Office-based Treatment of Opioid Dependence with Buprenorphine

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Dr. Fiellin’s Disclosures

- Dr. Fiellin has received honoraria from Pinney Associates and ParagonRx for serving on external advisory boards monitoring the diversion and abuse of buprenorphine
Learning Objectives

• Describe the legislation relevant to office-based treatment with buprenorphine
• Describe how to establish the diagnosis of opioid dependence
• Describe the effectiveness of office-based treatment of opioid dependence
Outline

• Drug Addiction Treatment Act of 2000 and Buprenorphine
• Establishing the Diagnosis Opioid Dependence
• Treatments for Opioid Dependence
• Components of Office-based Treatment of Opioid Dependence with Buprenorphine
• Effectiveness of Office-based Treatment of Opioid Dependence with Buprenorphine
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Federal Efforts to Increase Access
Fiellin and O’Connor, NEJM 2002

Congress (2000)
• Drug Addiction Treatment Act
  - Allows qualifying physicians to use approved schedule III-V medications
  - “Qualifying physician” (defined later)

FDA and DEA (2002)
• Approve buprenorphine and buprenorphine/naloxone for treatment of opioid dependence, schedule III
Drug Addiction Treatment Act of 2000

Practitioner requirements:

• “Qualifying physician”
• Has capacity to refer patients for appropriate counseling and ancillary services
• No more than 30 patients (in first year). Can notify Center for Substance Abuse Treatment after one year and increase to 100 patients
“Qualifying physician”: A licensed physician who meets one or more of the following:

1. Board certified in Addiction Psychiatry
2. Certified in Addiction Medicine by American Society of Addiction Medicine (now under the auspices of the American Board of Addiction Medicine)
3. Certified in Addiction Medicine by American Osteopathic Association
4. Investigator in buprenorphine clinical trials
5. Has completed 8 hours training provided by AAAP, AMA, AOA, APA, ASAM
Drug Addiction Treatment Act of 2000

• Physician must apply to Drug Enforcement Agency to receive a new registration to allow them to prescribe under the rules outlined in DATA 2000 http://buprenorphine.samhsa.gov/pls/bwns/waiver

• They will receive a new federal DEA registration with the first alphanumeric in their current registrations replaced with an X (XB1234567)
Drug Addiction Treatment Act of 2000

- **Medication:**
  - Approved by the FDA for use in maintenance or detoxification treatment of opioid dependence
  - Schedule III, IV, or V
  - Medication or combinations of medications

- As of 2013, buprenorphine and buprenorphine/naloxone are only such products, others could be developed in future
Drug Addiction Treatment Act of 2000

Legislation stipulated the development of a guideline to assist with implementation:

- Clinical Guidelines for the Use of Buprenorphine in the Treatment of Opioid Addiction
- A Treatment Improvement Protocol (TIP) #40
Buprenorphine

- Partial agonist at mu opioid receptor
- Lower abuse and diversion potential relative to full mu opioid agonists, especially when combined with naloxone
- Sublingual tablets (buprenorphine alone) or film (buprenorphine/naloxone)
- Prescribed by physicians and available at pharmacy
Intrinsic Opioid Activity

- Full Agonist (e.g.: Oxycodone)
- Partial Agonist (e.g.: Buprenorphine)
- Antagonist (e.g.: Naltrexone)
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Opioid Dependence
(DSM-IV, 3 or more within one year)

Physical Dependence
• Tolerance
• Withdrawal

Loss of control (addiction)
• Larger amounts/longer period than intended
• Inability to/persistent desire to cut down or control
• Increased amount of time spent in activities necessary to obtain opioids
• Social, occupational and recreational activities given up or reduced
• Opioid use is continued despite adverse consequences
Opioid Dependence

• Essential to realize that physical dependence is not sufficient to establish the diagnosis of opioid dependence according to DSM criteria

• Use worksheet to confirm diagnosis if unsure

Epidemiology of Opioid Dependence and Treatment

- More individuals meet criteria for opioid dependence due to prescription opioids than for heroin.
- Most prescription opioids are obtained from friends, family or dealer than directly from doctors.
- Heroin purity has resulted in most individuals using via intranasal route than intravenously.
- Most opioid dependent individuals do not receive the most effective form of treatment, opioid agonist treatment with methadone or buprenorphine.
Pathophysiology of Opioid Dependence

- Opioid dependence is a chronic, relapsing medical condition with biologic and behavioral components
- Neurobiological changes accompany the transition from use to dependence
- Neurobiological changes explain relapse even after “detoxification”
- Neurobiological changes form the rationale for the pharmacologic treatments
Repeated exposure to opioids leads to neuronal adaptations

• Mesolimbic dopaminergic system
  - adaptations in G protein-coupled receptors
  - up regulation of cyclic cAMP second messenger pathway
  - changes in transcription and translation
• Adaptations
  - Mediate tolerance, withdrawal, craving, self-administration
  - Provide insight into the chronic and relapsing nature of opioid dependence
  - Form basis of pharmacotherapies to stabilize neuronal circuits
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Treatment Options for Opioid Dependence

High rates of relapse with:

- Pharmacologic withdrawal - “detoxification”
  - Followed by medication-free treatments
- Opioid antagonist treatment
  - Naltrexone

Most effective treatments are opioid agonist treatments

- Methadone
- Buprenorphine
Opioid Agonist Treatment

Rationale

• Cross-tolerance
  - prevent withdrawal
  - relieve craving for opioids

• Narcotic blockade
  - May attenuate euphoric effect of exogenous opioids
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Components of Office-based Treatment of Opioid Dependence with Buprenorphine

- Physician with appropriate DEA registration
- Onsite or off-site counseling services
- Urine toxicology monitoring
- Pharmacy
- Method to screen for appropriate patients
- See http://www.pcssb.org/educational-and-training-resources/clinical-tools/ for examples of materials below:
  - Treatment agreements
  - Procedures for release of information
  - Patient log to avoid exceeding patient limit
Selecting Patients Who Are Appropriate for the Office

- Determine appropriateness of patient for office based buprenorphine treatment by considering the needs of the patient and the available resources.
- For patients whose needs exceed that of the office, referral to alternative offices or specialty treatment programs is appropriate and prudent.

  - [http://findtreatment.samhsa.gov/TreatmentLocator/faces/quickSearch.jspx](http://findtreatment.samhsa.gov/TreatmentLocator/faces/quickSearch.jspx)
Selecting Appropriate Patients

- Does the patient have a diagnosis of opioid dependence?
- Is he/she expected to be reasonably compliant?
- Can the office provide the needed resources for the patient (either on or off site)?
- Is the patient dependent on high doses of benzodiazepines, alcohol, or stimulants?
- Is there significant untreated psychiatric co-morbidity that can not be addressed by the office?
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Effectiveness of Office-based Treatment of Opioid Dependence with Buprenorphine

• Treatment practices
• Mental health and substance use among those seeking treatment
• Outcomes
  - Retention and Drug use
  - HIV risk behaviors
  - Patient satisfaction
  - Provider satisfaction and challenges
## Treatment Practices in Survey of Office-based Prescribers

<table>
<thead>
<tr>
<th>Treatment practices</th>
<th>N = 156</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of patients treated, mean</td>
<td>13.7</td>
</tr>
<tr>
<td>Median (interquartile range)</td>
<td>10 (3-25.5)</td>
</tr>
<tr>
<td>Detox or maintenance* n (%)</td>
<td></td>
</tr>
<tr>
<td>Detox only</td>
<td>12 (8)</td>
</tr>
<tr>
<td>Maintenance only</td>
<td>62 (41)</td>
</tr>
<tr>
<td>Detox and maintenance</td>
<td>77 (51)</td>
</tr>
<tr>
<td>Induction site†</td>
<td></td>
</tr>
<tr>
<td>Office only (observed)</td>
<td>71 (47)</td>
</tr>
<tr>
<td>Home only (unobserved)</td>
<td>31 (21)</td>
</tr>
<tr>
<td>Office and home</td>
<td>32 (21)</td>
</tr>
<tr>
<td>Inpatient only</td>
<td>15 (10)</td>
</tr>
<tr>
<td>Substance abuse counseling</td>
<td></td>
</tr>
<tr>
<td>Mandatory counseling</td>
<td>120 (79)</td>
</tr>
<tr>
<td>Individual counseling offered in practice</td>
<td>100 (66)</td>
</tr>
<tr>
<td>Group counseling offered in practice</td>
<td>59 (39)</td>
</tr>
<tr>
<td>Offer referral to counseling</td>
<td>87 (57)</td>
</tr>
<tr>
<td>Methadone program available for referral</td>
<td>131 (86)</td>
</tr>
<tr>
<td>Made referrals to methadone program</td>
<td>61 (40)</td>
</tr>
<tr>
<td>Monitoring practices:</td>
<td></td>
</tr>
<tr>
<td>Pill counts</td>
<td>67 (43)</td>
</tr>
<tr>
<td>Drug screens</td>
<td>128 (82)</td>
</tr>
<tr>
<td>Observed drug screens</td>
<td>68 (44)</td>
</tr>
<tr>
<td>Unobserved drug screens</td>
<td>60 (38)</td>
</tr>
<tr>
<td>Used mono tablet (buprenorphine alone) for:</td>
<td></td>
</tr>
<tr>
<td>Induction</td>
<td>15 (10)</td>
</tr>
<tr>
<td>Pregnant patients</td>
<td>21 (13)</td>
</tr>
<tr>
<td>Patient preference</td>
<td>17 (11)</td>
</tr>
<tr>
<td>OBOT notes stored separate from other records</td>
<td>46 (33)</td>
</tr>
<tr>
<td>Accept insurance for buprenorphine</td>
<td>119 (80)</td>
</tr>
</tbody>
</table>

Walley, JGIM, 2008
### Mental Health and Substance Use Disorders Among Patients Seeking Office-based Buprenorphine

<table>
<thead>
<tr>
<th>Variable</th>
<th>Lifetime, % (N)</th>
<th>Current, % (N)</th>
<th>Past, % (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mood disorders</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Major depression</td>
<td>43.0 (102)</td>
<td>19.4 (46)</td>
<td>23.6 (56)</td>
</tr>
<tr>
<td>Dysthymia</td>
<td>N/A</td>
<td>5.5 (13)</td>
<td>N/A</td>
</tr>
<tr>
<td>Mania</td>
<td>0.8 (2)</td>
<td>0.0 (0)</td>
<td>0.8 (2)</td>
</tr>
<tr>
<td>Hypomania</td>
<td>1.7 (4)</td>
<td>0.0 (0)</td>
<td>1.7 (4)</td>
</tr>
<tr>
<td><strong>Substance use disorders</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opioid</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abuse</td>
<td>0.4 (1)</td>
<td>0.4 (1)</td>
<td>0.0 (0)</td>
</tr>
<tr>
<td>Dependence</td>
<td>99.2 (235)</td>
<td>97.5 (231)</td>
<td>1.7 (4)</td>
</tr>
<tr>
<td>Alcohol</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abuse</td>
<td>17.7 (42)</td>
<td>2.1 (5)</td>
<td>15.6 (37)</td>
</tr>
<tr>
<td>Dependence</td>
<td>29.1 (69)</td>
<td>2.1 (5)</td>
<td>27.0 (64)</td>
</tr>
<tr>
<td>Cocaine</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abuse</td>
<td>11.8 (28)</td>
<td>2.5 (6)</td>
<td>9.3 (22)</td>
</tr>
<tr>
<td>Dependence</td>
<td>24.9 (59)</td>
<td>4.2 (10)</td>
<td>20.7 (49)</td>
</tr>
<tr>
<td>Cannabis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abuse</td>
<td>34.2 (81)</td>
<td>3.8 (9)</td>
<td>30.4 (72)</td>
</tr>
<tr>
<td>Dependence</td>
<td>8.4 (20)</td>
<td>0.4 (1)</td>
<td>8.0 (19)</td>
</tr>
<tr>
<td>Sedative</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abuse</td>
<td>7.2 (17)</td>
<td>0.4 (1)</td>
<td>6.8 (16)</td>
</tr>
<tr>
<td>Dependence</td>
<td>4.2 (10)</td>
<td>1.7 (4)</td>
<td>2.5 (6)</td>
</tr>
<tr>
<td>Stimulant</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abuse</td>
<td>1.3 (3)</td>
<td>0.0 (0)</td>
<td>1.3 (3)</td>
</tr>
<tr>
<td>Dependence</td>
<td>3.0 (7)</td>
<td>0.4 (1)</td>
<td>2.5 (6)</td>
</tr>
<tr>
<td>Hallucinogen</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abuse</td>
<td>5.5 (13)</td>
<td>0.0 (0)</td>
<td>5.5 (13)</td>
</tr>
<tr>
<td>Dependence</td>
<td>3.0 (7)</td>
<td>0.0 (0)</td>
<td>3.0 (7)</td>
</tr>
<tr>
<td>Polydrug</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abuse</td>
<td>0.8 (2)</td>
<td>0.0 (0)</td>
<td>0.8 (2)</td>
</tr>
<tr>
<td>Dependence</td>
<td>0.8 (2)</td>
<td>0.4 (1)</td>
<td>0.4 (1)</td>
</tr>
<tr>
<td>Other substances</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abuse</td>
<td>0.4 (1)</td>
<td>0.0 (0)</td>
<td>0.4 (1)</td>
</tr>
<tr>
<td>Dependence</td>
<td>0.0 (0)</td>
<td>0.0 (0)</td>
<td>0.0 (0)</td>
</tr>
</tbody>
</table>

Savant, DAD 2012
Treatment Retention Better in Those with Evidence for Early Abstinence

**FIGURE 1.** Program retention time by week 1 opiate test.
Treatment Retention by Cocaine Use: Better retention in those who do not use cocaine

Sullivan, AJA, 2010
Treatment Retention and Percent Opioid Negative Urines are Positively Correlated

Soeffing, JSAT, 2009
Treatment Retention and Drug Use Following Unobserved Induction

Lee, JGIM, 2008
### Treatment Outcomes

**Table 2. Treatment Outcomes at 12 Months of 382 Opioid-Dependent Patients Entering Office-Based Opioid Treatment in Primary Care**

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Patients, No. (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Successful treatment</td>
<td>196 (51.3)</td>
</tr>
<tr>
<td>Treatment retention</td>
<td>187 (49.0)</td>
</tr>
<tr>
<td>Successful taper after 6 months of adherence&lt;sup&gt;a&lt;/sup&gt;</td>
<td>9 (2.4)</td>
</tr>
<tr>
<td>Unsuccessful treatment</td>
<td>162 (42.4)</td>
</tr>
<tr>
<td>Lost to follow-up</td>
<td>113 (29.6)</td>
</tr>
<tr>
<td>Nonadherence despite enhanced treatment&lt;sup&gt;a&lt;/sup&gt;</td>
<td>46 (12.0)</td>
</tr>
<tr>
<td>Administrative discharge due to disruptive behavior</td>
<td>2 (0.5)</td>
</tr>
<tr>
<td>Adverse effects of buprenorphine hydrochloride</td>
<td>1 (0.3)</td>
</tr>
<tr>
<td>Transfer to methadone hydrochloride treatment program</td>
<td>24 (6.3)</td>
</tr>
</tbody>
</table>

<sup>a</sup> Significant differences were found for successful taper after 6 months of adherence and nonadherence despite enhanced treatment.

Alford, Arch Int Med, 2011
Retention by Counseling Level among Opioid-Dependent Patients Receiving Buprenorphine-Naloxone in Primary Care

Fiellin, NEJM, 2006
Self-Reported Frequency of Illicit Opioid Use by Counseling Level in Opioid-Dependent Patients Receiving Buprenorphine-Naloxone in Primary Care

Fiellin, NEJM, 2006
Long-term Retention

Fiellin, AJA, 2008
Injection and Sex Risk During Office-based Buprenorphine Treatment

Sullivan, JSAT, 2008
Patient Satisfaction with Office-based Buprenorphine Treatment

<table>
<thead>
<tr>
<th>Patient satisfaction item</th>
<th>Mean (SD)*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overall and Specific Service Components</strong></td>
<td></td>
</tr>
<tr>
<td>How satisfied are you with the treatment that you have received in the Primary Care Center?</td>
<td>4.7 (0.8)</td>
</tr>
<tr>
<td>Rate the PCC with respect to <em>Prompt service</em></td>
<td>4.4 (0.8)</td>
</tr>
<tr>
<td>Rate the PCC with respect to <em>Convenient appointments</em></td>
<td>4.4 (0.8)</td>
</tr>
<tr>
<td>Rate the PCC with respect to <em>Courteous staff</em></td>
<td>4.7 (0.6)</td>
</tr>
<tr>
<td>Rate the PCC with respect to <em>Clinic Comfort</em></td>
<td>4.1 (0.9)</td>
</tr>
<tr>
<td>Rate the PCC with respect to <em>Quality of care</em></td>
<td>4.3 (0.8)</td>
</tr>
<tr>
<td>Rate the PCC with respect to <em>Convenience of location</em></td>
<td>3.7 (1.2)</td>
</tr>
<tr>
<td>Rate the PCC with respect to <em>Interaction with other patients</em></td>
<td>2.9 (1.5)</td>
</tr>
</tbody>
</table>

0-5 scale, 0 = not at all, 5 = Most of all

* M = mean, SD = standard deviation.
Provider Satisfaction with Office-based Buprenorphine Treatment

• “The most satisfying part to me is to get all of their treatment under our [physicians’] control and ... managing patients in one clinic setting.”

• “The positive things about [buprenorphine treatment] are the effectiveness, patient satisfaction, the lack of side effects, and the conveniences.”

Barry, JGIM, 2009
Provider Challenges with with Office-based Buprenorphine Treatment

• “I would want some help just because there’s so much more than medication prescription and we don’t really have the capacity and the support here to do everything else that goes along with it. We have inadequate social services in the clinic itself, in terms of social work, drug and substance abuse counseling, psychiatric mental health counseling—it’s inadequate.”

Barry, JGIM, 2009
Physician Clinical Support for Office-based Buprenorphine

- PCSS-B http://www.pcsssb.org
  - Offers waiver trainings at no charge
- Network:
  - National Experts
  - Mentoring physicians
- Services:
  - Telephone, email support, site visits
- Web-based content:
  - Treatment guidances
  - Didactics
  - Clinical Resources

Egan, JGIM, 2010
Summary

- Opioid dependence due to prescription opioids and heroin is prevalent and increasing.
- The neurobiological changes that occur in opioid dependence respond to medication and counseling.
- Office-based treatment with buprenorphine is a viable option under DATA 2000.
- Matching patients to office-resources is important.
- With office-based treatment:
  - Drug use decreases for many.
  - Retention is modest.
  - Patient satisfaction is high.
  - Provider satisfaction is high and challenges decrease with time.
- Support systems such as PCSS-B can help expand office-based treatment with buprenorphine.
Please Click the Link Below to Access the Post Test for the Online Module

Upon completion of the Post Test:
• You will receive an email detailing correct answers, explanations and references for each question.
• You will be directed to a module evaluation, upon completion of which you will be emailed your module Certificate of Completion.

http://www.cvent.com/d/ccqvtx