OPIOID USE DISORDER

DIAGNOSTIC DILEMMAS IN THE PAIN POPULATION AND MEDICATION ASSISTED TREATMENT

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OBJECTIVES

- The opioid crises – how did we get here?
- Why are opioids so cool?
- Are my chronic pain patients addicted and how can I tell?
- What can we do to help and save lives?

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THE "OPIOID CRISES"

- 2.1 million Americans are addicted to prescription opioids and heroin in 2016 (1.8:630K ratio)
- The cost of the "opioid crises" in 2015 was $504 billion
- Overdose deaths now the leading cause of death in adults under age 50 leading to a lowering of the life expectancy 2 years in a row

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THE CHRONIC PAIN/OPIOID DILEMMA

- IOM in 1999 announces pain is undertreated
- Sales of opioids quadrupled from 1999-2010
- 60 millions (11%) of Americans complain of daily (chronic) pain, 40% report inadequate analgesia on opioids

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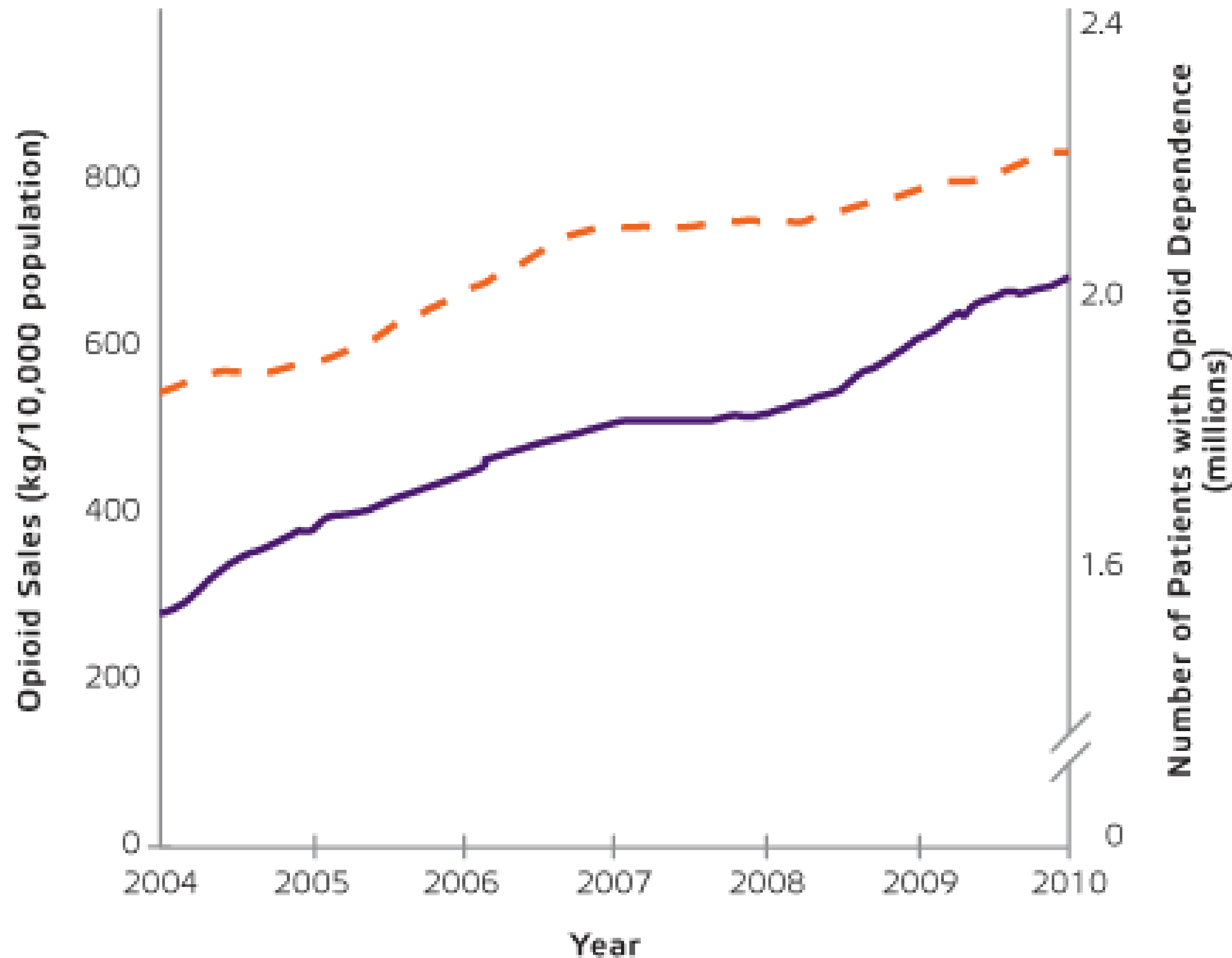

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As many as **1** in **4** people receiving chronic prescription opioids are **addicted** (i.e. meet criteria for moderate or severe opioid use disorder).

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TYPES OF OPIOIDS

Type of opioid	Where it comes from	Examples
Natural opiates	Made from poppy	Morphine Codeine
Semi-synthetic opiates	Made from poppy but processed	Heroin Oxycodone
Synthetic opiates	Made in a lab	Methadone Fentanyl Carfentanil

Poppy plant

Poppy pod

Poppy plant photo source: HGTV; Poppy pod photo source: Fine Art America

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OPIOID RECEPTORS AND NEUROTRANSMITTERS

- **Receptors:**
  - Mu (bingo!)
  - Kappa
  - Delta (know little)
- **Neurotransmitters:**
  - B-endorphins
  - Enkephalins
  - Dynorphins

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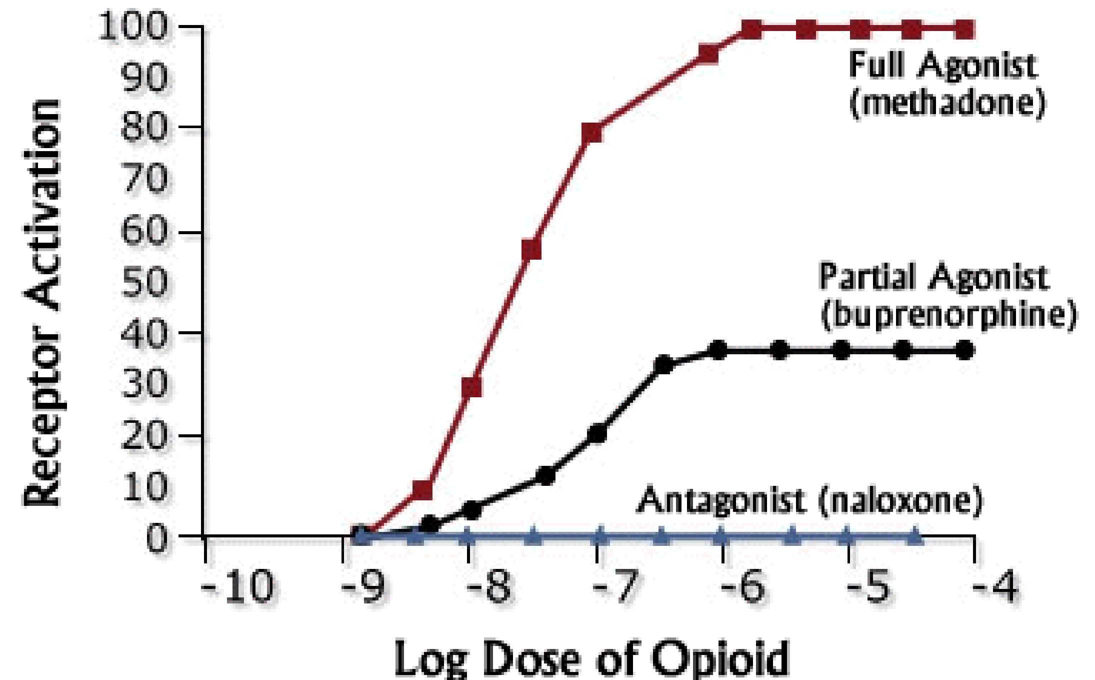
RECEPTORS

- **Affinity:** strength of receptor binding
- **Activation:** effect on the receptor (e.g. agonism vs. antagonism)
- **Dissociation:** speed of disengagement with the receptor



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OPIOID INTOXICATION AND WITHDRAWAL

INTOXICATION	WITHDRAWAL
Analgesia	Joint and muscle aches
Sedation, respiratory dep.	Dysphoria
Euphoria	Anxiety
Relaxation	Nausea/vomiting
Decreased stomach acid secretion	Cramping/diarrhea
Decreased GI motility	Dilated pupils
Pinpoint pupils	Lacrimation, yawning, rhinorrhea
Vasodilation	Hypertension, tachycardia

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MANAGEMENT OF INTOXICATION AND WITHDRAWAL

Intoxication:

- Respiratory support
- Naloxone IV, IM, SQ, intranasal
  - 0.4-0.8mg SQ or IM and RP
  - 0.1mg.min IV and titrate
  - 4mg intranasal

Withdrawal:

- Comfort medications
  - Clonidine
  - Anti-emetics
  - Anti-motility agents
  - Non-benzo anxiolytics
  - Non-controlled hypnotics
  - Buprenorphine

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SBIRT

- ✓ ASK
- ✓ ADVISE
- ✓ ASSESS
- ✓ ASSIST
- ✓ ARRANGE

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SCREENING TOOLS FOR PATIENTS ON OPIOIDS

- ASSIST
  - How many times in the past year have you…
- ORT
  - Sensitive shorter test to predict future opioid abuse risk
- SOAPP-R
  - 24 item self report test for opioid abuse in chronic pain pts → high and low risk for abuse

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OPIOID USE DISORDER

20% of primary care patients have a substance use disorder.

25% (4-26% of published data) of chronic opioid-receiving patients meet criteria for opioid use disorder.

High correlation with HCV, HIV, skin/soft tissue infection, STD's and more serious infections.

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RISK FACTORS FOR DEVELOPING OUD

- Younger age 13-45
- History of substance use disorder (incl. nicotine)
- Headache or back pain diagnosis
- High daily dose opioid >90 MME
- Multiple prescribers/pharmacies
- Psychiatric diagnosis (esp. depression)
- Living in a rural area

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DSM-V: OUD

A problematic pattern of opioid use leading to clinically significant impairment or distress, as manifested by at least two of the following, occurring within a 12-month period:

- Opioids are often taken in larger amounts or over a longer period than was intended.
- There is a persistent desire or unsuccessful efforts to cut down or control opioid use.
- A great deal of time is spent in activities necessary to obtain the opioid, use the opioid, or recover from its effects.
- Craving, or a strong desire or urge to use opioids.
- Recurrent opioid use resulting in a failure to fulfill major role obligations at work, school, or home.

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DSM-V: OUD (CONT'D)

A problematic pattern of opioid use leading to clinically significant impairment or distress, as manifested by at least two of the following, occurring within a 12-month period (cont'd):

- Continued opioid use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of opioids.
- Important social, occupational, or recreational activities are given up or reduced because of opioid use.
- Recurrent opioid use in situations in which it is physically hazardous.
- Continued opioid use despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance.

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DSM-V: OUD (CONT'D)

A problematic pattern of opioid use leading to clinically significant impairment or distress, as manifested by at least two of the following, occurring within a 12-month period (cont'd):

- Tolerance, as defined by either of the following:
    - A need for markedly increased amounts of opioids to achieve intoxication or desired effect.
    - A markedly diminished effect with continued use of the same amount of an opioid.
    - Note: This criterion is not considered to be met for those taking opioids solely under appropriate medical supervision.

- Withdrawal

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SAMHSA AND NIDA SAY…

- Addiction is a chronic treatable illness and management mirrors that of others chronic diseases
- OUD requires continuing care for effective treatment rather than an episodic, acute care approach
- Medications for OUD are evidence based for reducing opioid use and overdose, they are also cost effective
- Patients with OUD should have access to mental health, medical, psychosocial support services

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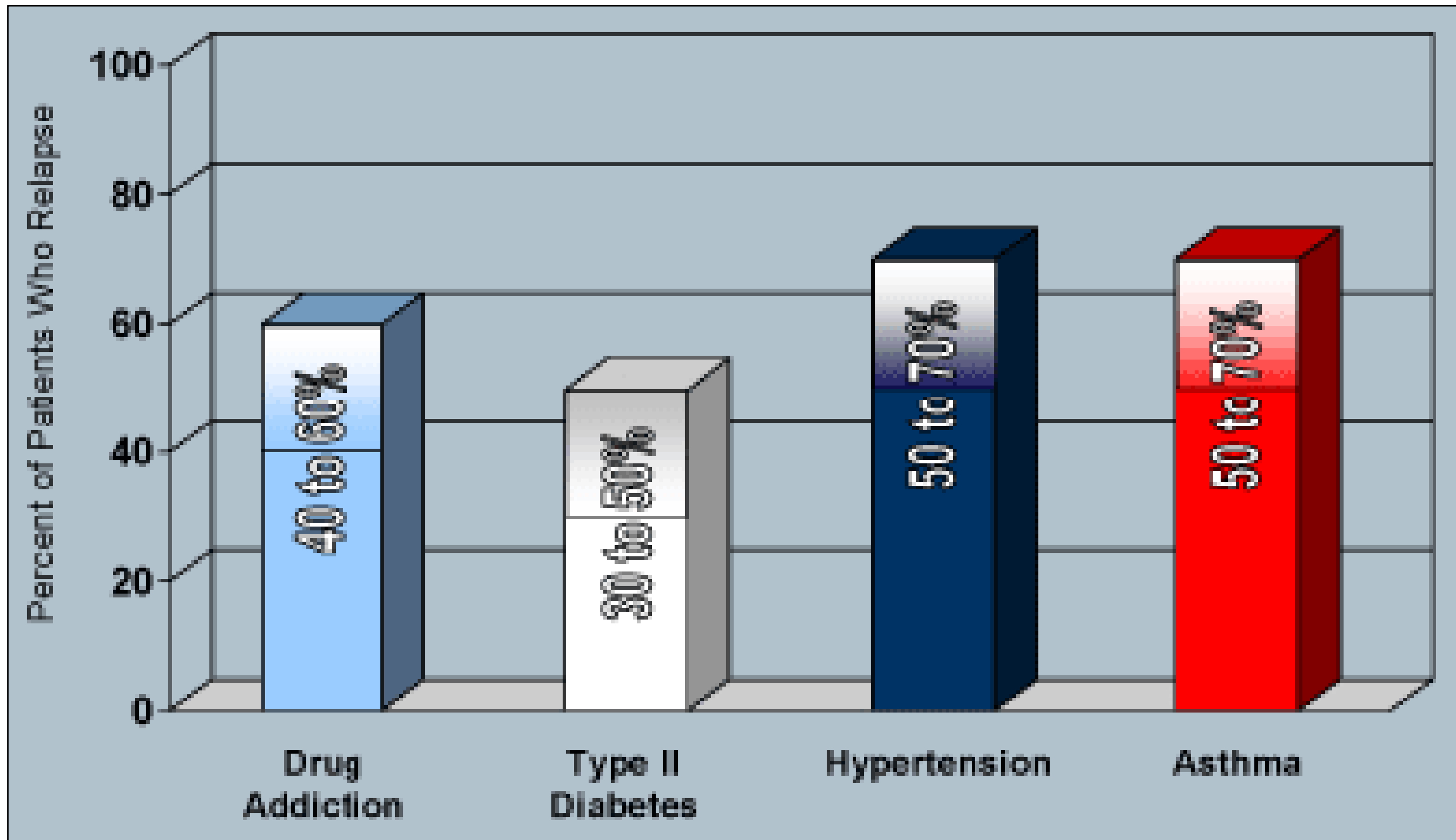
CHRONIC DISEASE MODEL



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WHO PRINCIPLES OF CHRONIC DISEASE CARE

- Develop a treatment partnership
- Patient centered
- Support patient autonomy of management
- Use 4 A's every visit (assess, advise, assist, arrange)
- Arrange follow up
- Link patient to community resources
- Involve peer support
- Ensure continuity of care

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Type II Diabetes	Opioid Use Disorder
Determine risk	Determine risk
Screen/diagnose with objective measures	Screen/diagnose with objective measures
Intervene with lifestyle modification/referrals	Intervene with lifestyle modification/referrals
Manage disease with protocols and guidelines	Manage disease with protocols and guidelines
Monitor progression/regression	Monitor progression/regression
Manage harms	Manage harms

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HOW TO PROCEED…

- Understand the pathophysiology of chronic pain
- Prescribe non-narcotics and other modalities
- **Assess** opioid abuse **risk**
- Use patient contracts and informed consent
- Utilize urine drug screens, pills counts and **PDMPs**
- **Treat** or refer patients with a SUD with **evidence based approach**

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OFFICE BASED TREATMENT OF OPIOID USE DISORDER

- Psychosocial support alone
- Withdrawal management + abstinence
- Withdrawal management + naltrexone
- Buprenorphine/naloxone maintenance

- Methadone maintenance is available for non-office based MAT

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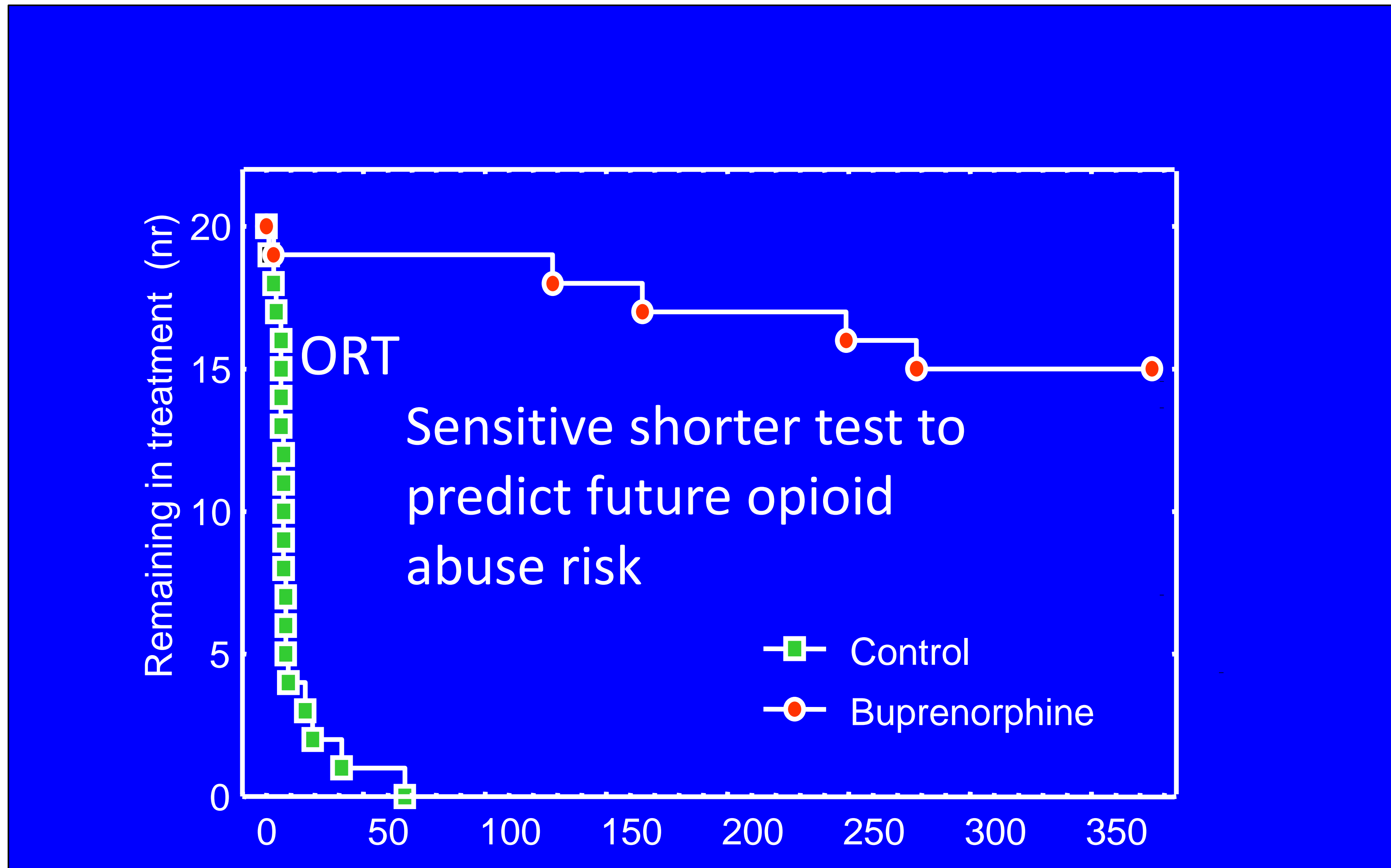
BUPRENORPHINE MAINTENANCE VS. WITHDRAWAL: RETENTION AND RELAPSE



Kakko et al. 2003

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BUPRENORPHINE

- Requires 8 hour training for physicians and a written request through SAMHSA for the DEA number
- 30 patient limit per physician for one year after waiver, then can apply to increase patient limit to 100, then 275.
- NP′s and PA′s can now apply to get a waiver (24 hours of training)

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BUPRENORPHINE (CONT'D)

- Partial mu opioid agonist and kappa antagonist with high affinity at the mu receptor
- Rapid onset (40min) and long acting (37 hours)
- Potent 1 mg= 25 – 40mg morphine
- Ceiling effect, less respiratory depression and overdose so better safety profile than full agonists

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BUPRENORPHINE (CONT'D)

- Patients often need frequent monitoring and adherence to program guidelines, including no concomitant benzodiazepines or alcohol
- Efficacy studies show higher retention in treatment, lower mortality, reduced opiate-positive urine drug screens

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NALTREXONE

- Mu-opioid antagonist, long acting and proven to help reduce opioid relapse
- Must have an interval of 6 days for short acting and 7-10 for long acting opioids before administration
- Can give orally 50mg daily or 100mg 3 times a week or IM extended release version every 28 days.

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NALTREXONE (CONT'D)

- Monitor LFTs at onset, 6 months and 12 months of use
- Pregnancy and lactation: caution advised, currently recommended to balance the risk vs. harm or discontinuation
- Avoid in patients with acute hepatic failure or cirrhosis

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METHADONE

- Only accessible from a federally regulated methadone (opioid) treatment program
- Shown in multiple studies over time to reduce drug use, criminal behavior, mortality, and the contraction of infectious disease
- High risk of overdose, especially in the titration process or in combination with benzodiazepines
- NIDA recommends treatment for at least 12 months if not longer (lifelong)

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METHADONE (CONT'D)

- Typical doses range from 60-120mg but may be higher
- Risks and adverse effects of methadone treatment need to balanced with the reality of an untreated OUD
- Patients should be monitored closely for central and obstructive sleep apnea, medication interactions, and infectious diseases and co-occurring addictions

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OPIOID OVERDOSE

- Caused 42,249 deaths in the US in 2016
- This is more deaths than from motor vehicle crashes
  - Source: CDC 2017; National Safety Council 2017
- Prescription opioids most associated with overdose: methadone, oxycodone and hydrocodone

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NALOXONE

- The CDC recommends co-prescribing with high dose **(>50MME** opioids), OUD patients and anyone with a history of overdose
- **Personal history of overdose increases the risk of death by overdose (in the next year) by 6X**
- Should be given to pregnant women who overdose
- 36 prescriptions given = 1 life saved from overdose

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NALOXONE (CONT'D)

- Comes in several formulations
  - Generic naloxone injectable or attached to a nasal atomizer
  - Narcan nasal spray
  - Evizio auto-injector
- Many private insurance companies and Medicaid now cover the cost

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SPECIAL POPULATIONS…

Pregnant women:

- Treatment with methadone or buprenorphine is advised over abstinence
- Encourage breastfeeding on these medications
- Pharmacokinetics affect dosing
- Stop naltrexone unless relapse risk is high

Adolescents:

- Bup/nlx approved for >16, utilize MAT after psychosocial attempts alone have failed

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Resources for providers

- **Mobile MAT app (MATx by SAMHSA)**
- **ASAM National guideline pocketbook and app** [www.asamnationalguideline.com]
- **SAMHSA's TIP 40**: Clinical Guidelines for the Use of Buprenorphine in the Treatment of Opioid Addiction and **TIP 63:** Medications for Opioid Use Disorders
- **PCSS MAT training resources** [http://pcssmat.org/] [http://pcss-o.org/]

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SUMMARY

- Providers should screen for and diagnose OUD
- OUD is a chronic, relapsing but treatable disease
- Treatment should be based on a patient centered care model similar to other chronic disease models
- Medication assisted treatment is the standard of care to reduce death and other comorbidities

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