical Use of Psychotherapeutics among Persons Aged 12 or Older: 2008
Source: NSDUH 2008
Past-Yr Initiates of Specific Drugs Among Persons Age ≥12 Yrs in 2011

The total initiates of nonmedical Rx drug use taken together greatly exceeds initiates of marijuana in 2010.


Nonmedical Use of Pain Relievers in Lifetime, Past Year, and Past Month: 2008

Nonmedical Use of Selected Pain Relievers in Lifetime by Age Group, Numbers in Thousands, 2007
Source Where Pain Relievers Were Obtained for Most Recent Nonmedical Use among Past Year Users Aged 12 or Older: 2008

- 81.7% of pain relievers obtained from friend/relative for free were obtained from one doctor.
- 1.6% were obtained from a drug dealer.

70% of Prescription Pain Relievers Used Non-Medically Come from Friends or Relatives

Past Year Perceived Need for and Effort Made to Receive Specialty Treatment among Persons Aged 12 or Older Needing But Not Receiving Treatment for Illicit Drug or Alcohol Use: 2008

- 1.1% felt they needed treatment and did not make an effort.
- 95.2% did not feel they needed treatment.

Medical Marijuana

- Confusion in regard to medication management and dosing schedules (forgetting doses and med locations)
- Drug interactions appear to be minimal but contaminants are still an issue
- Changes in time and space perception may increase accidental injuries (CA study 40% of impaired MVA)
- Science needs to clarify the indications of CB1 and CB2 receptor agonism
The Problem of Pain

- Costs US economy estimated $100 billion/year
  - Healthcare
  - Welfare & disability payments
  - Lost tax revenue
  - Lost productivity (work absence)
- 40 million physician visits annually
  - Most common reason for medical appointments
- Push toward opioid maintenance therapy in non malignant pain

### Risk Assessment Tools: Examples

<table>
<thead>
<tr>
<th>Tool</th>
<th># of Items</th>
<th>Administered</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORT Opioid Risk Tool</td>
<td>5</td>
<td>By patient</td>
</tr>
<tr>
<td>SDAPP® Screener &amp; Opioid Assessment for Patients w/ Pain</td>
<td>24, 14, &amp; 5</td>
<td>By patient</td>
</tr>
<tr>
<td>DIRE Diagnosis, Intractibility, Risk, &amp; Efficacy Score</td>
<td>7</td>
<td>By clinician</td>
</tr>
<tr>
<td>PMQ Pain Medication Questionnaire</td>
<td>26</td>
<td>By patient</td>
</tr>
<tr>
<td>DIRE Diagnosis, Intractibility, Risk, &amp; Efficacy Score</td>
<td>7</td>
<td>By clinician</td>
</tr>
<tr>
<td>SOAPP® Screener &amp; Opioid Assessment for Patients w/ Pain</td>
<td>24, 14, &amp; 5</td>
<td>By patient</td>
</tr>
<tr>
<td>PDUQ Prescription Drug Use Questionnaire</td>
<td>40</td>
<td>By clinician</td>
</tr>
<tr>
<td>COMM Current Opioid Misuse Measure</td>
<td>26</td>
<td>By patient</td>
</tr>
<tr>
<td>RAFFT Reassure, Alleviate, Friends, Family, Trouble</td>
<td>5</td>
<td>By patient</td>
</tr>
<tr>
<td>DAST Drug Abuse Screening Test</td>
<td>28</td>
<td>By patient</td>
</tr>
<tr>
<td>SBIRT Screening, Brief Intervention, &amp; Referral to Treatment*</td>
<td>Varies</td>
<td>By clinician</td>
</tr>
</tbody>
</table>

**Not specific to pain populations:**
- CAGE-AID Cut Down, Annoyed, Guilty, Eye-Opener Tool, Adjusted to Include Drugs
- RAFFT Reassure, Alleviate, Friends, Family, Trouble
- DAST Drug Abuse Screening Test
- SBIRT Screening, Brief Intervention, & Referral to Treatment*

**FDA Methadone Warning**

FDA ALERT [11/2006]: Death, N里斯tic, Overdose, and Serious Cardiac Arrhythmias

FDA has reviewed reports of death and life-threatening side effects associated with methadone, including those from few but serious adverse events. These events include death, respiratory depression, overdose, and serious cardiac arrhythmias. Deaths have occurred in patients receiving methadone who were either taking relatively large doses, or who were taking methadone with other medications that may increase the risk of life-threatening side effects. Methadone is a Schedule II controlled substance (C-II) and as such has specific toxicities and unique pharmacologic properties. Methadone doses in pain should be carefully selected and slowly titrated to minimize effect even in patients who are already tolerant of opioids. Methadone can be particularly dangerous when it is combined with benzodiazepine sedatives or other CNS depressants. Methadone also prolongs the QT interval on an electrocardiogram, and therefore, methylxanthine use is contraindicated in patients receiving methadone. Methadone is metabolized primarily in the liver, and thus, patients with liver disease may require dose reduction. Methadone is excreted in the urine and should be used with caution in patients with renal impairment. Methadone is a highly potent inhibitor of cytochrome P450 enzymes and should be used with caution in patients receiving other highly metabolized drugs. In some cases, methadone may cause a syndrome of autonomic hyperactivity (visceral rebound). In some cases, patients may complain of nausea, vomiting, diarrhea, sweating, tachycardia, and hypertension. However, these symptoms have also been observed in patients who are not using methadone. Methadone may cause an allergic reaction, rash, or angioedema in some patients. Methadone has specific toxic effects on the heart (QT prolongation and Torsades de Pointes). Physicians prescribing methadone should be familiar with methadone’s toxicities and unique pharmacologic properties. Methadone doses for pain should be carefully selected and slowly titrated to minimize effect even in patients who are already tolerant of opioids. Methadone can be particularly dangerous when it is combined with benzodiazepine sedatives or other CNS depressants. Methadone should be used with caution in patients with liver or renal disease. Methadone is a highly potent inhibitor of cytochrome P450 enzymes and should be used with caution in patients receiving other highly metabolized drugs. In some cases, methadone may cause a syndrome of autonomic hyperactivity (visceral rebound). In some cases, patients may complain of nausea, vomiting, diarrhea, sweating, tachycardia, and hypertension. However, these symptoms have also been observed in patients who are not using methadone. Methadone may cause an allergic reaction, rash, or angioedema in some patients. Methadone has specific toxic effects on the heart (QT prolongation and Torsades de Pointes). Physicians prescribing methadone should be familiar with methadone’s toxicities and unique pharmacologic properties.

**Aberrant Drug Related Behaviors - Less Predictive of an Addiction**

1. Complaining of the need for more drug
2. Drug hoarding during periods of reduced pain
3. Requesting specific drugs
4. Acquiring similar drugs from other medical sources if primary provider is absent or if under-treated
5. Unsanctioned dose escalation on one or two occasions
6. Exaggerated pain scores in clinic
Aberrant Drug Related Behaviors - Predictive of an Addiction

1. Selling prescription drugs
2. Prescription forgery
3. Stealing or “borrowing” drugs
4. Obtaining prescription drugs form non-medical sources
5. Concurrent abuse of alcohol or illicit drugs
6. Multiple dose escalations or other non-compliance with therapy
7. Aberrant administration of medications

Aberrant Drug Related Behaviors - Predictive of an Addiction

1. Multiple episodes of prescription “loss”
2. Prescriptions from other clinicians/EDs without seeking primary prescriber
3. Deterioration in function that appears to be related to drug use
4. Resistance to change in therapy despite significant side effects from the drug

Differential Diagnoses of Aberrant Drug Related Behaviors

1. Addiction
2. Pseudoaddiction
3. Other psychiatric disorder
4. Encephalopathy
5. Family disturbance
6. Criminal intent
7. Exacerbation of pain syndrome
8. Side effect(s) of the opioid
**Differential Diagnosis of Functional Downturn**

1. Syndrome of opioid abuse/dependence
2. Other substance use disorder
3. Other psychiatric disorder
4. Exacerbation of pain syndrome
5. Other medical problem
6. Side effect of opioid-hyperalgesia

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**Buprenorphine: Considerations for Pain Management**


- Open label study 95 consecutive patients on long term opioid therapy (LTOA) failing treatment based on:
  - Increased pain
  - Decreased Functional Capacity
  - Emergence of opioid addiction (8%)
  - Induced on buprenorphine 4-16mg (8mg mean dose)
  - 86% Experienced moderate to substantial pain relief
  - Mood and function improved
  - 8% Discontinued due to side effects or increased pain
The effect of buprenorphine and benzodiazepines on respiration in the rat.

Suzanne Nield et al.

- Plateau effect on respiratory depression lost with pre-administered benzodiazepine
- Also looked at methadone which potentates respiratory depression
- Buprenorphine not worse than methadone

Drug and Alcohol Dependence 79 (2005) 95-101

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Pain Patient on Chronic Opioids + Opioid Provider

**Are chronic opioids appropriate?**

**YES!**
- Re-document
- Diagnosis
- Work-up
- Treatment goal
- Functional status
- Pain P&P
- Monitor Progress:
  - Medication counts
  - Function
  - Refill flow chart
  - Occasional urine toxicology
  - Adjust medications
  - Watch for scams

**UNSURE**
- Physical Dependence vs Addiction:
  - Chemical dependence screening
  - Toxicology tests
  - Medication counts
  - Monitor for scams
  - Reassess for appropriateness

**NO**
- Educate patient on need to discontinue opioids
- Emergency?
  - Overdoses
  - Selling meds
  - Altering Rx
- Stop or quick taper (document in chart)
- 10-week structured taper
- Discontinue opioids at end of structured taper

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**Example of an Equipotent Dose Tables**

<table>
<thead>
<tr>
<th>Drug</th>
<th>Oral</th>
<th>Parenteral</th>
<th>Conversion ratio to oral morphine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morphine</td>
<td>30 mg</td>
<td>10 mg</td>
<td>Parenteral morphine: 3 times as potent as oral morphine</td>
</tr>
<tr>
<td>Oxycodone</td>
<td>20 mg</td>
<td>NA</td>
<td>Oral oxycodone: ~1.5 times as potent as oral morphine</td>
</tr>
<tr>
<td>Hydrocodone</td>
<td>20 mg</td>
<td>NA</td>
<td>Oral hydrocodone: ~1.5 times as potent as oral morphine</td>
</tr>
<tr>
<td>Hydromorphone</td>
<td>7.5 mg</td>
<td>1.5 mg</td>
<td>Oral hydromorphone: ~4-7 times as potent as oral morphine</td>
</tr>
<tr>
<td></td>
<td>NA</td>
<td>15 mcg/hr</td>
<td>Transdermal fentanyl: as potent as morphine (based on studies converting from morphine to fentanyl)</td>
</tr>
</tbody>
</table>

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Rising Concerns Over Misuse, Abuse, and Diversion

- Concerns about the misuse, abuse, and diversion of buprenorphine are growing
  - DEA recently decided to increase frequency of audits for waivered physicians
  - Among users already injecting, estimates of buprenorphine misuse and diversion vary from 20% to 89%\(^1,3\)
- Press coverage
  - Has drawn attention to the possibility of buprenorphine/naloxone diversion\(^1,3\)
  - Quoted anecdotal evidence implying increased rates of abuse and diversion
- Scientific literature

Fatal Med Errors Increase Domestic Use with Alcohol and/or Street Drugs

- Medication use has shifted
  - Past: Clinically orientated with inpatient, hospital care, supervised medication use
  - Current: Increased OTCs, increased domestic use, polypharmacy
- Consequences
  - Less professional oversight in domestic situation
  - Ease of concomitant use of EtOH and/or Street Drugs
  - Patient has increased responsibility to self-monitor drug consumption


FME death rate analysis

- Review of electronic death certificates
  - Jan 1, 1983 thru Dec 31, 2004
- FME definition: Fatal Preventable Adverse Drug Events
  - Listed as either primary or secondary cause of death
  - ICD-9/ICD-10 codes for FME
    - Includes OTC and OTC
    - Includes alcohol and "Street Drugs"
  - Location Code
    - Home
    - If not coded "home" assigned to Non-home
- Four FME groups analyzed
  - Type 1: Home with EtOH/Street Drug
  - Type 2: Home without EtOH/Street Drug
  - Type 3: Non-Home with EtOH/Street Drug
  - Type 4: Non-Home without EtOH/Street Drug

Overall FME death rate accelerated

- Overall FME death rate increased by 360% (above; p>0.001) with average age decreasing slightly (not shown)

- Figure 1 additionally demonstrates:
  - Surgical errors, adverse effects of Medication and deaths from EtOH/Street Drugs show a slight increase
  - Other types of accidents (falls, drowning, poisoning, MVA) show a slight decrease


Upper Graph  Fig 2a

- Type 1 (home with “EtOH/Street”) has increased by 3196%
- Steep and accelerating rate (p<0.001)
- Type 2 (home without EtOH/Street) and Type 3 (non-home with EtOH/Street) increased 564% and 555%, respectively
- Type 4 (non-home without EtOH/Street) only increased 5%

Lower Graph  Fig 2b

- Type 1 has three components:
  - Fatal Medication Errors
    - Occurring at home
    - In conjunction with EtOH/Street drugs
  - The 3 components graphed separately show slight increases
  - Component combined (Type 1) shows steep increase by 3196%


FME Death Rates Vary by Age

- Study limitations:
  - Official computerized death certificates do not provide much data about FME
  - Examination is only of severe (fatal) med errors
  - No coding for medical institution location (restricted to home vs non-home)
  - Does not document type of med error (type of medication, Rx vs OTC, type of street drug)

- Figure 3a demonstrates an increase in fatal medication errors are greater in the teen and middle age.
Pharmacist impact on domestic FME

- Self-administration of medication at home is least likely to have professional oversight
- Improve patient care by:
  - Evaluate patients’ capacity to manage their own medications
  - Educate patients about risks associated with their medications
  - Monitor patient performance


Pharmacist impact on EtOH/Street Drug related FME

- Steep increase in deaths related to combination of medication with alcohol and/or street drugs
- Improve patient care by:
  - Screening patients for use, misuse, or abuse of alcohol and/or street drugs
  - Taking extra precautions when prescribing/dispensing medicines with known dangerous interactions with alcohol and/or street drugs
  - Emphasizing to the patient the risks of mixing their medications with alcohol and/or street drugs


Pharmacist impact on EtOH/Street Drug related FME

- Medication reconciliation
  - Inpatient
  - Outpatient
- Written and oral patient education counseling
  - Regardless of distribution method:
    - Counsel all new and altered prescriptions
    - Provide annual to quarterly review of all medications
  - Black box warnings on drug information sheets
    - Up-to-date patient education sheets
Public Expectations of Substance Abuse Treatment Interventions

- Safe, complete “detox”
- Reduced use of medical services
- Eliminate crime!
- Return to employment/ self support
- Eliminate family disruption
- No return to drug use
- “CURE”

Methadone Maintenance: The “Gold” Standard

- A Comprehensive Rehabilitation Program…
  - Improves overall survival
  - Increases retention in treatment
  - Decreases illicit opioid use
  - Decreases seroconversion of hepatitis and HIV
  - Normalizes immune and endocrine systems
  - Decreases criminal activity
  - Increases employment
  - In Perinatal Addiction: Improves birth outcomes

Buprenorphine Maintenance/Withdrawal: Retention

(Kakko et al., 2003)
DIVERSION ISSUES OF BUPRENORPHINE

- T Cicero, JAMA, 2006, provided information demonstrating low levels of buprenorphine diversion.
- Finland report of the street value of buprenorphine/naloxone, compared to buprenorphine mono in Finland, once buprenorphine/naloxone was introduced due to buprenorphine mono formulation abuse.
- 80% of Finnish IV users said that the IV buprenorphine/naloxone experience was "bad". The street value of buprenorphine/naloxone was less than 50% of buprenorphine mono formulation.

Buprenorphine 2001-7
John Renner MD Feb 2008 Buprenorphine Summit

- 4.1 million prescriptions
- 585,000 patients treated
- 30% Detox
- 70% Maintenance
- 16,232 Physicians trained
- 13,318 Waivered
Baltimore Sun Articles

• 1-17-08 …October, its consultants found that half the doctors they surveyed were aware of an illegal trade in Buprenorphine and their numbers have been climbing”

• 1-25-08 “…addicts using the drug on the street mostly say they do so to avoid withdrawal, not to get high.”

Questions and Answers