Treatment and Prevention of Opioid Use Disorder: Overview*

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Learning Objectives

- Describe historical federal initiatives that provided treatment for OUD: US Public Health “Hospitals” and Narcotic Addict Rehab Act
- Identify the most effective therapies for OUD – opioid agonists
- Summarize the limited access to pharmacotherapy
- Explain the chronic nature of OUD and the rates of return to use
- Specify approaches to preventing OUD and the role of overdose education and naloxone distribution

Introduction

- Opioid use is widespread and treatment access is limited
- 36% of the US population aged 12+ (n = 97.5 M individuals) used prescription opioids in the past year.
  - 5% (n = 12.5 M) misused prescription opioids
  - 1% (n = 2 M) met criteria for opioid use disorders (OUD)
  - **822,000 entered treatment for OUD**
  - 828,000 used heroin; 72% also used prescription opioids

Estimates retrieved from: The 2015 National Survey on Drug Use and Health

Retrieved from: Taking_Your_Meds

Opioid Treatment: Practice and Policy circa 1900

- Opioids were common in over the counter medications
- Morphine maintenance was common
- 1914 Harrison Narcotic Act required physicians and pharmacists to register, pay a tax, and keep records of narcotics dispensed
- The legislation was interpreted as a prohibition against the prescription of narcotics to treat narcotic addiction
- The Supreme Court (Webb vs US) upheld that interpretation in 1919
- Federal prosecution closed morphine dispensaries
- Arrest and incarceration became the preferred intervention

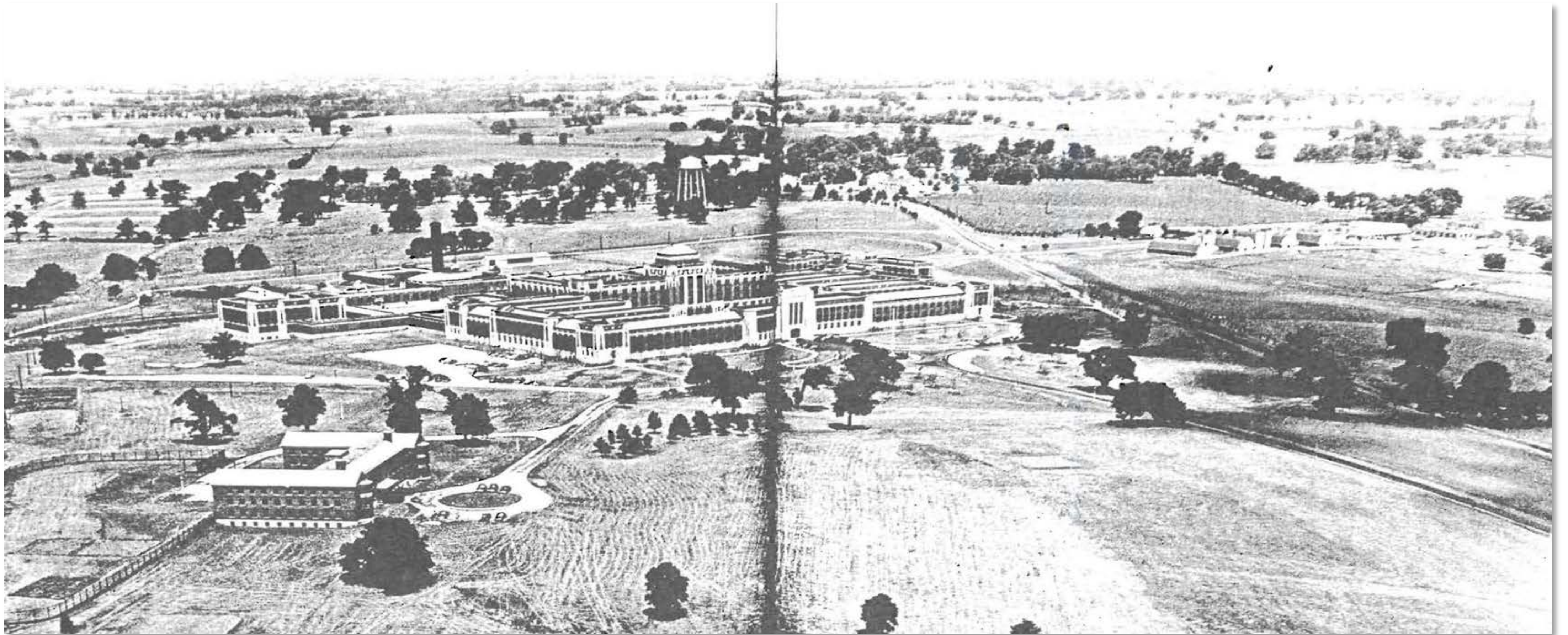
Image retrieved from: [Promoted_Herion_For_Children]

Narcotic Farms: US Public Health Hospitals

- There was no publicly supported treatment for opioid use disorder
- 1929 Federal legislation authorized construction of two narcotic farms
- Lexington, KY opened in 1935; Fort Worth, TX opened in 1938
- Co-managers: US Public Health Service & US Bureau of Prisons
- Moral Therapy guided care – healthy living, hard work & rural setting
- 4 to 6 months recommended stay; most volunteers left after detox
- Federal prisoners required to complete their sentence
- No aftercare following release – 95% returned to use
- Hospitals closed in 1974 – became Federal correctional institutions

US Public Health Hospital: Lexington, Kentucky (1935 – 1974)

“1000 acres for the cure”



- Social rehabilitation based on moral therapy
  - A healthful, rural setting where work, psychotherapy and recreation lead to personal growth and change.

- Federal mandate to find a cure for addiction
  - Ethical issues of asking prisoners to volunteer for science
  - Political issues of giving drugs to addicts
  - Follow-up studies suggested 95% returned to drug use

Campbell, N.D., Olsen, J.P. & Walden, L. The Narcotic Farm. New York: Abrams, 2008.

Narcotic Addict Rehabilitation Act of 1966

- Permitted 36 months of civil commitment for federal drug crimes
- 4 to 6 months at the Narcotic Hospitals
- Ongoing supervision and aftercare in outpatient settings
- Included the first Federal funds for outpatient services
- First community based publicly funding for drug treatment
- Needed to develop a workforce
- Authorization for $15 million per year

Synanon and Therapeutic Communities

- Synanon was the prototypic therapeutic community
- Staff in recovery used confrontational groups to change residents
- Required 15 to 24 months to modify dysfunctional behavior, eliminate criminal thinking and develop skills of daily living (e.g., employment)
- Confrontations were dehumanizing; dropout rates were about 70%
- TCs have eliminated the worst practices and reduced lengths of stay

Image of Synanon Community retrieved from: History_Of_Synanon

Opioid Agonist Therapy: Methadone

- A full opioid agonist activating mu opioid receptors
  - Prevents withdrawal
  - Reduces opioid craving and use
  - Improves employment and health
  - Decreases criminal activity
- Methadone centers expanded; centers dispense rather than prescribe
- President Nixon supported use of methadone to reduce crime (1971)
- SAODAP expanded methadone services and improved access to counseling; DEA managed the regulations
- IOM (1995) recommended less regulation; SAMHSA assumed regulatory responsibility and released accreditation standards (2000)

Image retrieved from: http://opium.com/addiction-treatment/methadone-treatment-opiate-addiction-right/

Opioid Agonist Therapy: Buprenorphine

- A partial agonist on the mu-opioid receptors
- Safer than methadone; formulated with naloxone to inhibit abuse
- Use for treating opioid use disorders required federal legislation
- DATA 2000 created a waiver to the prohibition of using narcotics to treat narcotic addiction if the FDA approves its use
- Prescribers with a waiver may prescribe buprenorphine for OUD
  - Patient panel is limited to 30 patients in Y1 and 100 in Y2
  - Prescribers with specialization in treatment OUD can treat 275
  - NPs and PAs approved to prescribe buprenorphine in 2016
- Formulations: sublingual, implant, extended-release injection

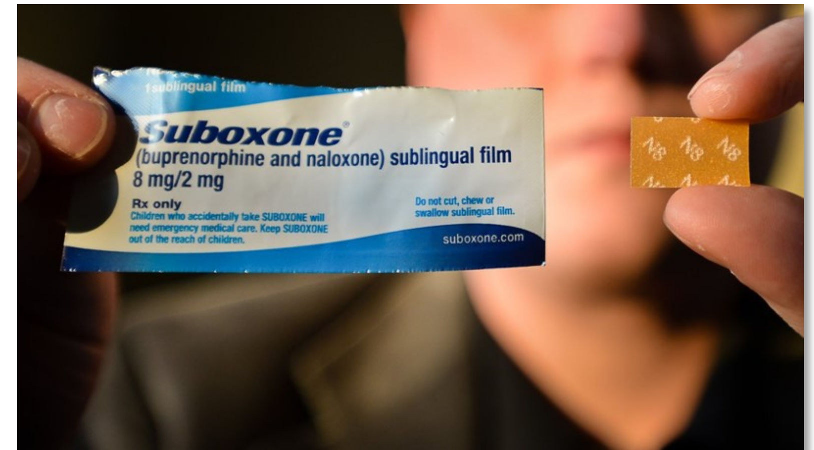


Image retrieved from: Addiction_Treatment_Dark_Side

Opioid Antagonist Therapy: Naltrexone

- An opioid antagonist that blocks mu-opioid receptors to prevent activation
- SAODAP authorization required it to develop opioid antagonists
- Naltrexone received FDA approval in 1984 for treatment of OUD
- Oral naltrexone blocks opioid effects but it is not an effective therapy
  - Daily dosing required; poor medication adherence i
  - Meta-analysis of trials finds no difference with placebo or no medication
- Extended release naltrexone (Vivitrol) approved in 2010
- Recent trials of XR-NTX vs buprenorphine find equivalent outcomes if patients get onto the medication; requires 10 days without opioid use

Image retrieved from: [Things_To_Know_About_Vivitrol]()

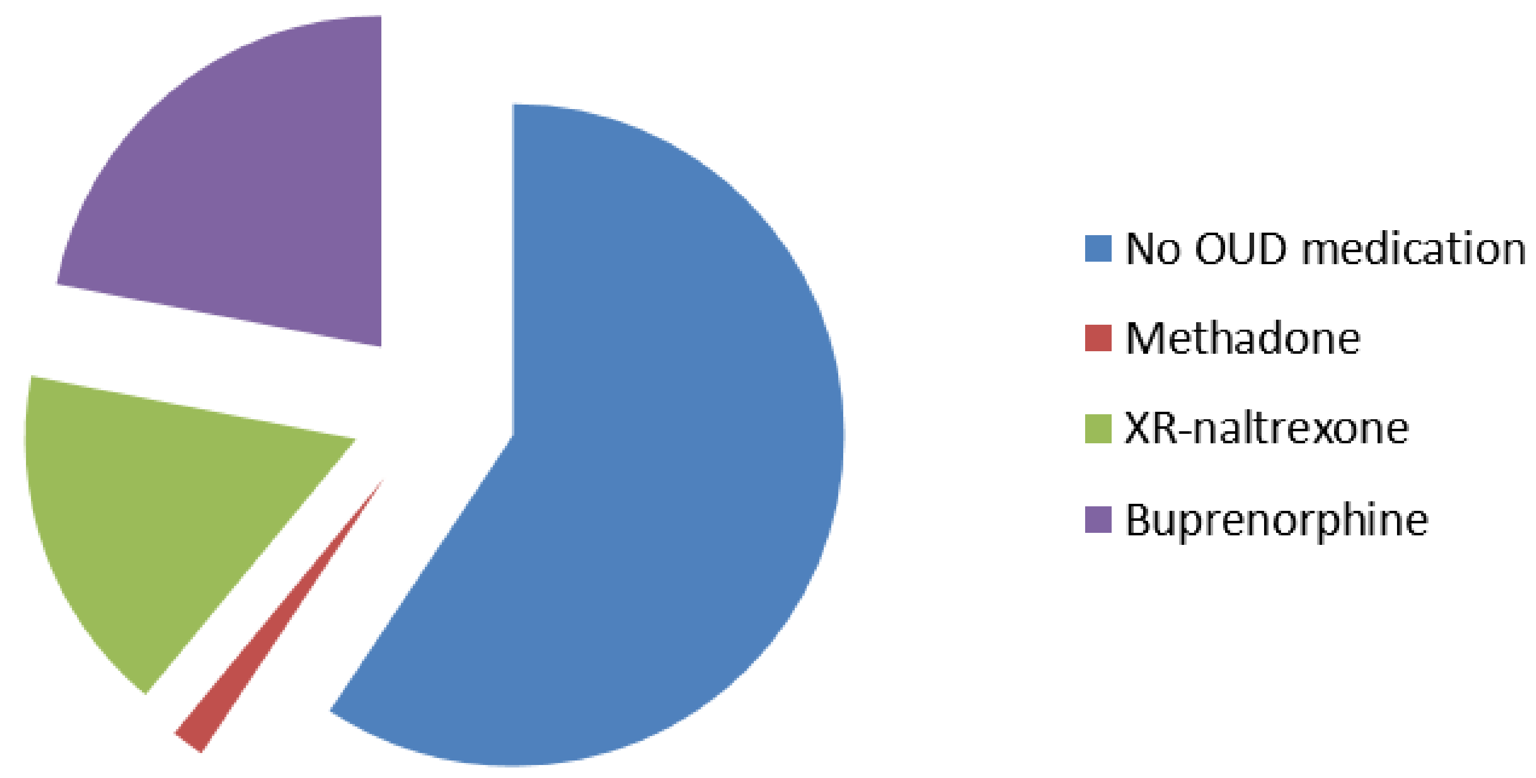
- 14,000 specialty addiction treatment centers in US
  - 82% outpatient; 32% short or long-term residential; 24% residential detox

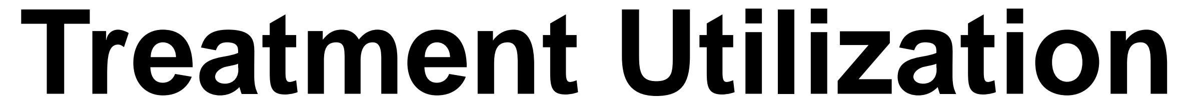
- Most do not provide opioid agonist or antagonist therapies
  - 1,283 opioid treatment programs (789 with buprenorphine; 337 had XR-NTX)
  - 3,101 other centers provide buprenorphine; 2,691 offered XR-NTX
  - Number of primary care practices that offer buprenorphine is unknown

- Most patients do not receive opioid agonist or antagonist therapy
  - Overall about 10% (Knudsen & Roman, 2012, J. of Addiction Medicine)

- Barriers: expectations for drug-free treatment, staff resistance, cost, lack of prescribers on staff, prior authorization and utilization review requirements, complexity of ordering and use

Addiction Treatment Centers Using Medication for OUD





- 34% of admissions reported opioids as primary drug in 2015
- Opioid admissions increased 58% from 2005 to 2015
- 1 in 3 patients began before age 18; most had prior treatment admits
- Medicaid was primary payer (about 50%)
- Patients tended to be White (80%)
- Women were more likely to seek care for use of other opioids (48%) vs. heroin (36%)

Return to Use is Common

- Patients have difficulty tapering from opioids and return to use
- A 1943 analysis found that 13% of volunteer patients at Lexington were opioid free 6 months post discharge
- NARA outcomes were similar (14% abstinent at 6 months)
- 33 years following civil commitment in California, 23% were living:
  56% provided opioid free urines, 14% incarcerated, 30% were positive for opioids or refused to provide urine.
- POATS: after 3 months of buprenorphine 49% were opioid free;
  - after an 8 week follow-up 8% remained opioid free
  - At 42 month follow-up: 32% opioid free, 29% on agonist therapy and opioid free, 8% on agonist therapy and using opioids, 31% using opioids

- OAT with methadone for patients who need structure of daily dosing
- OAT with buprenorphine for patients with structure in their life and without AUD or use of benzodiazepines
- Do not use opioid antagonist therapy unless it is XR-NTX
- WHO and UNODC encourage opioid agonist therapy
- 2017 British Columbia Guidelines discourage withdrawal from opioids without ongoing aftercare because of OD risk and promote use of buprenorphine rather than methadone because of greater safety (in Canada physicians can prescribe buprenorphine and methadone)

Models for Buprenorphine in Primary Care

- Office-based care under supervision of a waivered prescriber
- BHIVES provided treatment within HIV primary care
- Vermont hub-and-spoke and Baltimore Collaborative
    - Induct and stabilize in an OTP and then support primary care to continue care
- Massachusetts nurse care manager model uses a nurse to facilitate patient management and reduce burden on prescribers
- Project ECHO uses telemedicine to support rural prescribers
- Oregon Pain Guidance Group provides patients and physicians with web support, opioid prescribing guidelines and an annual meeting

Prevention of Opioid Use Disorder

- Focus is often prevention of opioid overdose
- Project Lazarus and the Oregon Coalition for Responsible Use of Medication – local initiatives using naloxone distribution, provider education, alternative pain therapies, increased access to opioid agonist therapy
- CDC guidelines reduce risky prescribing
- Prescription Drug Monitoring Programs discourage risky prescribing
- DEA regulations amended to permit taking back unused medication
- Presidential Opioid Commission released recommendations

Overdose Education and Naloxone Distribution

- Narcan approved in 1971; IV and IM use by EDs and first-responders

- Overdose education and naloxone distribution to address Ods
  - Recognize opioid OD symptoms and administer nasal naloxone
  - FDA has approved autoinjector and nasal spray formulations

- Naloxone prescriptions have increased slightly

- Price has escalated distressingly: autoinjector from $690 to $4,500

International Treatment Options

- Heroin assisted treatment for patients non-responsive to buprenorphine and methadone in Europe and Canada
- British Columbia permits daily slow-release oral morphine with observed dosing
- Vancouver BC hosts a supervised injection facility

Image retrieved From: [Providence_Crosstown_Clinic]

- Federal policy shapes and constricts treatment for OUD
- Lexington and Fort Worth hospitals were first federal funding for OUD
- NARA provided first federal funding for outpatient care
- Legislation and regulation continue to shape services
  - 2008 MHPAEA requires health plans to treat behavioral health equitably
  - ACA made addiction treatment an essential benefit and expanded Medicaid
  - CMS permits states to request a waiver from the IMD exclusion and to pay for residential care if they use ASAM PPC
  - CARA expanded prevention, public education, and naloxone distribution
  - 21st Century Cures Act appropriated $1 billion for state demonstrations
- 21st Century treatment requires evidence-based practices and integration with primary care to better serve patients with OUD

Drug and Social Policy History

- **1870s Anti-opium policies**
- 1909 The Smoking Opium Exclusion Act
- **1914 Harrison Narcotics Act**
- 1919: Webb v. the United States
- **1924 Heroin Act**
- 1925: Linder v. the United States
- 1934 Uniform State Narcotic Act
- 1961 United Nations Single Convention on Narcotic Drugs (Kennedy)
- 1969: President Nixon calls for national anti-drug policy

- **1970 Controlled Substances Act** (Nixon)
- 1971: Nixon declares “war on drugs”
- **1974 Narcotic Addict Treatment Act** (Nixon)
- 1984: Nancy Reagan “Just say no campaign” (Reagan)
- 1986 Anti-Drug Abuse Act of 1986–the law of the ”war on drugs”; mandatory minimums (Reagan)
- 1989: Creation of the Office of National Drug Control Policy (Bush)
- 1994 Violent Crime Control and Law Enforcement Act (Clinton)–three strikes
- **2000 Drug Addiction Treatment Act** (Clinton)
- 2016 Comprehensive Addiction and Recovery Act (Obama)

Questions and Discussion

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