MEDICATION ASSISTED TREATMENT AND THE DRUG COURT SYSTEM

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MN State Drug Court Conference
June 3rd, 2015
INTRODUCTION: A BIT ABOUT THE PRESENTER

SECTION 1: ADDICTION AS A BRAIN DISEASE
- FEATURES OF DISEASE; CHANGES TO THE BRAIN; SIMILARITIES TO OTHER CHRONIC CONDITIONS;

SECTION 2: MEDICATION ASSISTED TREATMENT
- METHADONE; BUPRENOROHINE; GOALS, IMPACT AND OUTCOMES OF MAT; COUNSELING; MEDICALLY SUPERVISED WITHDRAWAL;

SECTION 3: DRUG COURTS AND MEDICATION ASSISTED TREATMENT
- EVIDENCE BASED; MAT AVAILABILITY, BARRIERS AND INTENTIONS; SAMHSA “BRIEFS”; DRUG COURT KEY COMPONENTS; MN STATE SUBSTANCE ABUSE STRATEGY; DRUG COURT REVIEW – BEST PRACTICE STANDARDS

SECTION 4: QUESTION AND ANSWER
About the Presenter

• Chuck Hilger, MSW, LADC – Executive Director for Valhalla Place, Inc.
• 18 years in MN working in the field of Substance Use Disorders
• 11 years in Opiate addictions – Medication Assisted Treatment
• Counselor, Supervisor, Treatment Director, Regional Director, Executive Director
• Work with National Advocacy Groups on issues of MAT and Harm Reduction
• State advisory Board for Behavioral Health Home program
• Work as Adjunct Faculty at Argosy University in the masters of clinical psychology program - educate students about substance use disorders
• Served 6 years in the Army NG Military Police
• I am a person in long-term recovery
• Recovery was initially motivated by the Judicial system
MEDICATION ASSISTED TREATMENT AND THE DRUG COURTS

Credit: Dr. Thomas Payte
THE TREATMENT OF OPIOID DEPENDENCE: A CHRONIC RELAPSING BRAIN DISEASE
Section Objectives

• Review the evidence that opioid dependence is a chronic, relapsing disease
• Demonstrate similarities of opioid dependence to other chronic diseases
• Emphasize the importance of accepting the chronic disease model as an integral part of providing quality patient care and protecting access to treatment
• Understand the treatment of opioid addiction using opioid based medications (methadone, buprenorphine and buprenorphine/naloxone combination medications)
No Universally Accepted Definition of Addiction

National Institute on Drug Abuse (NIDA)—A *chronic, relapsing* brain disease characterized by *compulsive* drug-seeking and use despite harmful consequences and by long-lasting structural and functional changes in the brain\(^1\)

Other definitions exist, but all agree that addiction is:

- Chronic\(^2,3\)
- Relapsing\(^3,4\)
- Progressive\(^3,4\)
- Compulsive\(^2,4\)

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Features of a Chronic, Relapsing Condition

1. Limited chances of complete ‘cure’ or ‘recovery’
2. Relapse common
3. Multifactorial
   • Genetic (heritable vulnerability)
   • Environmental (exposure)
   • Biological (demonstrated pathophysiology)
   • Behavioral (lifestyle aspects)

Optimal patient care depends on accepting opioid dependence as a chronic, relapsing condition.
The Multiple Components of Drug Abuse

Drug abuse has multiple components:
- Neurobiologic\(^1,2\)
- Behavioral
- Cognitive and affective

_Treatment must address each component_

Some drug abuse is learned\(^3,4\)

Long-term drug use alters:
- The way people think about their own behavior\(^5\)
- Emotional reactions to environmental stimuli\(^5\)

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Neurobiological Aspects: The Cycle of Addiction

Chemical Changes: Craving and Relapse

- Long-term changes in brain responsivity may remain even after withdrawal and sustained abstinence
- Drug- and cue-induced craving are associated with activation of critical brain regions
- Patients may always be at risk for craving and relapse upon re-exposure to the drug or environmental cues associated with the drug

**Orbitofrontal Cortex**  **Nucleus Accumbens**

**Anterior Cingulate**  **Ventral Tegmental Area**

Opioid Dependence Causes Brain Changes

PET scan images

The lack of red in the opioid-dependent brain shows that chronic opioid use has reduced dopamine receptor concentration.

# Similarities to Other Chronic Diseases\(^1-3\)

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Drug Dependence</th>
<th>Diabetes, Asthma, and Hypertension</th>
</tr>
</thead>
<tbody>
<tr>
<td>Well studied</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Chronic disorder</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Predictable course</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Effective treatments</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Curable</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>Heritable</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Requires continued care</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Requires adherence to treatment</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Requires ongoing monitoring</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Influenced by behavior</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Tends to worsen if untreated</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

Relapse Rates Are Similar to Other Chronic Diseases\textsuperscript{1,2}

Characteristics of the Chronic Disease Model

- Emphasizes comprehensive, sustained services to help retain patients, maintain adherence, and focus on success
- Minimizes stigma associated with opioid dependence
- Promotes continuity of care
- Underscores the importance of ongoing monitoring
- Reinforces the need for a multifaceted, multidisciplinary approach
DSM-5: A New Paradigm of Addiction

Note that the word *addiction* is not applied as a diagnostic term in this classification, although it is in common usage in many countries to describe the severe problems related to compulsive and habitual use of substances. The more neutral term *substance use disorder* is used to describe the wide range of the disorder, from a mild form to a severe state of chronically relapsing, compulsive drug taking. Some clinician will choose to use the word *addiction* to describe more extreme presentations, but the word is omitted from the official DSM-5 substance use disorder diagnostic terminology because of its uncertain definition and its potentially negative connotation.

Pg 485 DSM-5

MEDICATION ASSISTED TREATMENT
Section Objectives

• What is Methadone?
• What is Buprenorphine/Naloxone (Suboxone)
• How Opioid Replacement Therapy Works
• Impact of Medication Assisted Treatment
• What About Counseling?
What is Methadone?

- Methadone is a synthetic opioid – analgesic
- Full opioid agonist (schedule II)
- Synthesized by Germans in 1938 – not named after Adolph
- Patent was purchased by Eli-Lily for $1.00
- First used in 1964 to treat heroin/morphine addiction
- Recognized as evidence based practice by NDCI
- Considered the gold standard for treating opiate addiction
- The most regulated substance use disorder treatment
- Risk of over medication and medication interaction
- Safe for prolonged use - nontoxic
There is a Linear Relationship Between Dose and Methadone Levels but not to Clinical Response

Payte & Khuri - Adapted from Wolff et al 1991
What is Buprenorphine?

- Buprenorphine is a synthetic opioid – analgesic
- Partial opioid agonist (schedule III)
- Approved for SUD 2000 to treat opioid use disorders
- Recognized as evidence based practice by NDCI
- Considered the gold standard for treating opiate use disorders
- Option for office based setting or as part of a Rule 31 program
- Limited application – effective mostly low to moderate tolerance
- More expensive than methadone
- Safe for prolonged use – nontoxic
- Safer medication – Ceiling effect
What is Buprenorphine?

**AGONIST**
- Methadone

**PARTIAL AGONIST**
- Buprenorphine

**DECREASED MAXIMAL EFFECT**

**TIME**

**EFFECT**

**Antagonist (Naloxone)**
Common Questions:

• What are the goals of Medication Assisted Treatment?
• What characteristics are important for an effective medication?
• Won’t patients just take more and more or use it to get high?
• What is the impact of MAT?
Goals for Medication Assisted Treatment

- Prevention or reduction of withdrawal symptoms
- Prevention or reduction of drug craving
- Prevention of relapse to use of addictive drug
- Restoration to or toward normalcy of any physiological function disrupted by drug abuse

Source: MJ Kreek, Rationale for Maintenance Pharmacotherapy of Opiate Dependence, 1992
Profile for Potential Psychotherapeutic Agent

• Effective after oral administration
• Long biological half-life (>24 hours)
• Minimal side effects during chronic administration
• Safe, no true toxic or serious adverse effects
• Efficacious for a substantial % of persons with the disorder

Source: MJ Kreek, Rationale for Maintenance Pharmacotherapy of Opiate Dependence, 1992
Tolerant/Dependent Drug States

- "Loaded"
- "High"
- Normal Range "Comfort Zone"
- "Sick"

Drug Effect Scale

Time
Heroin Simulated 24 Hr. Dose/Response
With established heroin tolerance/dependence

“Loaded”
“High”

Normal Range
“Comfort Zone”

Subjective w/d
“Sick”
Objective w/d

0 hrs. 24 hrs.

Time

Dose Response

“Loaded”
“High”

Normal Range
“Comfort Zone”

Subjective w/d
“Sick”
Objective w/d

0 hrs. 24 hrs.

Time

Dose Response
Methadone Simulated 24 Hr. Dose/Response
At steady-state in tolerant patient

“Loaded”
“High”

Normal Range
“Comfort Zone”

Subjective w/d
“Sick”

Objective w/d

0 hrs. 24 hrs.

Dose Response
Time
Impact of Maintenance Treatment

- Reduction death rates (Grondblah, ‘90)
- Reduction IVDU (Ball & Ross, ‘91)
- Reduction crime days (Ball & Ross)
- Reduction rate of HIV seroconversion (Bourne, ‘88; Novick ‘90; Metzger ‘93)
- Reduction relapse to IVDU (Ball & Ross)
- Improved employment, health, & social function
Death Rates in Treated and Untreated Heroin Users

Impact of MMT on IV Drug Use for 38 Male MMT Patients in 6 programs

Adapted from Ball & Ross - The Effectiveness of Methadone Maintenance Treatment, 1991
Crime Among 491 Patients Before and During MAT at 6 Programs

Adapted from Ball & Ross - The Effectiveness of Methadone Maintenance Treatment, 1991
Recent Heroin Use by Current Methadone Dose

J. C. Ball, November 18, 1988
Retention in Treatment Relative to Dose

Relative Risk of Leaving Treatment

Risk based on dose

- <60 mg (Baseline)
- 60-79 mg
- 80 + mg

Adapted from Caplehorn & Bell - The Medical Journal of Australia
Relapse to IV Drug Use After MAT
105 Male Patients who Left Treatment

Adapted from Ball & Ross - The Effectiveness of Methadone Maintenance Treatment, 1991
Other Benefits of Pharmacotherapy for Opioid Addiction

- Increased Employment
- Improved Physical and Mental Health
- Improved Social Function

But aren’t you just trading one addiction for another?
What Does a Functioning Patient on Methadone look like?
COUNSELING AND TREATMENT PLANNING
Counseling and Treatment Planning

The Components of Treatment: Pharmacotherapy and Psychosocial Intervention

**Pharmacotherapy**
- Can control symptoms by normalizing brain chemistry

**Psychosocial Intervention**
- Essential to change behaviors and responses to environmental and social cues that significantly impact relapse

Both are necessary to normalize brain chemistry, change behavior, and reduce risk for relapse; neither alone is sufficient.
Defining Counseling and Behavioral Therapy for Opioid-Dependence Treatment

Encompasses several types of treatment modalities
• Counseling/psychotherapy, including cognitive behavioral therapy
• Community-based support (12-step programs, Alcoholics Anonymous (AA)/Narcotics Anonymous (NA))
• Other social support (financial, housing, life skills)

Treatment should be individualized to address the unique constellation of factors that impacts each patient’s condition
• Dependence history
• Comorbidities
• Existing social network
• Socioeconomic status

Psychosocial support may continue beyond pharmacotherapy to aid in relapse prevention
Methadone Dosing Phases

**Induction**
Individualized titration upward of dose to reach therapeutic levels

**Medically Supervised Withdrawal**
Individualized gradual (as tolerated dose reduction...”Maintenance to Abstinence”

**Medical Maintenance**
Long term maintenance pharmacotherapy for the psycho-socially rehabilitated former patient in a less restrictive primary medical care setting providing up to one month of medication at a time.
Medically Supervised Withdrawal is for the Highly Motivated Patient Who Has:

- No alcohol/drug use/abuse (>6mo)
- Stable living/social/employment situation
- No illegal activities, warrants, or cases pending
- Relative psychiatric/medical stability
- Friends and associates from outside drug culture
- Non-drug related hobbies, interests, and pursuits
- Support system and continuing care in place
Medically Supervised Withdrawal Techniques

- Graded reduction or taper (usually outpatient)
- Accelerated withdrawal, clonidine assisted with early antagonist induction (in or outpatient)
- Rapid or Ultra-rapid antagonist induced withdrawal under anesthesia or sedation (preferable inpatient – not widely accepted)
- Crossover to Buprenorphine from low to moderate dose methadone then taper from Buprenorphine
RESEARCH: DRUG COURTS AND MAT
APPLICABLE KEY FINDINGS

- Availability, Barriers, Attitudes (2 Articles); Journal of Substance Abuse Treatment
- Adult Drug Courts and MAT For Opioid Dependence SAMHSA – In Brief;
- Quality Improvement For Drug Courts – Evidence Based Practices - National Drug court Institute;
- Drug Court Review, Volume III, Issue 1; National Drug Court Institute;
- Adult Drug Court Best Practices Standards, Volume I National Association of Drug Court Professionals;
- Defining Drug Courts, The Key Components; Bureau of Justice Assistance;
- MN State Substance Abuse Strategy;
QUESTIONS AND ANSWERS:
Thank You Very Much For All Your Participation!

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