Advances in Addiction Science and Treatment

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Treatment Research Institute
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Presentation

1. What is driving the increased focus on addictions and their treatment?
   - Costs
   - Prescription Drugs

2. What are the new technologies and best practices in treatment of addictions?
   - SBI ++
   - Medications
   - Continuum of Care

3. What are the policy issues we must address?
What Do Substance Use Disorders Cost?

- Close to one-quarter of patients in medical settings have substance use disorders (SUDs)

- Health care costs – about $41 billion in health care alone for alcohol and drugs, and $96 billion for tobacco

- Individuals with untreated SUDs have higher medical costs than those without SUDs especially for ED visits and hospitalizations

- Use of medications in treatment, including in primary care, drives down medical costs significantly for alcohol or opiate dependence driven yet accounts for only 1% of spending for drug and alcohol treatment due to low utilization
What Do Substance Use Disorders Cost?

- Families of untreated individuals with SUDs use about 5X more health care for hospitalizations, pharmacy costs, and primary care visits.

- Drug or alcohol disorders are identified in 3% of all hospital stays totaling $12 billion in hospital costs.

- Among both the uninsured and Medicaid patients, about 25% of hospital stays are the result of alcohol disorders; about 20% of Medicaid hospital costs are associated with substance use.
Alcohol and Addiction

- Alcohol consumption is the third leading cause of death in the U.S. (Mokdad AH et al., JAMA, 2000)

- Among the top 25 diseases, patients with alcohol-use disorders are least likely to receive evidence-based care. (McGlynn EA et al., N Engl J Med. 2003)

- Prevalence of severe alcohol addictions is about 3.8% or 8 million adults.

- Use of medications increases other treatment options for moderate and severe alcohol addiction (Aetna, 2012)
Adolescent Alcohol Use and Its Sequelae

- 6.9 million young people had 5 or more drinks on the same occasion, within a few hours, at least once in the past month.

- 2.1 million young people had 5 or more drinks on the same occasion on 5 or more days over the past month (National Survey on Drug and Alcohol Use (NSDUH) 2009)

- Research shows that people who start drinking before the age of 15 are four times more likely to meet the criteria for alcohol dependence at some point in their lives.
Drug Disorders

- After alcohol, marijuana has the highest rate of dependence or abuse among all drugs.
  - In 2012, 4.3 million Americans met clinical criteria for substance used disorders related to marijuana in the past year—more than twice the number for substance use disorders related to prescription pain relievers (2.1 million) and four times the number related to cocaine (1.1 million).
Past month illicit drug use among persons aged 12 years and older

<table>
<thead>
<tr>
<th>Drug</th>
<th>Users (in millions)</th>
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<tbody>
<tr>
<td>Heroin</td>
<td>0.3</td>
</tr>
<tr>
<td>Inhalants</td>
<td>0.5</td>
</tr>
<tr>
<td>Hallucinogens</td>
<td>1.1</td>
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<tr>
<td>Cocaine</td>
<td>1.6</td>
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<tr>
<td>Psychotherapeutics</td>
<td>6.8</td>
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<tr>
<td>Marijuana</td>
<td>18.9</td>
</tr>
<tr>
<td>Illicit drugs</td>
<td>23.9</td>
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Drug Overdose Deaths

- Drug overdose deaths outnumbered motor vehicle deaths in 10 states in 2005.
  - In 2010, overdose deaths outnumbered motor vehicle deaths in **31 states**. (CDC, 2013)
- Most common drugs associated with misuse resulting in ED visits:
  - Cocaine (~500,000)
  - Cannabinoids (~480,000)
  - Benzodiazepines (~450,000)
  - Opioid analgesics (~450,000)
  - Heroin (~275,000)
  - Antidepressants (~175,000)  (SAMHSA, DAWN 2011)
Number of drug overdose deaths involving opioid pain relievers and other drugs
US, 1999-2010

- Any opioid analgesic
- Specified drug(s) other than opioid analgesic
- Only non-specified drug(s)

CDC/NCHS, National Vital Statistics System
Rates of opioid overdose deaths, sales and treatment admissions increased in parallel in the United States.

National Vital Statistics System, DEA’s Automation of Reports and Consolidated Orders System, SAMHSA’s TEDS
Treatment Gap

- There continues to be a large “treatment gap” in this country.
  - In 2012, an estimated 23.1 million Americans (8.9 percent) needed treatment for a problem related to drugs or alcohol, but only about 2.5 million people (1 percent) received treatment at a specialty facility.
How Do We Treat Addictions?

- SBI + outpatient detox + counseling in primary care and stabilization
- Clinical Management
  - Specialty Treatment with evidence-based practices along the full continuum of care – severity, complexity
  - Use of Medications
  - Recovery Support Services
- Self-Management
  - Continued Monitoring and Telephone Follow-up
  - Recovery Support Services
SPECTRUM OF ILLNESS & CONTINUUM OF CARE:
Type 2 Diabetes

What is Needed?
- Screening those at risk
- Motivational education
- Behavioral Interventions
- Electronic Monitoring

Pre-Diabetes

Clinically Managed Diabetes
- Behavioral Interventions
- Medications
- Family/Peer Support
- Close Monitoring

Personally Managed Diabetes
- Electronic Monitoring
- Social/Environment Services
- Family/Peer Supports
SPECTRUM OF ILLNESS & CONTINUUM OF CARE:
Substance Use Disorders

<table>
<thead>
<tr>
<th>Harmful Substance Use</th>
<th>Clinically Managed Addiction</th>
<th>Personally Managed Addiction</th>
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Where/How Provided

- Home, School, Work, Legal & Other settings
- Primary & Specialty Care
- Specially trained provider Teams

Many provider types

Home, School, Work, Legal & Other settings

Patient, Family, Social Networks
SBI

- Ongoing controversy about the usefulness of screening and brief interventions among some clinicians and researchers
  - Appropriate vs. inappropriate use of brief interventions
  - Standardization of screening
  - How brief interventions are received by patients based on who carries them out
  - Questions about screening if evidence-based treatments are not available
Referrals to Treatment (the RT in SBIRT)

- Significant problems with referrals to treatment
  - Lack of access to evidence-based care
  - Lack of standards for treatment programs
  - Lack of patient readiness
  - Lack of knowledge by referring clinicians about treatment programs and availability
  - Lack of networks among specialty providers
What To Do

- Stop screening and conducting brief interventions in primary care and other health care settings?
- Create standards of care for treatment programs, i.e., verify ASAM criteria?
- Create incentives for treatment programs to improve quality of care?
- Stop referring patients to treatment?
Integration 2.0

- SBI+ - behavior change, focused counseling sessions, and use of medications in primary care settings

- Providing screening, referral, and supports for engagement in treatment in other health care settings, e.g., mental health settings, hospital medical and surgical units

- Evidence-based clinical assessment that assures appropriate level of care and treatment planning.
SBI+

- TRI research --- PA CURE Foundation
  - Training for behavioral health specialists (manualized) in cross-substance screening and counseling
  - SBI plus assessment and 4-6 sessions of behavioral health counseling (if appropriate) in nurse-managed FQHCs
  - On-going telephone follow up if needed
  - Referral to treatment if needed
SBI++

- SBI ++ --- TRI grant to PCORI for care provided in nurse-managed FQHCs:
  - SBI, PLUS psych evaluation PLUS consultation on ambulatory detox PLUS prescription and initiation of medication by psychiatric nurse practitioner PLUS daily follow up as appropriate PLUS 2x per week counseling for 4-6 weeks by behavioral health counselor (MET with incentives) PLUS peer recovery specialists 2x per week
Specialty Treatment

Clinical Management

- Specialty Treatment with evidence-based practices along the full continuum of care – severity, complexity
- Use of Medications
- Recovery Support Services
Major Domains of Evidence-based Behavioral Therapies

- Brief Intervention
- Motivational Interviewing
- Contingency Management
- Cognitive-Behavioral, Social Learning, Skills Training
- Social Support, Social Network, and Family/Couples Therapy

Source: Miller & Carroll (2006)
Use of Medications

Conceptual Issue

Should medications be used in the treatment of addictions?

- Is this a philosophical question?
  - Is this a scientific question?
  - Is this a practical question?
Rationale for Medications

- Reduce craving
- Protect against lapses, which should be expected
- Reduce high rates of readmission to detoxification and hospital levels of care
- Improve treatment retention
- Improve outcomes
Standards of Care are Changing

National Consensus Standards

Use Pharmacotherapy

5. Healthcare providers should systematically promote patient initiation of care and engagement in ongoing treatment for substance use disorders. Patients with substance use illness should receive supportive services to facilitate their participation in ongoing treatment.

Withdrawal Management

6. Supportive pharmacotherapy should be available and provided to manage the symptoms and adverse consequences of withdrawal, based on a systematic assessment of the symptoms and risk of serious adverse consequences related to the withdrawal process. Withdrawal management alone does not constitute treatment for dependence and should be linked with ongoing treatment for substance use illness.

<table>
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<tr>
<th>Therapeutic Interventions to Treat Substance Use Illness</th>
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<tr>
<td><strong>Psychosocial Interventions</strong></td>
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<tr>
<td>1. Empirically validated psychosocial treatment interventions should be initiated for all patients with substance use illnesses.</td>
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<tr>
<td><strong>Pharmacotherapy</strong></td>
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<tr>
<td>8. Pharmacotherapy should be recommended and available to all adult patients diagnosed with opioid dependence and without medical contraindications. Pharmacotherapy, if prescribed, should be provided in addition to and directly linked with psychosocial treatment/support.</td>
</tr>
<tr>
<td>9. Pharmacotherapy should be offered and available to all adult patients diagnosed with alcohol dependence and without medical contraindications. Pharmacotherapy, if prescribed, should be provided in addition to and directly linked with psychosocial treatment/support.</td>
</tr>
<tr>
<td>10. Pharmacotherapy should be recommended and available to all adult patients diagnosed with nicotine dependence (including those with other substance use conditions) and without medical contraindications. Pharmacotherapy, if prescribed, should be provided in addition to and directly linked with brief motivational counseling.</td>
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<tr>
<td><strong>Continuing Care Management of Substance Use Illness</strong></td>
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<tr>
<td>11. Patients with substance use illness should be offered long-term, coordinated management of their care for substance use illness and any coexisting conditions, and their care management should be adapted based on ongoing monitoring of their progress.</td>
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Slow Adoption of Medication Policy & Financing Change Wary

Counselors and Clients

Advancing Recovery: Implementing Evidence-Based Treatment for Substance Use Disorders at the Systems Level

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ABSTRACT: Objective: A multisite evaluation examined the process and outcomes of Advancing Recovery, a Robert Wood Johnson Foundation initiative to deliver evidence-based treatments to substance use disorder services. Methods: Data from 18 sites were collected with a baseline survey and at 6 and 12 months of follow-up. Analysis was conducted using descriptive statistics and regression. Findings: After 12 months, the number of settings with specific services increased, but also the number of practices implementing evidence-based treatments. Conclusions: Feedback from sites reporting evidence-based treatments. counselors and clients noted a decrease in the number of patients who received evidence-based practices, up from a number of clients in use. The findings suggest that evidence-based practices are more commonly adopted when they are recommended or when counselors and clients are more willing to adopt new treatments. Because of the large scale of the program, the authors recommend that additional studies be conducted to better understand the factors that influence the adoption of evidence-based treatments.

Although not without controversy, the rapid expansion of evidence-based treatments for alcohol and drug disorders has occurred amidst a number of challenges. These challenges include limited research on evidence-based treatments and limited adoption of evidence-based treatments. Although many organizations and practitioners have supported the adoption of evidence-based treatments, others have been less enthusiastic. This study examines the extent to which counselors and clients are adopting evidence-based treatments and identifies factors that may influence this adoption.

1. Introduction

Evidence for the effectiveness of evidence-based treatments for alcohol and drug disorders has increased over the past decade. These treatments have been shown to be effective in reducing substance use, improving mental health outcomes, and increasing functional and quality of life outcomes. Despite this evidence, the adoption of evidence-based treatments has been slow and inconsistent. This study examines the extent to which counselors and clients are adopting evidence-based treatments and identifies factors that may influence this adoption.

2. Methods

The study was conducted using a mixed-methods approach. Data were collected through surveys, interviews, and focus groups with counselors and clients. The surveys were administered at baseline and follow-up, and interviews were conducted at 6 and 12 months. The study was approved by the institutional review board of the University of California, San Francisco.

3. Results

At baseline, 60% of respondents reported using evidence-based treatments, but only 30% at follow-up. Counselors reported that they were more likely to use evidence-based treatments if they perceived them to be effective, if they had received training in these treatments, and if they had supportive supervision. Clients reported that they were more likely to use evidence-based treatments if they perceived them to be effective, if they had information about these treatments, and if they were provided with support to help them implement these treatments.

4. Discussion

The findings suggest that counselors and clients are adopting evidence-based treatments, but the adoption is slow and inconsistent. The reasons for this are multifaceted and include limited training, lack of support, and limited knowledge about these treatments. Future research is needed to further understand the factors that influence the adoption of evidence-based treatments and to identify strategies to increase their use.

Additional support for evidence-based treatments has been limited. This has been due to a number of factors, including limited research, limited availability, and limited training. The lack of support for these treatments has been a barrier to their adoption. The findings of this study suggest that counselors and clients are adopting evidence-based treatments, but the adoption is slow and inconsistent. The reasons for this are multifaceted and include limited training, lack of support, and limited knowledge about these treatments. Future research is needed to further understand the factors that influence the adoption of evidence-based treatments and to identify strategies to increase their use.
Issues in Use of Medications

- Under-utilization of effective medications in comprehensive treatment prevents using medications to help stem the growth of overdose;
- Lack of Medicaid eligible and enrolled practitioners that can provide medications with appropriate counseling is significant.
- Non-quantitative treatment limitations (NQTLs) are frequent among private insurers despite the passage of the parity act (MHPAEA).
- A number of State legislatures and governors are limiting access, duration, and dosages for medications that are used to treat substance use disorders.
Medication Diversion

• Patients may provide their medication to others
  ▪ For profit
  ▪ To help with withdrawal
  ▪ To get high

• This has become a problem in some countries where there is a shortage of heroin

• Steps should be taken to minimize diversion
  ▪ Provide number of tablets commensurate with stay in treatment and progress
  ▪ Get to know family members to have monitoring
  ▪ Some ask for tablet counts at follow-up visits
  ▪ Monitor urine testing to ensure the presence of buprenorphine
Vocabulary

- **Agonist** – activates a receptor
  - Methadone

- **Antagonist** – blocks a receptor
  - Naltrexone
  - Long-acting, injectable naltrexone (Vivitrol)

- **Partial agonist/antagonist** – does some of both
  - Buprenorphine
  - Acamprosate
Medications for Alcohol or Opioid Disorders

Alcohol:
- Naltrexone – oral
- Naltrexone (Vivitrol) – long-acting, injectable
- Acamprosate
- Disulfram (Antabuse)

Opioids:
- Methadone
- Buprenorphine
- Naltrexone – oral
- Naltrexone (Vivitrol) – Long-acting, injectable
Office-Based Buprenorphine Treatment

- **Physician Offices**
  - With physician monitoring and advice
  - Referral to counseling and drug testing
    - *Added counseling not shown to be of extra benefit* (Fiellin et al., 2006; Weiss et al., 2011)
  - Doses self-administered through prescriptions
  - Widely used internationally
  - In U.S. often limited to insured patients
Buprenorphine Treatment

- Buprenorphine more effective than placebo
- Buprenorphine equally effective as moderate doses of methadone
Injectable extended-release naltrexone for opioid dependence: A double-blind, placebo-controlled, multicentre randomised trial

Evgeny Krupitsky, Edward V Nunes, Walter Ling, Ari Illeperuma, David R Gastfriend, Bernard L Silverman

Once-monthly XR-NTX
- Non-narcotic

Effective
- Confirmed abstinence
- Craving
- Retention
- Prevents relapse

No Risk
- Physical dependence
- Illegal diversion

New Treatment Option
- FDA approved
- Acceptance of opioid treatment medications
Effectiveness of Medications in Treatment

All medications for treatment of moderate and severe addiction to opioids and/or alcohol have shown clear clinical evidence of effectiveness in:

- reducing alcohol or opioid use and alcohol-use or opioid-use related symptoms of withdrawal and craving and,
- risk of infectious diseases and crime when used as part of a comprehensive approach in appropriate doses.

Adherence to oral medications is often a problem.
Effectiveness (con’t)

- Effectiveness of these medications is true only when used as maintenance treatments.

- There is NO evidence of enduring benefits from any medications when used in any type of “detoxification only” regimen that does not include continuing treatment and recovery supports. Detoxification is not a treatment.
What are the characteristics of effective maintenance treatment?

- Higher doses (individualized to patients’ needs)
- Longer time in treatment
- Psychosocial services of appropriate intensity and duration
Discussion

- 40,000+ individuals treated with medication
  - 1,323 with XR-NTX
- Consistent effects for alcohol & opioid disorders
  - Patients using medication appear to have fewer detox and inpatient admissions.
  - Total costs of care appear to be lower for patients using medication
- XR-NTX associated with lower utilization & costs
Cost-Effectiveness

- All medications are cost-effective
  - Use of medications reduces inpatient hospital admissions for both alcohol- and drug-related issues and for other health issues including admissions to emergency departments
  - Use of medications increases use of outpatient psychotherapy – we speculate because patients taking medications have virtually no craving, are more stable and, therefore, better able to participate in outpatient treatment
Any vs. No Medication: TOTAL Cost per patient (inpatient + outpatient + pharmacy costs)

<table>
<thead>
<tr>
<th>Cost per patient</th>
<th>Any Medication (N=10376)</th>
<th>No Medication (N=10376)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$8,134</td>
<td></td>
<td>$11,677</td>
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* Any vs. No Medication: P<0.0001
Cost Offsets

- Use of medications in treatment for both alcohol and opiate dependence results in significant reductions in overall healthcare costs as a direct result of reduced ED visits and inpatient detox and alcohol- or opiate-related hospitalizations.
- Outpatient psychotherapy visits increase, a positive finding suggesting that patients are more able to make use of outpatient treatment services early in treatment.
Populations of Concern

- Adolescents
  - SBI
  - Medication Guidelines
- Pregnant Women
  - Integrated care
  - Medications
- Individuals at risk for HIV+ and HepC
  - Integrated care
Policy Issues

- How will the ACA and Parity play out?
  - Medical necessity criteria – studies reveal continued discrepant criteria
  - Network adequacy – specialty physicians – where are they?

- Organization of Care and Workforce
  - What should specialty treatment look like?
  - What should behavioral health in primary care look like?
THANKS!