



COR-12: Integrated, Medication- Assisted Treatment for Opioid Use Disorder



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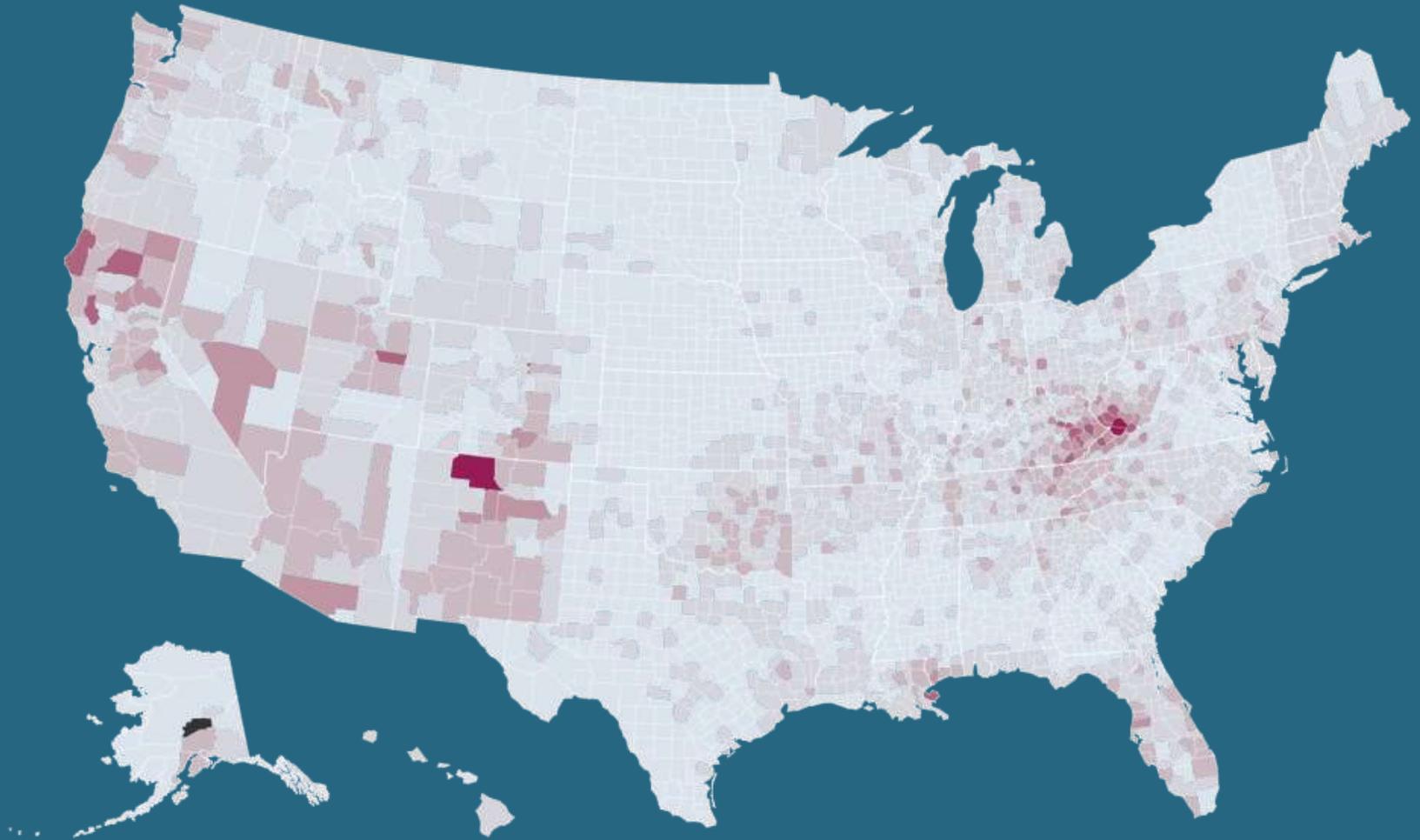
The Opioid Crisis:

National trends, local challenges

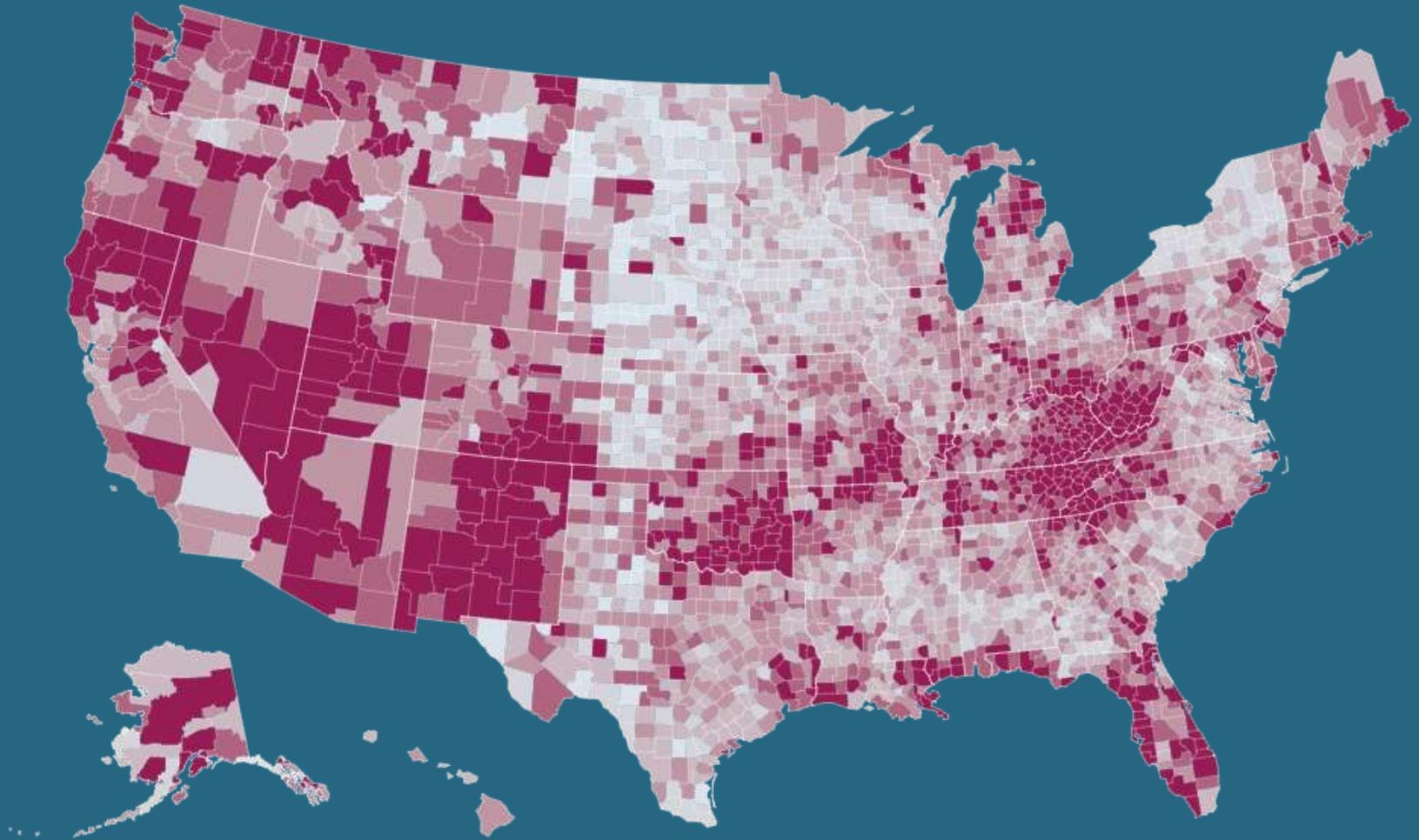


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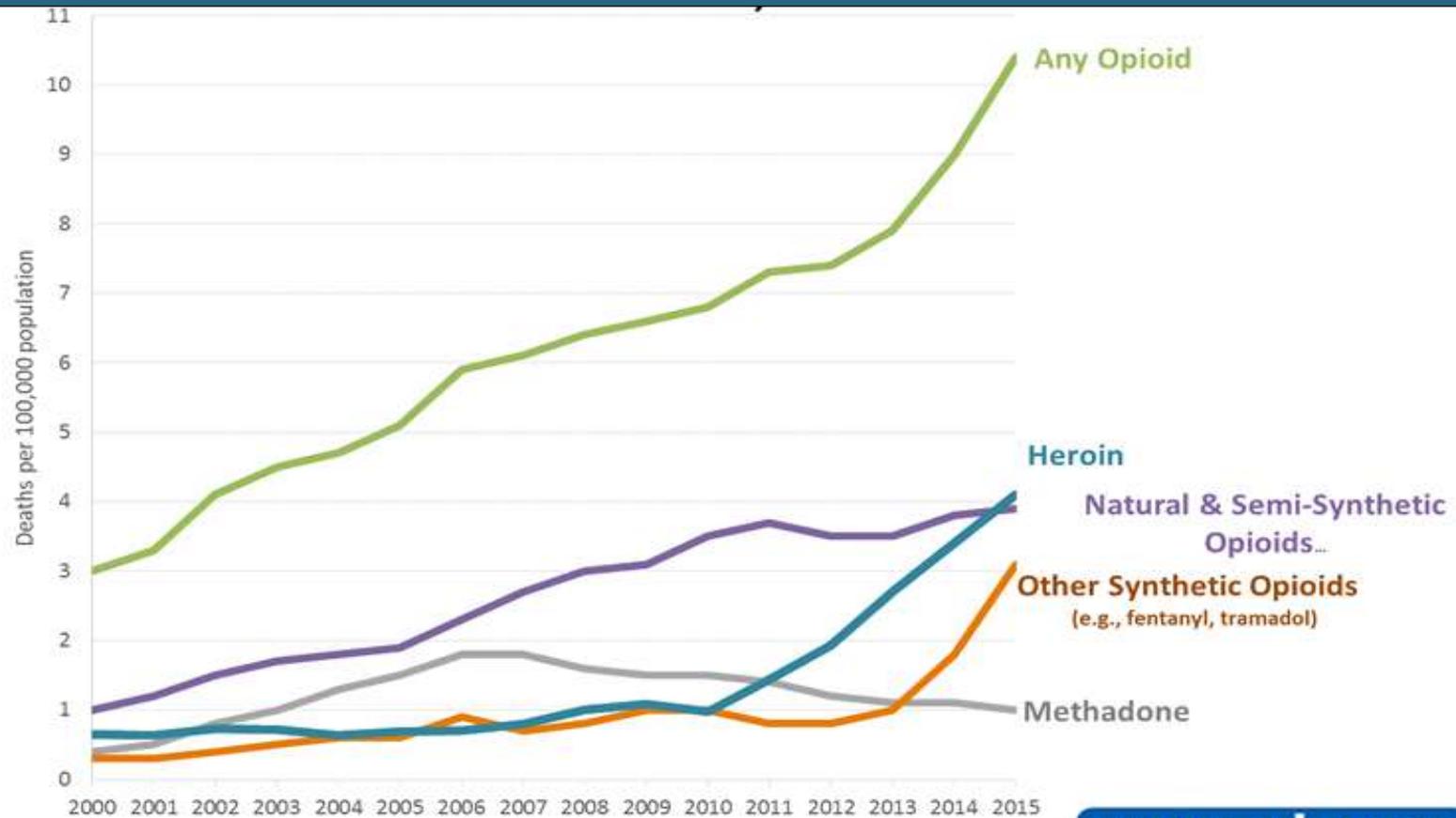
Opioid Overdose Deaths 1999



Opioid Overdose Deaths 2014



Opioid Overdose Deaths in U.S. 2000-2015



SOURCE: CDC/NCHS, National Vital Statistics System, Mortality. CDC WONDER, Atlanta, GA: US Department of Health and Human Services, CDC; 2016. <https://wonder.cdc.gov/>.

www.cdc.gov
Your Source for Credible Health Information

Opioids in Washington

Publicly funded treatment admission rate, any opiate

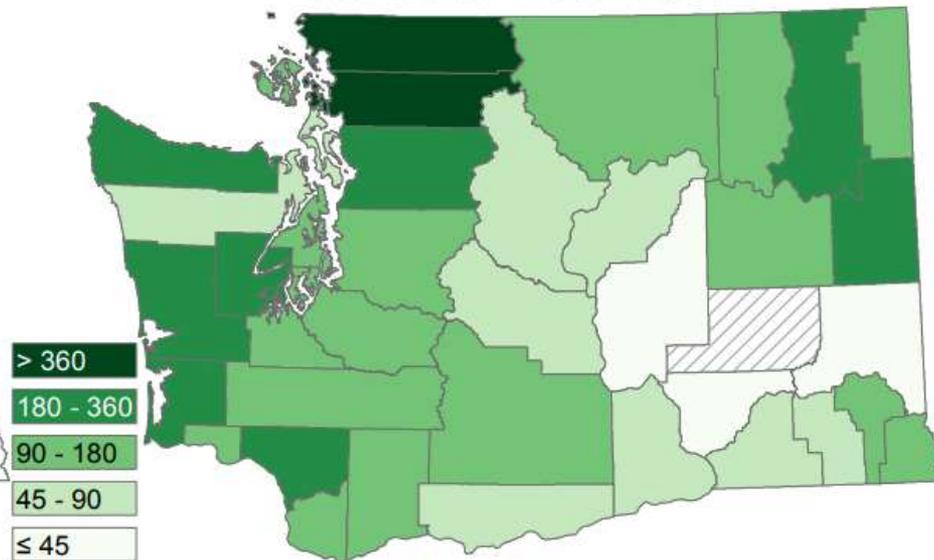
2002 - 2004

State-wide rate 59.4 per 100,000

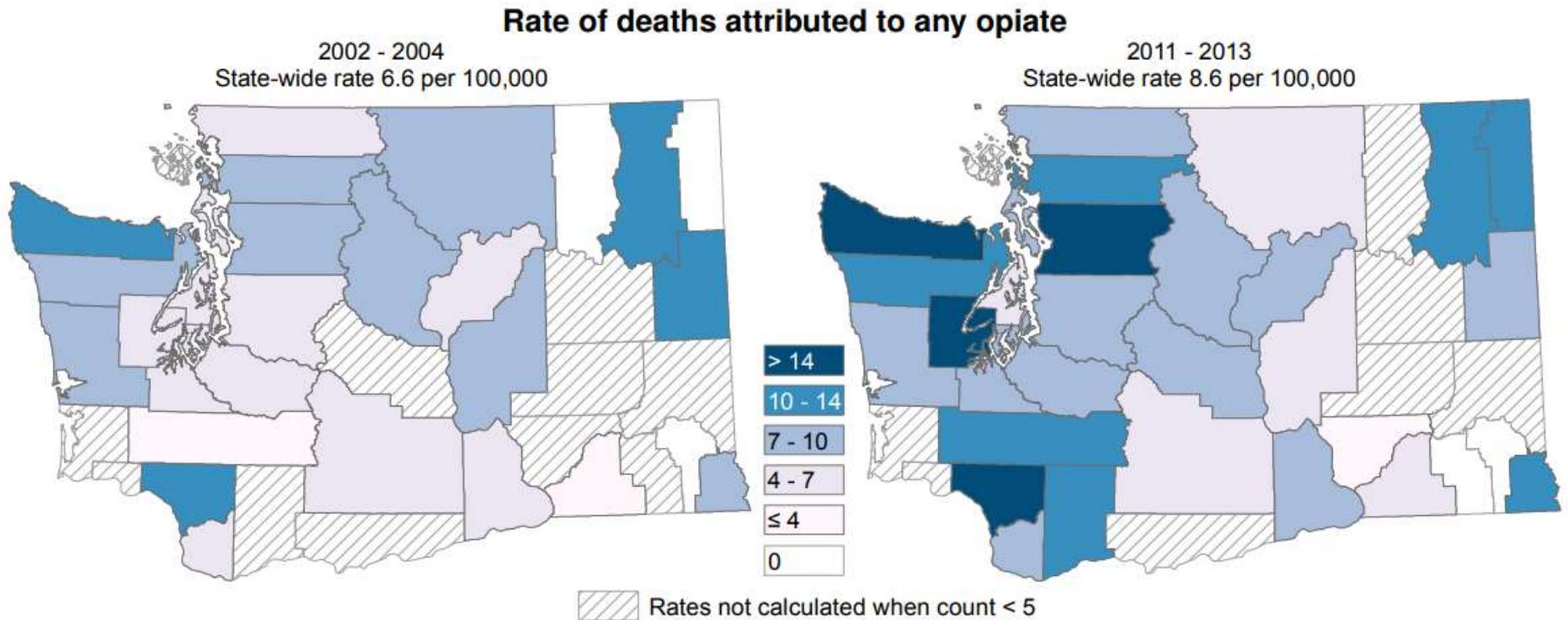


2011 - 2013

State-wide rate 176.3 per 100,000

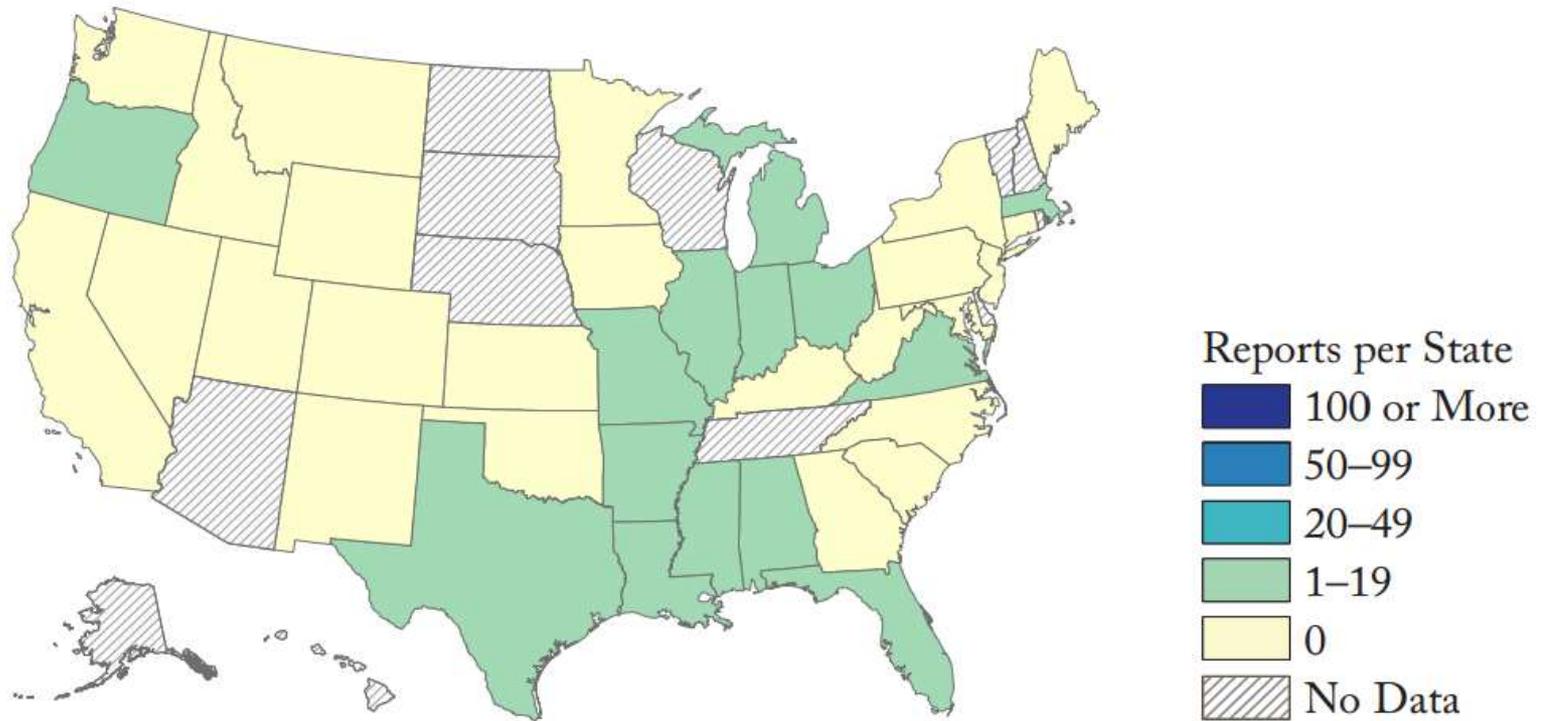


Opioids in Washington



Fentanyl

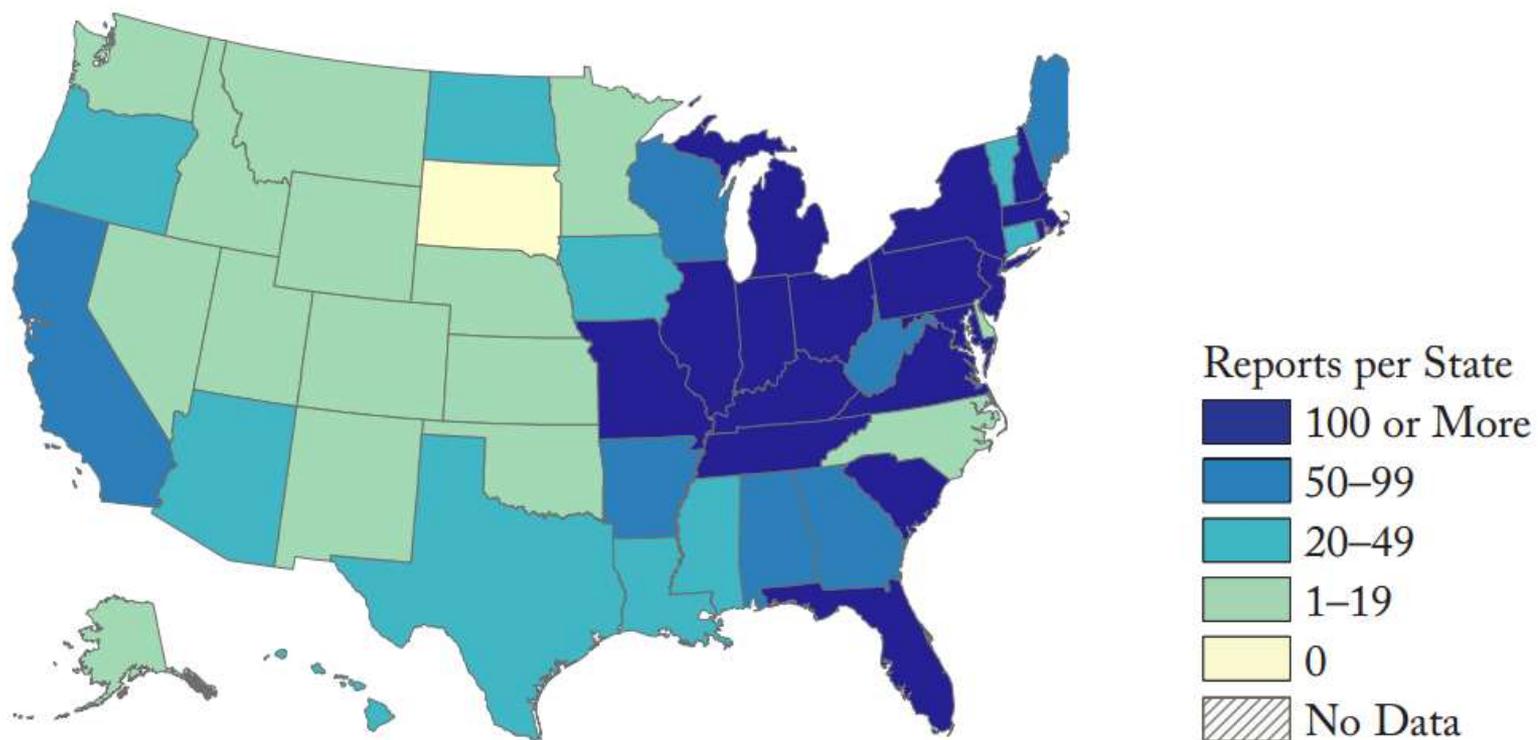
Figure 3 Fentanyl reports in NFLIS, by State, 2001



National Forensic Laboratory Information System

Fentanyl

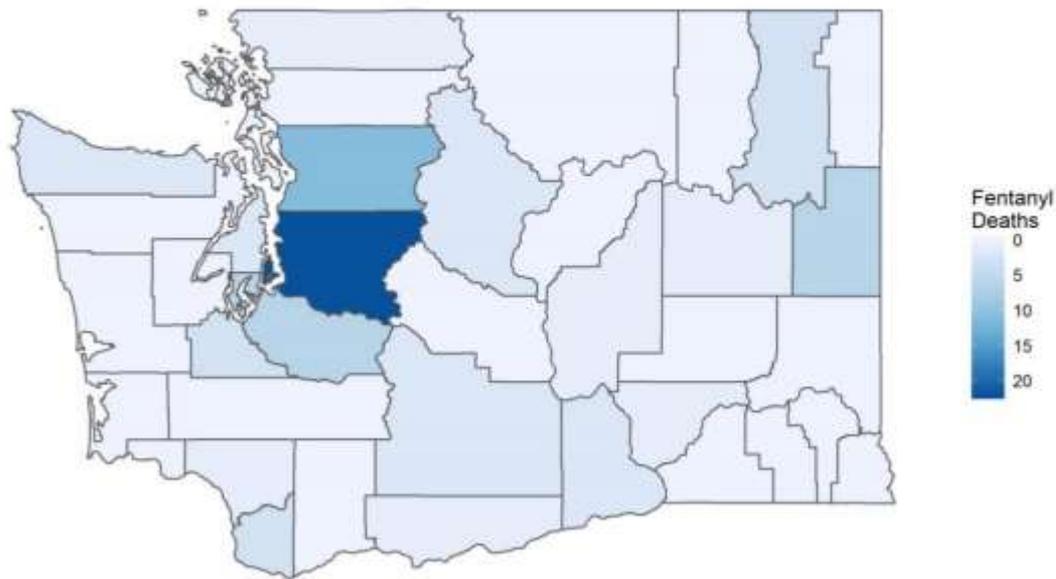
Figure 4 Fentanyl reports in NFLIS, by State, 2015



National Forensic Laboratory Information System

Fentanyl

Figure 4. Fentanyl-related Overdose Deaths by County of Overdose, 2016, Washington State



Mamadou Ndiaye, Injury Epidemiologist, WA DOH May 5, 2017

Fentanyl

Table 5. Top Five Drug Classes Identified by Toxicology Testing Among the Fentanyl-related Overdose Deaths, 2016, Washington State

Class	Death Count	Percent	Lower 95% CI Percent	Upper 95% CI Percent
Benzodiazepine	29	41.4	30.6	53.1
Other Opioid	26	37.1	26.8	48.9
Antidepressant	18	25.7	16.9	37.0
Alcohol	15	21.4	13.4	32.4
Non-benzodiazepine Sedative	12	17.1	10.1	27.6



Mamadou Ndiaye, Injury Epidemiologist, WA DOH May 5, 2017

The Hazelden Betty Ford Experience: Five Factors That Caused Us To Change

- 1) Increased admissions for opioid dependence
 - Adults: 19% (2001) → 30% (2011)
 - Youth: 15% (2001) → 41% (2011)
- 2) Problems with treatment retention

Significant increase in rate of “Against Staff Advice” discharges among patients with opioid use disorder
- 3) Unit milieu issues
- 4) Use of opioids during treatment
- 5) Increased incidence of overdose deaths following treatment



COR-12: Science and Wisdom



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The prevailing narrative tells us...

CONTEXT

- Medication-Assisted therapy and the 12 Steps cannot co-exist
- Harm-reduction and abstinence-based are mutually exclusive

The prevailing

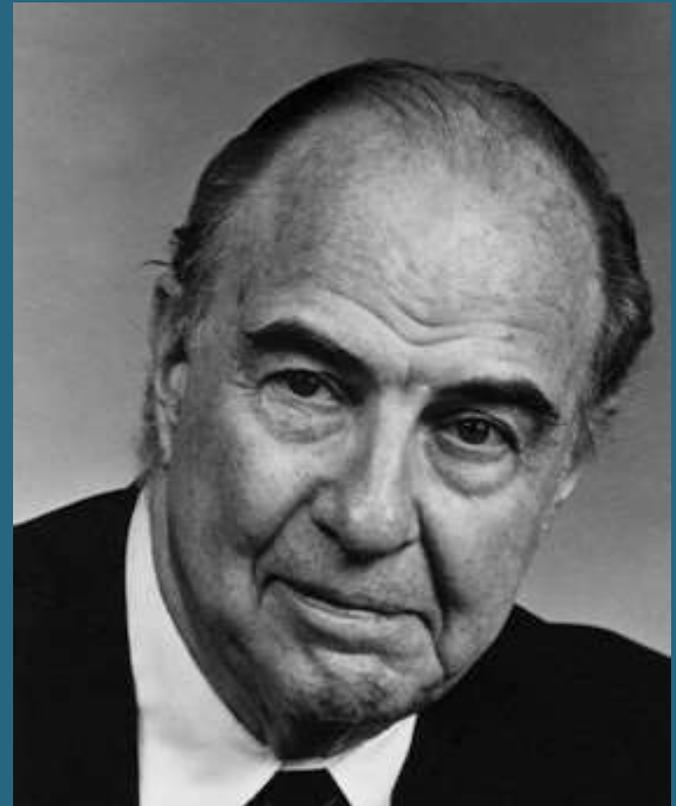
CONTEXT

- Medical treatment and the 12 Steps can co-exist
- Harm-reduction and abstinence are mutually exclusive

The narrative...



Bill Wilson



Dr. Vincent Dole

The narrative...

“At the last trustee meeting (of AA) that we (Vincent Dole and Bill Wilson) both attended, he (Bill Wilson) spoke to me of his deep concern for the alcoholics who are not reached by AA, and for those who enter and drop out and never return. Always the good shepherd, he was thinking about the many lost sheep who are lost in the dark world of alcoholism. He suggested that in my future research I should look for an analogue of methadone, a medication that would relieve the alcoholic’s sometimes irresistible craving and enable him to progress in AA toward social and emotional recovery, following the Twelve Steps.”

- *Vincent Dole*

The narrative...

- Participation in Twelve Step Facilitation therapy supported by the TSF manual:

Many opinions on the topic are formed out of misinformation. Reasons for prescribing medication in treatment and recovery vary. Some medications assist with withdrawal, others change the way addictive substances affect people, and still others help manage co-occurring mental health disorders, such as depression or anxiety. Medications may play a role in a treatment and recovery plan, and ultimately that is the decision of the participant, with help from his or her doctor, therapist, and Higher Power.

Nowinski, J., (Scheduled for release fall of 2017). The twelve-step facilitation handbook: a systematic approach to early recovery from alcoholism and addiction. Center City, MN: Hazelden Publishing.

COR-12 – Comprehensive Opioid Response with the 12 Steps

Recovery Orientation

- Culture
- Theoretical underpinning of all services

Medications

Buprenorphine
Naloxone:
Suboxone

IM Naltrexone:
Vivitrol

Methadone

No medications

Therapies/ Case management

Substance
Use Disorders

Mental health
issues

Evidence-
based

Peer-support/ 12-Step fellowships

AA

NA

Other groups

Al-Anon



COR-12:

The nature of addiction



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ASAM Definition of Addiction

- Addiction is a primary, chronic disease of brain reward, motivation, memory and related circuitry.
- The neurobiology of addiction is related to more than just reward.
- Genetic factors account for about 50% of the risk of developing addiction. So, about 50% is not related to genetic factors alone.
- Other factors certainly contribute – biology, psychology, social, spiritual, early childhood experiences, attachment.
- So, addiction can be characterized as an inability to abstain, impairment in behavioral control, craving, diminished recognition of associated problems, and a dysfunctional emotional response.

Challenges in Treating Opioid Use Disorders

“A drug is a drug is a drug....
.....and then there
are opioids...”

Dr. Andy Mendenhall

Acuity and Complexity of Opioid Use Disorders Present Treatment Challenges

- **Acuity** is defined as the extent and severity of pathology and complications associated with an individual patient
- **Complexity** of care is inherent in all of the services necessary to provide integrated care to our patients and families for addiction and associated problems. Organizational and external requirements also drive complexity.

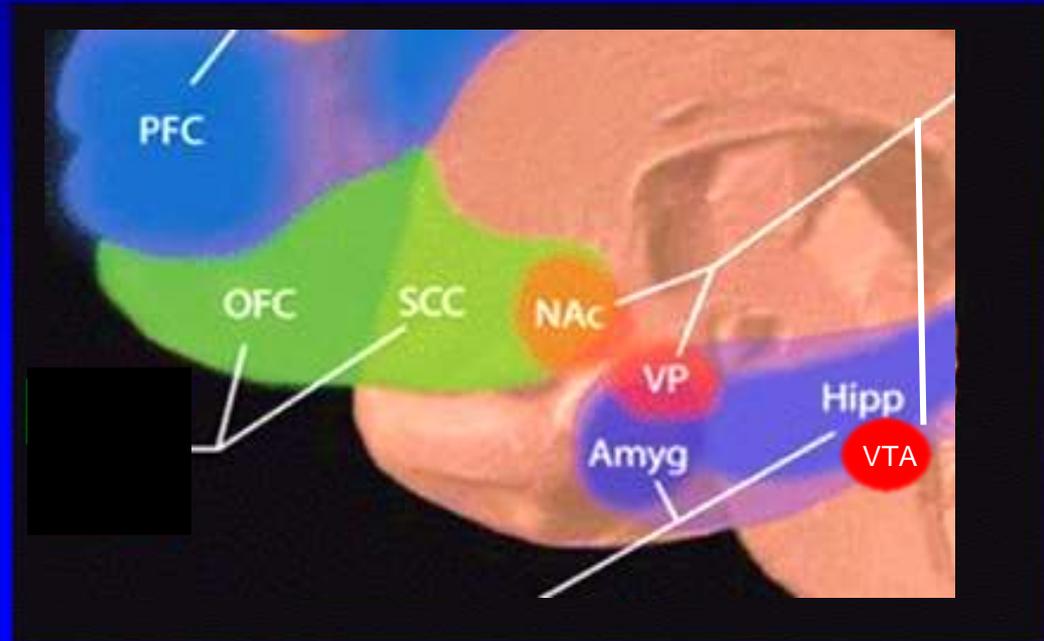
Challenges in Treating Opioid Use Disorders

1. Potent stimulator of dopamine release in brain
 - a) No “Pink Cloud” with opioid addiction
 - b) Profound “salience”
 - a) Powerful physical dependence, withdrawal is uncomfortable, and protracted post-acute withdrawal
2. Diverse population
 - a) Young population → early substance use with alcohol, cannabis and pills. Progress to smoked or IV heroin before completion of brain development
 - b) Older population → prescription opioids. Chronic pain issues lead to chronic prescriptions. Often concomitant use of benzodiazepines, sleep medications and/or alcohol
3. Low distress tolerance
4. Mismatch between traditional treatment and biological reality

How Drugs of Abuse Affect the Brain

Binge/Intoxication

- Positive Reinforcement

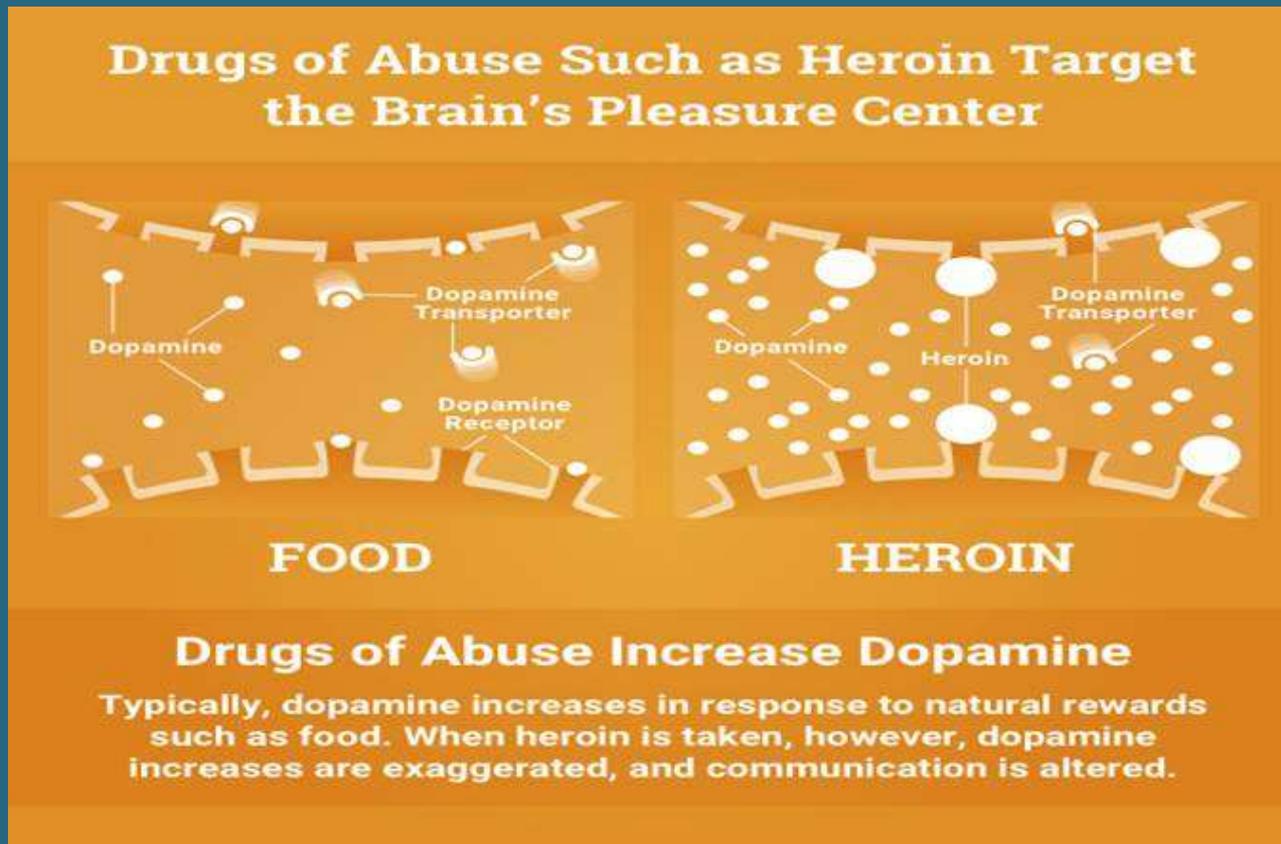


All of these brain regions must be considered in developing strategies to effectively treat addiction

NIDA

Dopaminergic Reward System

All addictive drugs will ultimately cause an increase of dopamine in the reward pathway

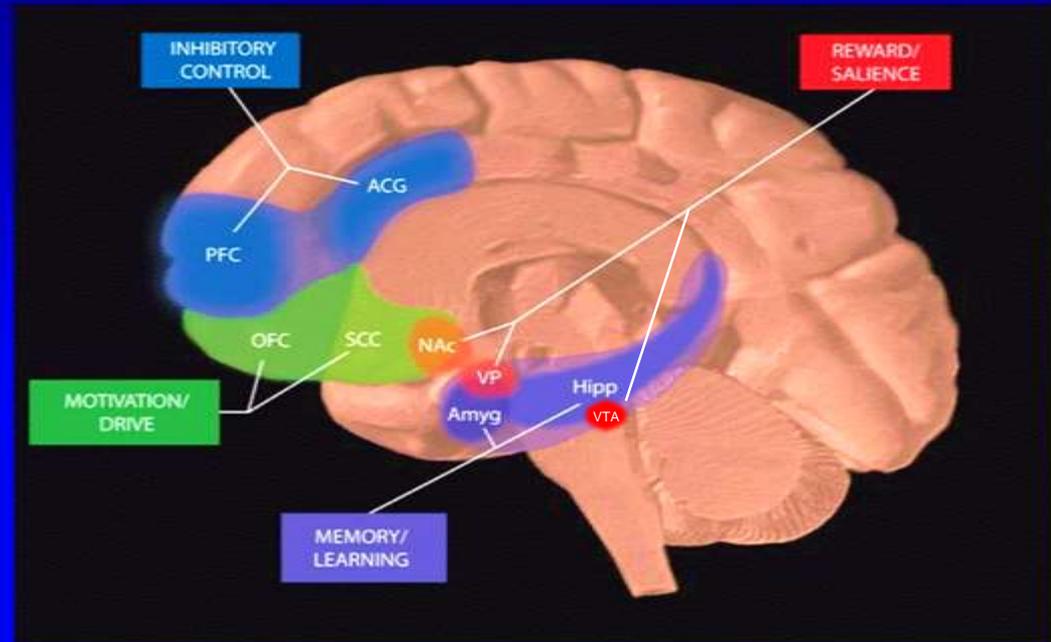


How Drugs of Abuse Affect the Brain

Binge/Intoxication

Withdrawal
Negative Affect

Preoccupation
Anticipation



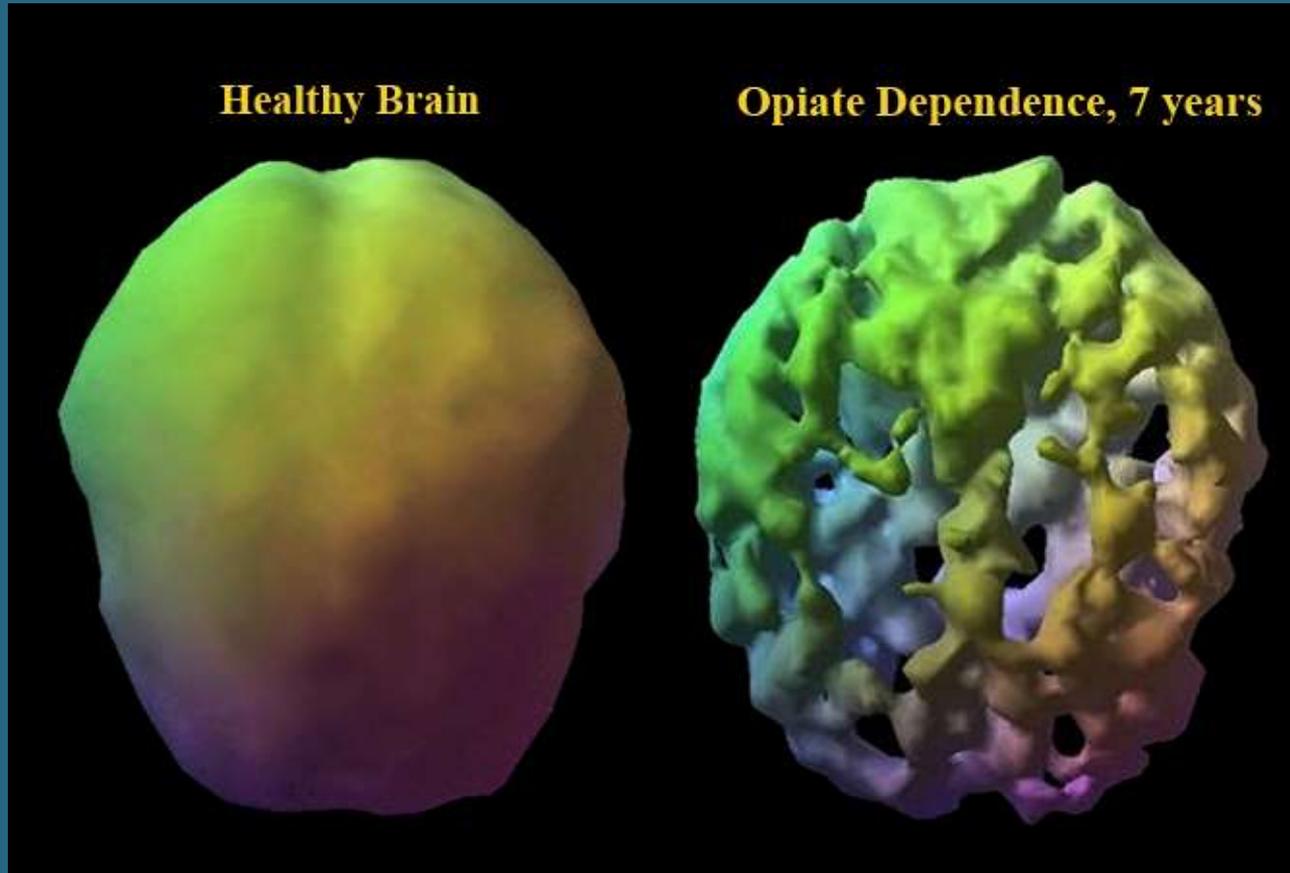
All of these brain regions must be considered in developing strategies to effectively treat addiction

NIDA

The Neurobiology of addiction; An Overview
A. J. Roberts, Ph.D., G. F. Koob, Ph.D .

Source: Dr. Darryl Inaba Pharm.D CADC III

Our population



Signs of prefrontal cortex, executive functioning deficits

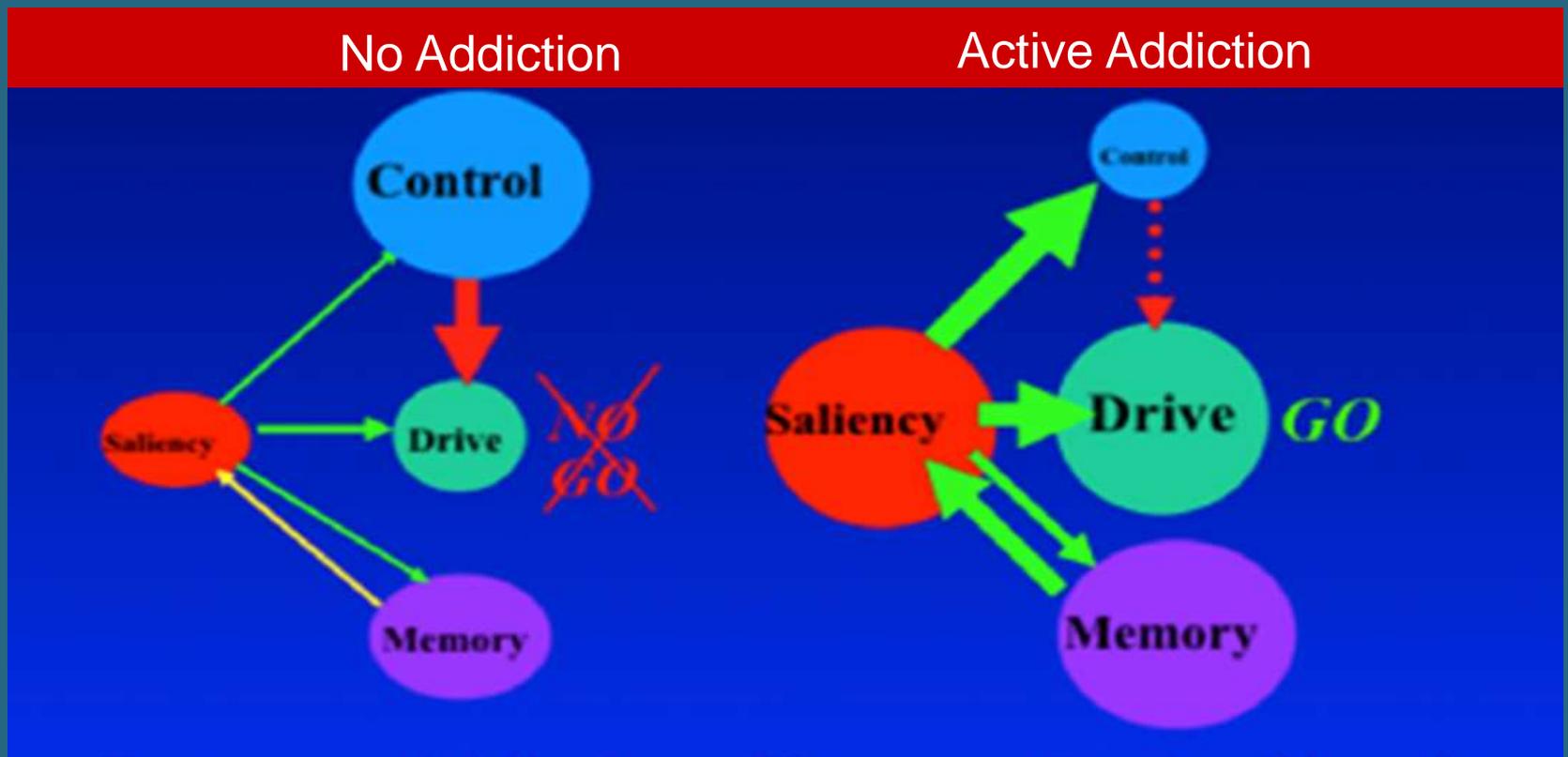
NON-CLINICAL TERMS (what we all see lived out) :

- Inability to objectively assess oneself
- Poor judgment
- Inability to learn from experience
- Decreased attention span
- Becoming easily bored
- Argumentative
- Thin skinned
- Self-centered
- Disorganized



How Drugs of Abuse Affect the Brain

The more we understand the neurobiology of addiction, the more we expand the possibilities for developing medications and other therapeutic modalities to assist in the treatment of addiction



OUD outcomes enhanced with medications

- Cochrane Review: Buprenorphine maintenance versus placebo or methadone maintenance for opioid dependence

There is high quality of evidence that buprenorphine was superior to placebo medication in retention of participants in treatment at all doses examined.

Buprenorphine is an effective medication in the maintenance treatment of heroin dependence, retaining people in treatment at any dose above 2 mg, and suppressing illicit opioid use (at doses 16 mg or greater) based on placebo-controlled trials.

Research unequivocally supports MAT

- Reduces mortality from 50%-70%*
- Reduces infectious disease*
- Reduces risky behaviors and criminal activities*

Pierce, M., Bird, S. M., Hickman, M., Marsden, J., Dunn, G., Jones, A., and Millar, T. (2016) Impact of treatment for opioid dependence on fatal drug-related poisoning: a national cohort study in England. Addiction, 111: 298–308. doi:

Connery, H. (2015). Medication-Assisted Treatment of Opioid Use Disorder. Harvard Review Of Psychiatry, 23(2), 63-75. doi:10.1097/hrp.0000000000000075

The Relationship of Adverse Childhood Experiences to Addiction

- Women with an ACE score of 4 or more have are 78% more likely to use IV drugs compared to women with an ACE score of 0. (Miller, 2011)
- Men with an ACE score of 6 have a 46-fold (4,600%) increased risk of becoming an IV drug user later in life. (Miller, 2011)
- As many as 75% of women in treatment for Alcohol Use Disorder have a history of sexual abuse. (Matsakis, 1994)
- Approximately 50%-60% of women and 20% of men in treatment for Substance Use Disorders report having history of sexual abuse, 69% of women and 80% of men report physical abuse. (Matsakis, 1994)

Attachment and Trauma

- Trauma disrupts attachment, and early attachment problems can amplify later trauma responses.
- Recovery is connection with self, others, and a Higher Power
 - Our job is to create a safe environment for each of these pursuits
- Insecure attachment often looks like:
 - Non-compliance
 - Unwillingness
 - “Doesn’t want it”
 - “Not getting it” - step 1, 3, sponsor, meetings, etc...
 - Drug seeking
 - Unmotivated
 - Emotional volatility

“ADDICTIVE” BEHAVIOR



COR-12 Outcomes



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COR-12 Outcomes

- The Hazelden Betty Ford Foundation, through the Butler Center for Research, is committed to evaluating the COR-12 approach to Opioid Use Disorder treatment.
- Through two types of research, we are examining:
 - Atypical discharges
 - Length of stay
 - Abstinence
 - Quality of life

COR-12 Outcomes: Types of Research

- Research Study

We are conducting a naturalistic, observational study of patients who are attending our COR-12 programming and who agree to be part of a COR-12 research study. 159 people are enrolled as of September, 2016. They are statistically compared to a matched group of OUD patients who attended treatment before COR-12 was initiated

- Administrative Review

We also reviewed data on patients who participated in COR-12 but are not in the research study. This information is collected during the course of routine healthcare at Hazelden Betty Ford.

COR-12 Participants (Administrative Review)

- Information was gathered on 523 patients with OUD (7.48% of our total population) who participated in residential treatment from January 1, 2013 through June 30, 2016
- Just over 25% of all patients with OUD participated in COR-12
 - 34% in the Buprenorphine group
 - 41% in the Naltrexone group
 - 25% in the No Medications group

COR-12 Outcomes (Administrative Review)

Atypical Discharge and Length of Stay

	OOD Patients (COR-12)	OOD Patients (Not COR-12)
Atypical Discharge	6.4%	21.6%
Length of Stay (Mean)	38 days	28 days

COR-12 Outcomes:

Implications of Administrative Review

- **Decreased atypical discharge rates** are important because incomplete treatment is a predictor of bad outcomes, and completion is predictive of good outcomes
- **Extended engagement in treatment** is a goal of the COR-12 program, and we are encouraged by the ability of the COR-12 program to engage its patients for a longer period of time, measured by length of stay

COR-12 Research Study Participants: Demographic and Clinical Characteristics

- There were no significant differences in age or gender
- Majority in both groups were also dependent on alcohol with no significant difference between groups
- COR-12 patients had a significantly higher number of pretreatment heroin use days than controls
- Most patients in both groups also had at least one co-occurring mental health disorder, but COR-12 patients were significantly more likely than control patients to have a co-occurring disorder
- Fewer COR-12 participants completed surveys at 1 month, but at 6 months the rate was the same – 59%

COR-12 Outcomes (Research Study)

Atypical Discharge and Length of Stay

	COR-12 Participants	Control Group
Atypical Discharge	5%*	13%
Length of Stay (Mean)	49 days	26 days
“Stepped down” to another HBFF program	87%**	59%

*p <0.05 vs control group

** p <0.001 vs control group

COR-12 Study: One and Six Month Outcomes

	COR-12 1 Month	Control 1 month	COR-12 6 months	Control 6 months
% w/ Continuous Abstinence	86%	84%	71%*	52%
% Days Abstinent from all drugs	98%	98%	96%	96%
% Days Abstinent from alcohol	99%	98%	99%*	98%

- **p < 0.05 vs Control.**

There were no statistical differences at 1 month. At six months, COR-12 patients were significantly more likely to be continuously abstinent and to have more days abstinent from alcohol.

COR-12 Study: Quality of Life at Six Months

	COR-12	Control
Physical Health: % E or VG	70	61
Overall Quality: % E or VG*	74*	61
Quality of Recovery: % E or VG	71	57
% Complying with Most of their CC plan Recommendations*	82*	63
% Attending Psychotherapy	56	46
Mental Health Meds as part of CC plan	60	48
% Complying with Mental Health Meds*	95*	77

p < 0.05 vs control patients

At six months, COR-12 patients were significantly more likely than control patients to report a higher overall quality of life, compliance with most of their continuing care recommendations, and compliance with mental health medications.

Implications

- These initial findings of the COR-12 Research Study are encouraging and suggest the program holds promise for opioid-dependent patients.
- Results should be interpreted cautiously and be considered as preliminary due to the small sample size and the fact that the study is still in progress.
- We will continue to recruit for the current COR-12 research study and plan to conduct ongoing research on the impact of the program for all of our patient populations

Parallel Process

VIDEO

- Smarter Every Day: Backwards Bicycle
- <https://youtu.be/MFzDaBzBIL0>



COR-12: Integrated, Medication- Assisted Treatment for Opioid Use Disorder

Thanks!



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