Individualized Treatment and Understanding the Non-Pharmacologic Components that are Part of Recovery

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University of Massachusetts Medical School

Et al.

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Individualized Treatment and the Non-Pharmacologic Components of Recovery

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5 Common Myths About Substance Use Disorder

1. "OVERCOMING ADDICTION IS A SIMPLY A MATTER OF WILLPOWER."
Prolonged exposure to drugs alters the brain in ways that result in powerful cravings and a compulsion to use. These brain changes make it extremely difficult to quit by sheer force of will.

2. "ADDICTION IS A DISEASE; THERE'S NOTHING YOU CAN DO ABOUT IT."
Most experts agree that addiction is a brain disease, but that doesn’t mean you’re helpless to it. The brain changes associated with addiction can be treated and reversed through therapy, medication, exercise, and other treatments.

3. "ADDICTS HAVE TO HIT ROCK BOTTOM BEFORE THEY CAN GET BETTER."
Recovery can begin at any point in the addiction process and the earlier, the better. The longer drug abuse continues, the stronger the addiction becomes and the harder it is to treat. Don’t wait to intervene until the addict has lost it all.

4. "YOU CAN'T FORCE SOMEONE INTO TREATMENT; THEY HAVE TO WANT HELP."
Treatment doesn’t have to be voluntary to be successful. People who are pressured into treatment by their family, employer, or the legal system are just as likely to benefit as those who choose to enter treatment on their own. As they sober up and their thinking clears, many formerly resistant addicts decide they want to change.

5. "TREATMENT DIDN'T WORK BEFORE, SO THERE'S NO POINT TRYING AGAIN."
Recovery from drug addiction is a long process that often involves setbacks. Relapse doesn’t mean that treatment has failed or that you’re a lost cause. Rather, it’s a signal to get back on track, either by going back to treatment or adjusting the treatment approach.

Do any of these myths strike a cord with you? While we are waiting to begin….

If you feel comfortable, share your thoughts about these myths in the chat box.
Your Webinar Host

Susan Halpin
susan.halpin@umassmed.edu
National Network of Libraries of Medicine (NNLM), New England Region (NER)
Education & Outreach Coordinator
University of Massachusetts Medical School
Worcester, Massachusetts
Webinar Learning Objectives

• Become familiar with the National Library of Medicine (NLM) and its free, digital resources

• Understand the how the NLM provides outreach by the National Network of Libraries of Medicine (NNLM) through comprehensive online resources, training classes and grant funding opportunities.

• Understand the rationale and treatment options for managed withdrawal of a patient with opioid use disorder.

• Understand the rationale and treatment options for Medication Assisted Treatment in a patient with opioid use disorder.

• Understand the non-pharmacologic components that are part of recovery.
The NLM physical library is Bethesda, MD on the NIH campus.

NLM is the largest biomedical library in the world

NLM is one of the federal government’s largest providers of digital content

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**NLMs mission**

*Advance the progress of medicine and improve public health by making biomedical information accessible to everyone.*
NLM Implements Outreach
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- Outreach provided through
  - Free access to online health & medical resources
  - Free Training & Professional Development
  - Grant funding opportunities
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Introducing
Your Webinar Presenters

Dr. Gerardo Gonzalez, MD
Medical Director, Washburn House, Worcester, MA
Director of the Division of Addiction Psychiatry
& Associate Professor of Psychiatry, University of Massachusetts Medical School

Lindsey Silva, RN, MSN
Director of Quality and Compliance, Washburn House, Worcester, MA
Individualized Treatment and Understanding the Non-Pharmacologic Components that are Part of Recovery

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Presenters

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Medical Director, Washburn House, Worcester, MA

Lindsey Silva, RN, MSN
Director of Quality and Compliance, Washburn House, Worcester, MA
Disclosures

• We have no financial conflicts to disclose
• We will review evidence based off-label use of medications
Outline

- Epidemiology
- Preventive efforts
- Treatment
- Longitudinal outcomes
- Recovery elements
- Conclusions
Epidemiology

NSDUH, 2014
Drug overdose deaths involving opioids by type of opioid
United States, 2000–2014

CDC, 2016
Prescription Opioids and Heroin use during the Previous Year

Comptom, 2016
Prescription Opioids and Heroin Drug Poisoning

Comptom, 2016
Main medical diagnosis
UMMC Worcester MA: 2008-2012

Ross et al, unpublished
Last treating services
UMMC Worcester MA: 2008-2012

Ross et al, unpublished
Source Where Pain Killers Were Obtained
Age 12 or Older: 2010-2011

Note: The percentages do not add to 100 percent due to rounding.

1 The Other category includes the sources "Wrote Fake Prescription," "Stole from Doctor's Office/Clinic/Hospital/Pharmacy," and "Some Other Way."
Substance use disorders (DSM-5)

• **Neuroadaptation:**
  - Tolerance
  - Withdrawal

• **Cognitive distortion:**
  - Importance of substance use
  - Subjective awareness of decrease control
  - Craving or a strong desire or urge to use

• **Behavioral dyscontrol:**
  - Obtaining, using and recovering
  - Use despite knowledge of problems
  - Using more and longer than intended
Substance use disorders (DSM-5)

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Preventive efforts
Preventive efforts

• Education of medical and nursing students on universal precautions with controlled substances

• Prescription guidelines for practicing physicians and dentists on safe pain management

• Prescription monitoring program (PMP)

• Safe storage of opioid analgesics (locked box)

• Appropriate disposal of unused opioid analgesics

• Naloxone rescue kits available (standing orders)
Treatment
• The proportion of all clients receiving methadone was 22 to 25 percent between 2006 and 2010.

• The proportion of clients receiving buprenorphine was 1 percent or less from 2006 to 2008, but increased to 2 percent in 2009 and 2010.
Substance use disorder treatment services

1. Detoxification / stabilization units (ATS)
2. Inpatient acute hospitalization
3. Nonhospital residential rehabilitation (CSS)
4. Partial hospital day Program (PHP)
   Intensive outpatient program (IOP)
5. Outpatient treatment / office-based
Substance use disorder treatment services

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Psychosocial treatments

1. Drug Counseling
2. Motivational Enhancement Therapy
3. Relapse prevention
4. Cognitive Behavioral Therapy
5. Mindfulness base treatment
6. Contingency Management
7. Twelve Steps facilitation
8. Self-help groups
Use of Medications
Managed withdrawal (ATS)

• Reduction of the intensity of opioid withdrawal
• 1 or 2 attempts are reasonable
• Should be considered initial step in recovery
• Efficacy alone is very low (less 20%)
• Efficacy improves with IOP or PHP
• ATS is not necessary to start MAT
Managed withdrawal (ATS)

• Clonidine protocol $\rightarrow$ Naltrexone (IM)
• Buprenorphine protocol
• Methadone protocol
Managed withdrawal (ATS)

- Joint selection of protocol is helpful for engagement
- Motivation enhancement for treatment is needed
- Challenges include wide variation of motivation for treatment and risk of use while on the unit.
Medication assisted treatment (MAT)

- Outpatient settings
- Suppress opioid withdrawal symptoms
- Suppress craving for opioids
- Stop opioid use and relapse
- Adjust daily dose to avoid sedation
Medication assisted treatment (MAT)

- Naltrexone (PO and IM)
- Buprenorphine + Naloxone
- Methadone
Naltrexone

- **Indications:** Severe opioid use disorder
- **Mechanism:** Opiate receptor antagonist
- **Efficacy:** Oral is good in high motivated.
- **Implementation:** 50-100 mg/per day; LFT’s
- **Side effects:** nausea, headache, anxiety, OD
- **Compliance:** Improved with naltrexone depot (IM)

(Comer, 2006; Krupitsky, 2011)
Naltrexone Depot

Krupitsky, 2011
Methadone

- **Indications**: Severe opiate use disorder
- **Mechanism**: Full opiate receptor agonist.
- **Efficacy**: 70-80% retention in OTP.
- **Implementation**: Start at 25-30mg and built-up dose until opiate free urines.
- **Side effects**: sedation
- **Interactions**: benzodiazepine – alcohol.
Methadone

- Age >18 or 2 documented failures of detox.
- One year history of severe opiate use disorder
- Exceptions:
  - Pregnancy
  - Release from prison
Methadone dose: illicit opioid use

Strain, 1999
Buprenorphine

- Partial opiate receptor agonist
- Combination tablet /film (Bup/naloxone)
- Sublingual administration
- High affinity and slow dissociation
- Office based opiate use treatment
- Death associated with IV use and with benzodiazepines
FIGURE 1.

Mean Proportion of Opioid Use

Weeks

Heroin User - Observed
Heroin User - Regressor
Opioid User - Observed
Opioid User - Regressor

Romero-Gonzalez et al, 2017
Treatment of opioid dependent youth

Observed data

<table>
<thead>
<tr>
<th>% Opioid-Positive Urine Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week</td>
</tr>
<tr>
<td>Baseline</td>
</tr>
<tr>
<td>Detox</td>
</tr>
<tr>
<td>12-Week</td>
</tr>
</tbody>
</table>

Detox indicates detoxification group. Error bars indicate 95% confidence intervals.

†12-Week buprenorphine-naloxone group.

Woody, 2008
Buprenorphine and Memantine for young adults

Figure 4

Cumulative Proportion Abstinent

- Placebo
- Mem 15mg
- Mem 30mg

Weeks

Gonzalez, 2015
Long-term outcomes
Long-term outcomes

- Reduction of mortality compared to untreated controls (Gronbladh, 1990)
- Decrease IVDU from 81% to 29% vs 82% at 1 year of those who left treatment (Ball and Ross, 1991)
- HIV seroconversion: methadone 3.5% vs active IVDU 22%
Prevalence of past month heroin use, heroin dependence and other drug use across the 11-year follow-up period

Teesson, 2015
## Comorbid disorders impact

<table>
<thead>
<tr>
<th>Disorder</th>
<th>Impact Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major Depression *</td>
<td>1.96 (1.50 – 2.55)</td>
</tr>
<tr>
<td>Antisocial Personality</td>
<td>1.02 (0.70 – 1.32)</td>
</tr>
<tr>
<td>Borderline Personality</td>
<td>1.16 (0.91 – 1.48)</td>
</tr>
<tr>
<td>PTSD</td>
<td>0.81 (0.63 – 1.05)</td>
</tr>
</tbody>
</table>

Teesson, 2015
## Treatment effect

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Effect Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT</td>
<td>1.11 (0.90 – 1.38)</td>
</tr>
<tr>
<td>Detoxification *</td>
<td>1.52 (1.20 – 1.92)</td>
</tr>
<tr>
<td>Residential Rehab *</td>
<td>0.59 (0.46 – 0.76)</td>
</tr>
</tbody>
</table>

Teesson, 2015
NON-PHARMACOLGIC COMPONENTS OF RECOVERY

ASAM criteria:

• Dimension 1: Acute intoxication/withdrawal potential
• Dimension 2: Biomedical complications
• Dimension 3: Emotional, behavioral or cognitive complications; co-occurring disorders
• Dimension 4: Readiness to change
• Dimension 5: Relapse, Continued use potential
• Dimension 6: Recovery environment
COMPONENTS OF RECOVERY

• EBP recognizes that treatment should be individualized based on a comprehensive assessment

• Offering a continuum of care allows for more time to address major life problems requiring continued work from the individual, such as:
  – Homelessness
  – Legal issues
  – Family and interpersonal struggles
  – Education and vocational training
  – Life skills

• Case Management services are critical
Current opioid use epidemic is responsibility of all to help reduce.

Education and change in prescription practices are key elements in prevention.

Reduction of diversion and appropriate disposal is important.

Stabilization treatment alone is not effective.

Medication-assisted treatments are effective.

There is still need to develop effective short-term treatments.
Opiate Addiction & Treatment Portal

https://sis.nlm.nih.gov/enviro/addiction.html#a7
Handy NLM Tool To Identify a Pill

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“Through rich illustration and narrative, *Sobriety: A Graphic Novel* offers an inside look into recovery from the perspectives of five Twelve Step group members, each with a unique set of addictions, philosophies, struggles, and successes while working the Steps.”

To Request a Kit:  
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For Questions or Further Information,  
Contact Matthew Noe at  
[Matthew.No@umassmed.edu](mailto:Matthew.No@umassmed.edu)
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- En español

Disaster Information Management Research Center
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  - Table Top 8 1/2 x 11 inch Poster - 2015 (PDF, 2.1 MB)
  - Large Poster - 2015 (PDF, 2.9 MB)
  - Disaster and Emergency Apps Flyer - 2016 (PDF, 308 KB)
  - Where To Find Disaster Literature Flyer - 2017 (PDF, 356 KB)
  - Disaster Health Information Resources Wallet Card - 2013 (PDF, 68 KB)

Thank you all for attending this webinar!

Thank you Dr. Gonzalez and Lindsey for sharing your experience and knowledge!

Please complete the webinar evaluation to receive MLA credit
http://www.surveygizmo.com/s3/3529624/62b1b6a48e79

For more information about how you can benefit from NNLM NER outreach contact Susan Halpin, Education & Outreach Coordinator
susan.halpin@umassmed.edu

I am planning the next series of webinars about Substance Use Disorder. Is there a topic you would like to learn about? Let me know.