INTRODUCTION TO MAT

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QUESTION 1

What is your profession

1- Prescriber
2- Pharmacist
3- Therapist
4- Peer support
5- student
6- Other

Learning Objectives

1. What is MAT
2. The impact of MAT
3. How has MAT changed
4. Common issues in MAT
5. Future issues in MAT

WHAT DO WE MEAN BY MAT (Medication Assisted Treatment)

Medication-assisted treatment (MAT) is the use of medications, in combination with counseling and behavioral therapies, to provide a "whole-patient" approach to the treatment of substance use disorders

- individual or groups therapy
- family therapy
- 12 step
- peer support
- others

KEY CONCEPT OF MAT

- Use disorders are complex diseases having both neurochemical abnormalities and behavioral components

- Optimal treatment should target both aspects of the disease

THERAPY

Minimal

Intense

- prescription use
- stable in most domains
- high level of motivation
- Good recovery support system

- multi drug
- unstable
- Concurrent mental health issues
- Poor social support

Medical Management Alone vs Therapy linked

- 4 studies that suggest no additional benefit of behavioral intervention with buprenorphine but…

- Regular medical management that included weekly appointments for early phase
- Regular urine monitoring
- Physician counseling on addiction that stressed importance of abstinence, outside meetings.

MEDICATIONS USED IN MAT

ALCOHOL USE DISORDER
- Antabuse
- Naltrexone

OPIOID USE DISORDER (MOUD-medications for opioid use disorder)
- Methadone
- Buprenorphine
- Naltrexone
- Naloxone

TOBACCO USE DISORDER
-Nicotine replacement
-Wellbutrin
-Varenicline

WHY IS MAT SO CRUCIAL IN THE TREATMENT OF OPOID USE DISORDER

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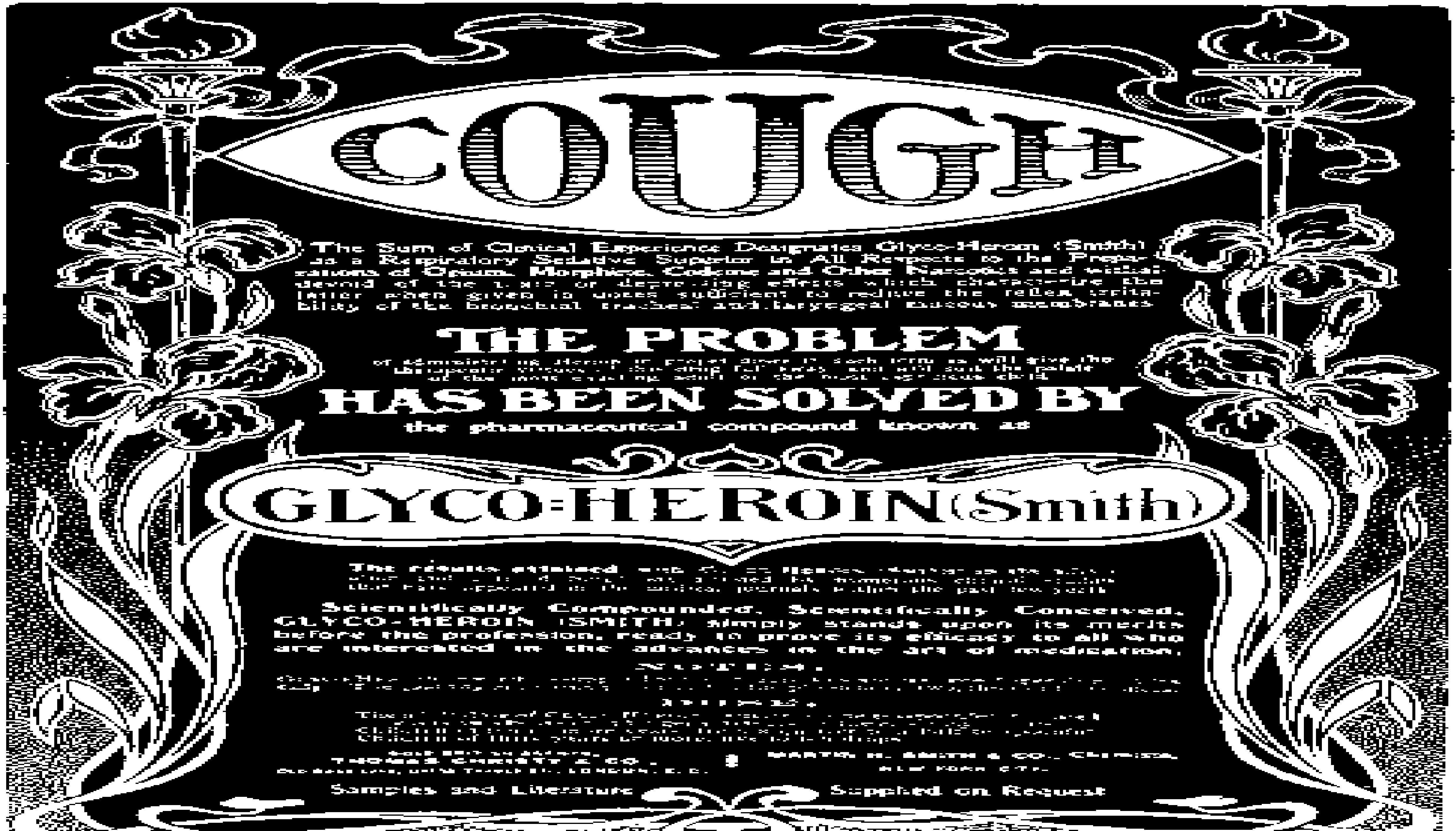
BECAUSE ABSTINENCE BASED TREATMENT IS MUCH LESS EFFECTIVE THEN MAT

History provides insight into today


1887
Mrs. Winslow's
SOOTHING
SYRUP
FOR CHILDREN TEETHING

Post Civil War Addiction

Most likely addicted to morphine, opium tinctures or laudanum
Often female, middle or upper class
Had unlimited access to opiates
Viewed by society as a pathetic , not a criminal
Treatment often physician office based or sanatoriums utilizing maintenance therapy with morphine or opium
Estimated up to 300,000 addicted


COUGH
THE PROBLEM
HAS BEEN SOLVED BY
the pharmaceutical compound known as
GLYCO-HEROIN (Smith)
Scientifically Compounded. Scientifically Conceived.
GLYCO-HEROIN (SMITH) simply stands upon its merits before the profession, ready to prove its efficacy to all who are interested in the advances in the art of medication.
THOMAS CHRISTY & CO.
Samples and Literature
Supplied on Request

Criminalization Period :1900-1920s

-Connection of addiction with racism – “DOPE FIEND”
-Heroin distribution directed to the inner cities
-International policies for opium control
-Medical community accepted that addiction was a moral issue.
AMA in 1921 ”shallow pretense that drug addiction is a disease”
- clinics that attempted to use opioids to treat opioid use disorder, Shreveport closed in 1923, New York City clinics

Era of Narcotic Control

Harry Jacob Anslinger
Head of Bureau of Narcotics from 1930-1962
No room for maintenance as a treatment option
Detoxification in select facilities

Congress appropriates funds to establish 2 new treatment facilities "narcotic farms"
-Fort Worth, Texas
-Lexington, Kentucky

Lexington facility opens in 1935 as the "US Public Health Service Narcotic Hospital
-long term (6 months) detoxification for prisoners and volunteers

The initial results are not promising

Outcomes of two follow-up studies

- relapse rate of 93% in 1, 881 patients
- relapse rate of 97% in 453 patients

Narcotic Control is Challenged
50-60s – second wave

Between 1950-1960 death from IV heroin use increased from 7.2 to 35.8/10,000 deaths

Veterans returning from Vietnam where heroin use was not uncommon

Between in 1960-1970 over 150,000 new names added to the narcotic registry in NYC

Heroin related mortality became the leading cause of death in the age group 15-35 in NYC

Incarceration rates had no effect

New York

Riverside Hospital for adolescent - 1956
- 86% relapse in 247 pts
  11% death rate
    3% abstinence rate

1956- Joint committee of the ABA and AMA, New York Academy of Science establish an outpt facility to investigate the option of maintenance

Drs Dole/Nyswanger and Kreek- feasibility grant for opiate maintenance: initially used morphine but ended up using methadone

Methadone 1965-2000

1962- Anslinger retires

White House Conference in 1962

1963 – Kennedy Administration Advisory Commission on Narcotic and Drug Abuse recommends research on opiate maintenance
Marie Nyswander / Vincent Dole set up a experimental maintenance program eventually leading to the first methadone programs

Opiate treatment programs expand under the jurisdiction of the DEA and State

Methadone treatment comes of age

- Methadone Regulations 1972
- Narcotic Addict Treatment Act 1974
  - limited methadone maintenance treatment in the context of an Opioid Treatment Program (not a general drug treatment program) requiring special registration

RELAPSE (1970-75)

- 13 studies
- 807 patients

- 334 detoxed with psychotherapy
  - 42% completed (no psychotherapy)
  - 60% completed (if there was psychotherapy)
  - 16% abstinent after 12 months
- 402 detoxed without staff approval
  - 19% completed
  - 8% abstinent after 12 months

RELAPSE (1976-1980)

- 22 studies
- 677 patients

- 428 detoxed with psychotherapy
  - 57% completed the detox
  - 36% remained abstinent at 12 months

RELAPSE 1980-90

- Gossop,et al, 1986
  - 17% successfully detoxed with a 56 day detox
- Senay, et al., 1981
  - 19% successfully detoxed with a 84 day detox
- Dawe et al., 1991
  - 28% successfully detoxed with a 42 day detox

Bentzley 2015 (Review on BUP Discontinuation)

Study (N)	Heroin	Duration (taper)	Avg Dose	Treatment Abstinent	F/u	Post taper Abstinence
Sigmon 2013 (70)	50%	2 wks (1 v. 2)	11.5mg	82%	9 wks	17% (21%)
Weiss 2011 (323)	26%	12 wks (4)	20.8g	54%	8 wks	10%
Ling 2009 (516)	83%	4 wks (1 v. 4)	20.3mg	37%	4 wks	18% (18%)
Woody 2008 (55)	76%	8 wks (4)	15.1mg	54%	24 wks	34%

- The goal is not weaning or “detox”
- The goal is to keep the patient engaged and alive
- The goal is stabilization and “normalization” of the patient
- The goal is to keep the patient engaged in treatment
- Reduce or eliminate cravings
- Block euphoric effects of the opioid of choice

The next wave (prescription wave)

The fear of prescribing opioids among physicians leads to inadequate treatment of cancer and other severe painful conditions

70-80s- shift that cancer pain needs to be aggressively treated with opioids without regard to addiction

80s - If we are undertreating cancer pain we probably are undertreating chronic nonmalignant pain and we overestimate the addiction risk

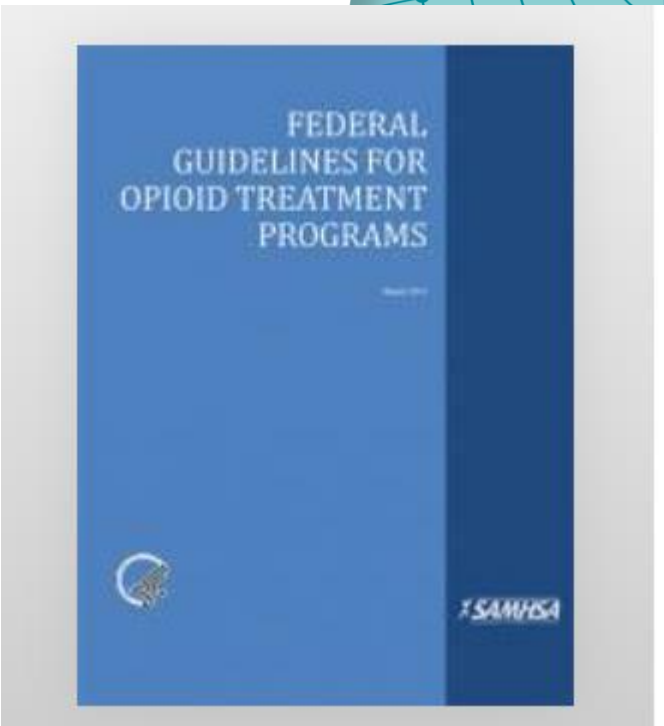
Various factors lead to the overprescribing of opioid pain medications

By the 1990s it is clear we have a major opioid addiction issue in United States, predominately drive by Rx pain meds

The pendulum now swings to stopping opioids among chronic pain patients and many patients now turn to street opioids, heroin

Methadone and Office Based 2000

- Drug Addiction Treatment Act of 2000
  -moved monitoring of clinics from FDA to the Office of Substance Abuse and Mental Health Services Administration / CSAT
- Established accreditation bodies as responsible for monitoring OTPs
- Accreditation guidelines and standards
- Requirements under the Code of Federal Regulations 42 CFR-



MOUD SETTINGS AND REQUIREMENTS

BUPRENORPHINE/NALOXONE

- approved in 2002 (Drug Abuse Treatment Act 2000)
  OFFICE BASED TREATMENT
  - setting of a substance use disorder clinic

  - setting of a medical clinic -Office Based Treatment)
  (may be integrated within the primary practice)

- Minimal federal requirements: waiver requirement removed, special DEA number, patient number limits
- State requirements for OBTs (Public Law 213-2019)

OBT STATE REQUIREMENTS

- INSPECT on induction and 4 times/yr.
- Initial assessment including mental health assessment
- Treatment agreement
- Some level of counseling
- Regular follow up visits with documentation of progress
- Drug testing as part of their follow up and documentation of plan when positive or no buprenorphine in urine
- Provide naloxone rescue prescription

BUPRENORPHINE

- Partial agonist
- Reduces cravings
  Stops withdrawal
  Blocking of pure agonist
- Can be started within a short period after stopping opioids or even low dose initiations while opioid use is continued
- Patient can be stabilized within 2-4 days
- No euphoria once stabilized
- Can help with pain (variable)

NALTREXONE

- NALTREXONE
  - developed in 70s
  - approved for heroin addiction as oral version in 1984
  - injectable formulation approved for alcohol use disorder 2006
  - injectable formulation approved for opioid use disorder 2010
  - Office based,
  - No restrictions or special requirements to prescribe

Mechanism of Action

Competitive antagonist of opioid receptors
- mu, < kappa, < delta
Highest affinity for mu receptors , 10-20 x lower affinity for kappa and delta receptors
May have some very weak agonist properties also
- single 50 mg dose blocks receptors for 48-72 hours
  96% blockade of brain opioid mu receptors at 24hr
  86% at 48hr
  46% at 72hr

NALTREXONE

- NALTREXONE
  - Equally effective *if you can get the patient on it*
  - Requires a prolonged period of abstinence before it can be started without risk of precipitated withdrawal
  - May not be as effective in reducing cravings as agonists
  - Zero abuse potential
  - Will not help in pain management

So what is the success rate of MAT

Overall between 50-60% 12 month abstinence

Major issue is retention, not failure of the medication

HOW LONG?

The end goal is not getting off the MAT

You can remain on it as long as you feel it is working and you need it

Would not try to use it as a short term “detox agent”

Who shouldn't be placed on MAT for opioid use disorder?

- There is no opioid use disorder (? Chronic pain patients)
- They already are getting MAT from someone else
- If they are clearly intoxicated at time of starting
- They are transitioning somewhere soon where they will not have access to MAT
- Short term "detoxes"
- If their employment precludes it and they need to maintain that position (nurses, CDL License)
- Known allergy or adverse reaction

The most recent wave

The addition of fentanyl

The resurgence of methamphetamines

The emergence of newer synthetic opioids, benzodiazepines, others

How has fentanyl changed things

Overdoses did not decline despite increased treatment

The induction process for patients on fentanyl is not as simple as for heroin and short acting opioids

Patients may be able to override what were therapeutic doses of MOUD

Overdose reversal with naloxone becomes more difficult

NITAZINES

- isotonitazene
- metonitazene
- etonitazene
- protonitazene
- Etodesnitazene

TIANEPTINE (ZA ZA REDS)

- Atypical antidepressants,

-low dose opioid properties,

THE FUTURE OF MAT

Even less restrictions on prescribing requirements for buprenorphine

Further expansion of treatment (barrier free treatment)

Further expansion of harm reduction models

Improving induction success with fentanyl and concurrent use

Increasing use of injectable buprenorphine as alternative to daily dosing

Continues expansion of naltrexone rescue kits access

Role of low dose hallucinogens/ketamine in substance use treatment

Improvements in tapering strategies when appropriate

Every person eligible for MOUD should be offered and have available treatment with medications in addition to psychosocial support

That treatment should be timely given the risk of overdose,
It should be viewed as a medical emergency

Naloxone should be readily available free

Your best tools is the therapeutic relationship you have with the patient (this means listening)

LINK TO STATE LAW 214

https://services.statescape.com/ssVersions/2479000/2479076/u_20190509.pdf

Download your PDF of **Ind. Code § 12-23-20-2**