Treating Addiction as a Chronic Disease

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Disclosures

“Neither I nor my spouse/partner has a relevant financial relationship with a commercial interest to disclose.”
• “The question is frequently asked: Why does a man become a drug addict? The answer is that he usually does not intend to. Junk wins by default. I tried it as a matter of curiosity. I drifted along taking shots when I could score. I ended up hooked. You don’t decide to be an addict. One morning you wake up sick and you’re an addict.”

William S. Burroughs, *Junky* (1953)
Natural History of Opioid Use Disorder

Using to feel good

- Needing to use more to feel normal

- Using to keep from getting sick
A Disease of Gene-Environment-Development

Onset depends on many intrinsic and extrinsic factors

Biology Genes/Development

DRUG/ALCOHOL

Brain Mechanisms

Addiction

Slide courtesy of Dr. Compton, NIDA
Defining Addiction

- Primary, chronic brain disease characterized by compulsive drug seeking and use *despite harmful consequences*

- Involves cycles of relapse and remission

- 40-60% genetic

- Without treatment addiction is progressive and can result in disability or premature death

Defining Chronic Illness

• Long in duration—often with protracted clinical course
• Associated with persistent and recurring health problems
• Multi-factorial in etiology, often heritable
• No definite cure
• Requires ongoing medical care

SUD Meets Criteria for Chronic Illness

• Common features with other chronic illnesses:
  – Heritability
  – Influenced by environment and behavior
  – Responds to appropriate treatment
  – Without adequate treatment can be progressive and result in substantial morbidity & mortality
  – Has a biological/physiological basis, is ongoing and long term, can involve recurrences

https://archives.drugabuse.gov/about/welcome/aboutdrugabuse/chronicdisease/definition-of-addiction
http://www.asam.org/quality-practice/definition-of-addiction
Addiction Changes Brain Structure and Function

Decreased Heart Metabolism in Coronary Artery Disease

Healthy heart
Diseased Heart

Decreased Brain Metabolism in Addiction

Healthy Brain
Diseased Brain
A Treatable Disease

Why is addiction treatment evaluated differently? Both require ongoing care.

Hypertension Treatment

Addiction Treatment

Relapse & Chronic Disease

Comparison of Relapse Rates Between Drug Addiction and Other Chronic Illnesses

Percentage of Patients Who Relapse

- Type 1 Diabetes: 30 to 50%
- Drug Addiction: 40 to 60%
- Hypertension: 50 to 70%
- Asthma: 50 to 70%

Visualizing Recovery

Cost Savings of Treatment

For every $100,000 spent on treatment, $487,000 of health care costs and $700,000 of crime costs were shown to be avoided.

SAMHSA, 2009.
What is Effective Treatment?

The best treatment programs provide a combination of therapies and other services to meet the needs of the individual patient.

NIDA, 2012
https://d14rgtrzwf5a.cloudfront.net/sites/default/files/podat_1.pdf
**What is Effective Treatment?**

**Pharmacotherapy**
- **Alcohol use disorder**
  - naltrexone, acamprosate, disulfiram, topiramate*
- **Opioid use disorder**
  - methadone, buprenorphine, naltrexone
- **Tobacco use disorder**
  - varenicline, bupropion, NRT
- **Cocaine use disorder**
  - Topiramate*, naltrexone*

**Psychosocial/behavioral**
- **Levels of care**
  - Outpatient, IOP/PHP, residential
- **Modalities**
  - CBT, MI/MET, CM, TSF

**Recovery Supports**
- Mutual help/peer support
- Recovery coaching

* not FDA-approved but some research suggesting modest efficacy
Similar to Medical Management of Other Chronic Illnesses (e.g. Diabetes or HIV)

• No cure

• Goal is prevention of acute and chronic complications

• Individualized treatment plans and targets

• Treatment includes:
  – Medication
  – Lifestyle changes
  – Regular monitoring for complications
  – Behavioral support
Learning from HIV/AIDS

[TEST MORE] + [TREAT EARLY] + [STAY SAFE] = ENDING HIV

Everything has changed. We can end HIV.
Medication Saves Lives

- HIV discovered
- First NRTI (Retrovir) launched
- First PI (Invirase) launched
- First NNRTI (Viramune) launched
- Impact of HAART
- First NRTI+NRTI combination (Combivir) launched
- First PI (Invirase) launched
- First NNRTI (Viramune) launched
- First PI (Invirase) launched
- First NNRTI (Viramune) launched
- First PI (Invirase) launched
- First NNRTI (Viramune) launched

Nature Reviews | Drug Discovery

www.mghcme.org
Medication Saves Lives

Perinatal mortality in type 1 diabetic mothers, Belfast, 1940–1990. The control group is the total perinatal mortality for all pregnancies managed at the same hospital.
Medication Saves Lives

Maryland: 50% reduction in overdose death with opioid agonist treatment

France: 79% reduction in overdose death with opioid agonist treatment
### Long-term Outcomes: Most Patients in Remission

Table 2.
Change in clinical characteristics from study entry to follow-up 18, 30, and 42 months later.

<table>
<thead>
<tr>
<th>Participant characteristics</th>
<th>Month 0(^1) (n = 338)</th>
<th>Month 18 (n = 252)</th>
<th>Month 30 (n = 312)</th>
<th>Month 42 (n = 306)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current opioid dependence(^2), %**</td>
<td>100</td>
<td>16.3(^a)</td>
<td>11.5</td>
<td>7.8(^b)</td>
</tr>
<tr>
<td>Abstinent from illicit opioids(^3), %***</td>
<td>0</td>
<td>51.2(^a)</td>
<td>63.5(^b)</td>
<td>61.4(^b)</td>
</tr>
<tr>
<td>Opioid agonist treatment, %</td>
<td>0</td>
<td>31.8</td>
<td>38.1</td>
<td>36.9</td>
</tr>
</tbody>
</table>

How Long Should Treatment Last?

• “In most cases, treatment will be required in the long term or even throughout life. The aim of treatment services is not only to reduce or stop opioid use, but also to improve health and social functioning, and to help patients avoid some of the more serious consequences of drug use. Such long-term treatment, common for many medical conditions, should not be seen as treatment failure, but rather as a cost-effective way of prolonging life and improving quality of life, supporting the natural and long-term process of change and recovery.”

World Health Organization
http://apps.who.int/iris/bitstream/10665/43948/1/9789241547543_eng.pdf
“I got into harm reduction to enable people who use drugs. I enable them to protect themselves and their communities from HIV and hepatitis C and overdose. I enable them to feel like they have someone to talk to, someone who cares, someone who respects them and their humanity. If that makes me an enabler, I’m proud to claim that term.”

—Daniel Raymond, Director of Policy, Harm Reduction Coalition.
Thank you!

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