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

Gerardo Gonzalez

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Et al.

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Welcome to the Webinar
Individualized Treatment and the
Non-Pharmacologic
Components of Recovery

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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.

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.
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.
NLMs mission

Advance the progress of medicine and improve public health by making biomedical information accessible to everyone.

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.

The library is open to everyone. All of its resources are FREE.
NLM Implements Outreach Through the National Network of Libraries of Medicine (NNLM)

- Nationwide network of health sciences libraries, public libraries & information centers
- Each region has a partnership with a regional medical library
- Outreach provided through
  - Free access to online health & medical resources
  - Free Training & Professional Development
  - Grant funding opportunities
NNLM has about 6800 Network Members.

Members are
- Librarians,
- Healthcare providers,
- Public health professionals
- K-12 Educators and students
- Consumers

Anyone can join the network, it’s FREE

Joining the network provides you access to training classes and grant funding opportunities

To Join the NNLM Network:
https://nnlm.gov/members/join-network

https://nnlm.gov/
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

Gerardo Gonzalez, MD
Lindsey Silva, MSN, RN
Gerardo Gonzalez, MD
Director of the Division of Addiction Psychiatry and Associate Professor of Psychiatry, University of Massachusetts Medical School
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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
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
Main medical diagnosis
UMMC Worcester MA: 2008-2012

![Bar graph showing the distribution of main medical diagnoses for problematic and non-problematic opioid users. Key findings include:
- Opioid Use Disorder: Problematic (30%), Non-problematic (0%)
- Substance Use Disorder: Problematic (30%), Non-problematic (0%)
- Mental Health Illness: Problematic (10%), Non-problematic (0%)
- Chronic Pain non-cancer: Problematic (50%), Non-problematic (50%)
- Cancer: Problematic (0%), Non-problematic (0%)
- Others: Problematic (10%), Non-problematic (10%)

The chi-squared test statistic for the difference in distributions is $X^2 = 58.6$, with 5 degrees of freedom, and $p < 0.0001$.

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

Problematic Opioid Users
Non-Problematic Opioid Users

Emergency Department
Surgical/Subspecialties
Medical Inpatient
Primary Care
Psychiatry

X² = 9.6, df = 4, p = 0.04

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 decreased 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

1. Detoxification / stabilization units (ATS)
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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
Let's expand our view.
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
MAT – Buprenorphine - Naloxone

FIGURE 1.

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

Mean Proportion of Opioid Use vs. Weeks

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

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

\(^a\)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 OR (95% CI)</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>
<th>Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT</td>
<td>1.11</td>
<td>(0.90 – 1.38)</td>
</tr>
<tr>
<td>Detoxification *</td>
<td>1.52</td>
<td>(1.20 – 1.92)</td>
</tr>
<tr>
<td>Residential Rehab *</td>
<td>0.59</td>
<td>(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
Conclusion

• 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

[Image of Pillbox tool]

Discover
There's more to a pill than how it looks. What's inside the pill other than the drug? Is it a controlled substance?

Connect
Learn more than the pill's name. Pillbox links you to the drug label, clinical trials, breastfeeding safety, and more.

Explore
Pillbox's advanced search app has been retired. A new Pillbox website is in development that has the same features as the advanced search and runs on phones, tablets, and desktop browsers.

Data version: May 10, 2016

NLM Resources Related to Mental and Behavioral Health

https://medlineplus.gov/

https://mentalhealth.gov/

Offering programming on addiction and recovery? Consider borrowing one of our Graphic Medicine Book Club Kits featuring *Sobriety: A Graphic Novel*!

From the publisher…
“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: [www.nnlm.gov/ner/kits](http://www.nnlm.gov/ner/kits)

For Questions or Further Information, Contact Matthew Noe at [Matthew.Noe@umassmed.edu](mailto:Matthew.Noe@umassmed.edu)
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- HIV/AIDS
- Minority Health
- Radiation Emergency Medical Management (REMM)
- Specific Populations
- Students and Educators
- Wireless Information System for Emergency Responders (WISER)
- En español

Disaster Information Management Research Center
- Posters, Flyers, and Wallet Cards
  - 8 1/2 x 11 inch Flyer 2017 (PDF, 2.1 MB)
  - 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.