

NC Department of Health and Human Services

NC Opioid and Prescription Drug Abuse Advisory Committee (OPDAAC)

December 14, 2018

Welcome and Introductions of Attendees

Alan Dellapenna, Head, Injury and Violence Prevention Branch, Chronic Disease and Injury Section, Division of Public Health

Dr. Carrie Brown, Medical Director, Division of Mental Health, Developmental Disabilities & Substance Abuse Services

• Take breaks as needed

Opioid Action Plan Version 2.0

- The Opioid Action Plan is a living document
- We are building on requirements for the creation of a strategic plan through OPDAAC
- Opportunity to determine:
 - -Areas that are ongoing priorities
 - -Areas that are new priorities
 - -Areas that are no longer priorities
- Breakout groups: 12:30-1:30
 - -Providers and Health Systems Room 1D
 - -Harm Reduction Room 7B
 - -Community Prevention- Room 8A
 - -Law Enforcement and Justice Involved Persons- Room 8B

Pharmacotherapies for Opioid and Alcohol Use Disorders

Ashwin A. Patkar, MD

Learning Objectives

1.Discuss the role of pharmacological therapies in treatment of substance use disorders

2.Describe the efficacy and safety of approved medications in management of substance use disorders

3. Apply evidence based approaches for management of substance use disorders in clinical practice

Addiction Treatment

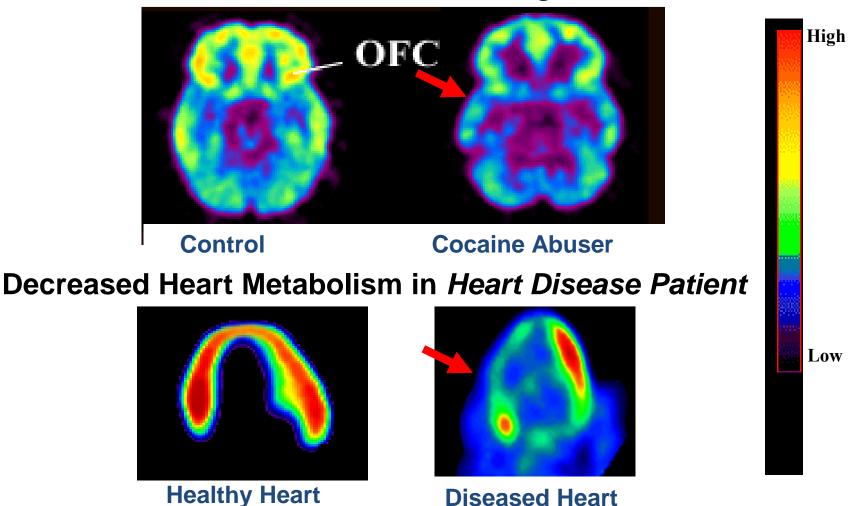
- Behavioral Treatments
- Medications
- Self Help Groups

Setting:

- Outpatient/Intensive Outpatient
- Partial Hospital
- Inpatient/Residential
- Detoxification (inpatient or outpatient)

ADDICTION IS A DISEASE OF THE BRAIN As other diseases, it affects tissue function

Decreased Brain Metabolism in Drug Abuse Patient



Sources: From the laboratories of Drs. N. Volkow and H. Schelbert

Chronic Opioid Use Changes Brain Structure and Function

- · Potential physiologic mechanisms of tolerance and
- dependence include
 - Changes in dopamine reward circuitry including decreased D₂ receptors (figure)¹
 - Opioid receptor desensitization and downregulation²
 - Decreased synthesis of endogenous opioids²
 - Increased neuronal excitability when opioids are withdrawn²
- Behavioral/cognitive changes
 - Craving induced by drug cues³
 - Loss of control over drug seeking behavior³

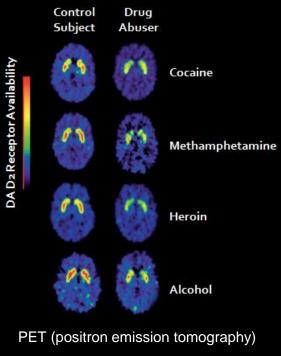


Image: Courtesy of National Institute on Drug Abuse (NIH)

^{1.} Volkow ND et al. *Mol Psychiatry.* 2004; 9, 557–569. 2. Feldman RS, Meyer JS, Quenzer LF. The Opiates. In: *Principles of Neurpsycholpharmacology*. Sunderland, Ma: Sinauer Associates, Inc; 1997: 495-548. 3. Volkow ND et al. *PNAS*. 2011; 108(37), 15037–15042.

Medications for Treating Drug Dependence

	Medication	Target
FDA Approved	Methadone	Opioid agonist
	Naltrexone Buprenorphine	Opioid antagonist Mu partial agonist
Under Investigation	Modafinil Tiagabine Reserpine cabergoline	Glutamate enhancer GABA uptake inhibitor Catecholamine depletor D2 agonist
	Vigabatrin Antalarmin Rimonabant	GABA transaminase CRF1 Receptor CB1 Receptor

Medications for Treating Alcohol Dependence

•	Medication	Target
FDA Approved	Disulfiram	Aldehyde
	Inj Naltrexone	Dehydrogenase
	Naltrexone	Mu Opioid Receptor
	Acamprosate	Glutamate Related
Under	Topiramate	GABA/Glutamate
Investigation	Valproate	GABA/Glutamate
	Ondansetron	5-HT ₃ Receptor
	Nalmefene	Mu Opioid Receptor
	Baclofen	GABA _B Receptor
	Antalarmin	CRF1 Receptor
ourtoov: Dr T K Li, Director NIAAA	Rimonabant	CB1 Receptor

Slide courtesy: Dr T K Li, Director NIAAA

Medications for Smoking

- Nicotine Replacement Therapies
- Sustained release Bupropion (Zyban®)
- Varenicline (Chantix®)

NIDA Principles of Effective Treatment

#7 Medications are important, especially when combined with behavioral therapies.

#8 Substance abuse and coexisting mental disorders should receive integrated care.

-Detoxification alone is not sufficient treatment & has to be followed by continuing care

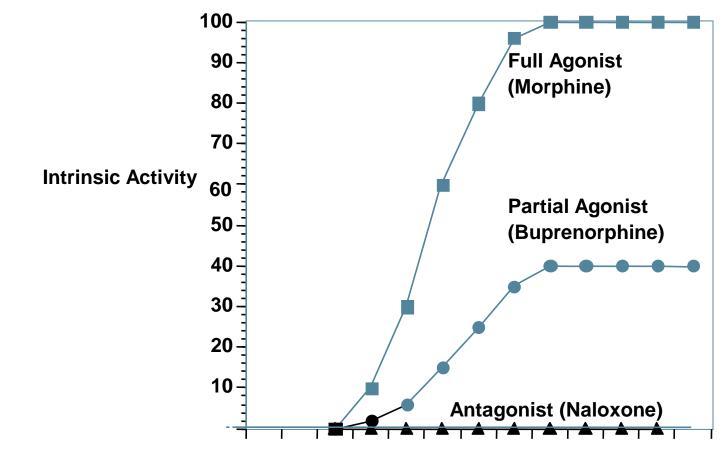
NIDA Principle of effective Treatment: A research based guide, 3rd edition last updated January 2018 https://www.drugabuse.gov

Medications for Opioid Use Disorder

Characteristics	Methadone (µ agonist)	Buprenorphine (µ partial agonist)	Naltrexone (µ antagonist)
Schedule	II	III	unscheduled
Availability	Opioid treatment Programs	DATA waivered prescribers	Any prescribers
Half life	24-55 hrs	24-60 hrs (43-60 days for depot)	9 hrs (5-10 days for depot)
1 year retention	60%	60%	20% (55% for depot)
Physical dependence	Yes	Yes	No
Overdose potential	Yes	Limited	No

Connery HS Harv Rev Psychiatry. 23(2):63-75, 2015.

Intrinsic Activity: Full Agonist (Morphine), Partial Agonist (Buprenorphine), Antagonist (Naloxone)



Log Dose of Opioid

Overdose Mortality Rates In and Out of Opioid Agonist Therapy: 1974-2016

		f deaths/ on years		mortality rate/ on years (95% CI)		mortality rate/ n years (95% CI)
Methadone	In treatment Out of treatment		i		in treatment	Out of treatment
Gearing et al 1974	33/14 474	21/1170			2.3 (1.6 to 3.2)	17.9 (11.1 to 27.4)
Cushman 1977	4/1655	7/297			2.4 (0.7 to 6.2)	23.6 (9.5 to 48.6)
Grönbladh et al 1990	7/1085	27/740	-		6.4 (2.6 to 13.3)	36.5 (24.0 to 53.1)
Caplehom et al 1996	4/1792	19/2004			2.2 (0.6 to 5.7)	9.5 (5.7 to 14.8)
Buster et al 2002	42/18747	26/10 983	-Pin-	-	2.2 (1.6 to 3.0)	2.4 (1.6 to 3.5)
Scherbaum et al 2002	6/1114	13/172			5.4 (2.0 to 11.7)	75.6 (40.2 to 129.2)
Davoli et al 2007	7/5751	9/998			1.2 (0.5 to 2.5)	9.0 (4.1 to 17.1)
Clausen et al 2008	24/6450	28/1303	+-	-	3.7 (2.4 to 5.5)	21.5 (14.3 to 31.1)
Peles et al 2010	5/3985	13/727			1.2 (0.4 to 2.9)	17.9 (9.5 to 30.6)
Kimber et al 2015	169/91 792	216/45 265		o-	1.8 (1.6 to 2.1)	4.8 (4.2 to 5.4)
Cousins et al 2016	54/22 648	24/6247	-	- 1	2.4 (1.8 to 3.1)	3.8 (2.5 to 5.7)
Overall			+		2.6 (2.1 to 3.3)	12.7 (6.9 to 23.4)
Buprenorphine						
Kimber et al 2015	31/21 936	143/31 239		F.	1.4 (1.0 to 2.0)	4.6 (3.9 to 5.4)
			0.5 1 2	5 10 20 50 1	00	
			 In treatment 	🗆 Out of treatment		

Sordo L BMJ. 2017 357:j1550.

Buprenorphine Preparations

Drug	Indication	Strength
Buprenorphine	Opioid dependence	2mg and 8 mg SL
Buprenorphine + naloxone Suboxone® film & tablet Zubsolv® tablet Bunavail® buccal film	Opioid dependence	2 mg/0.5 mg and 8 mg/2 mg SL 5.7 mg/1.4 mg sl 4.2/0.7 mg buccal
Buprenorphine implant (Probufine®)	Opioid dependence	8-24 mg
Buprenorphine depot (Sublocade®)	Opioid Use Disorder	300 mg/1.5 ml, 100 mg/0.5 ml

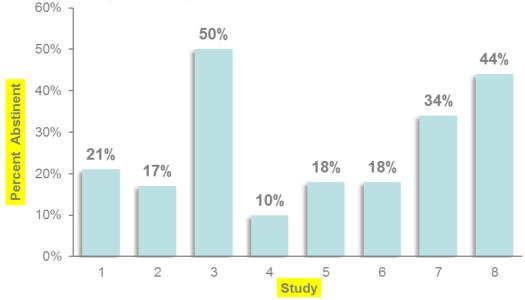
Is "Opioid Detoxification" Effective?

- Low rates of retention in treatment
- High rates of relapse post-treatment
 - < 50% abstinent at 6 months</p>
 - < 15% abstinent at 12 months
 - "Detoxification" is not treatment, it is just the start of treatment
- Increased rates of overdose due to decreased tolerance

Short-Term Maintenance With Buprenorphine Is Associated With Relapse

- Conclusions from a recent review
 - Discontinuation of buprenorphine, even with gradual tapering, was associated with high rates of relapse to illicit opioids
 - Mean abstinence rate of 18% across studies
 - Most patients relapsed within 1 month of buprenorphine discontinuation

Abstinence Rates After Buprenorphine Discontinuation^a



^aBuprenorphine maintenance duration was 2 to 12 weeks followed by 1-11 week taper. Followed up 4 weeks to 6 months post

buprenorphine cessation.

Study key: 1-3 = Sigmon et al. 2013; 4 = Weiss et al. 2011;

5-6 = Ling et al. 2009; 7,= Woody et al. 2008; 8 = Breen et al. 2003.

Bentzley BS, et al. J Subst Abuse Treat. 2015;52:48-57.

Buprenorphine: Evidence

- Is comparable to methadone for opiate withdrawal
- Is safer (overdose risk 6 times less) and less euphoric than methadone.
- Is comparable to methadone for maintenance, retention may be better with high dose methadone.
- Recent data suggest buprenorphine may have superior benefits for neonate abstinence syndrome than methadone

Soyka M Dialogues Clin Neurosci. 2017 Sep;19(3):299-308.

Long-term Outcomes with Buprenorphine: POATS Trial

Characteristics	Baseline	18 months	36 months	42 months
Past month opioid dependence %	100	16.3	11.5	7.8
Abstinence from illicit opioids	0	51	63.5	61.4
Current opioid agonist therapy	0	31.8	38.1	36.9
Abstinence rate with agonists				29.4%
Abstinence rate without agonist				31.7%

Weiss RD Drug Alcohol Depend. 2015 1; 150: 112–119.

Buprenorphine Extended Release

- 4-week sc 300 mg & 100 mg depot injection for patients stable on sl 8-24 mg buprenorphine for 7-14 days
- Pivotal 24 week Phase 3 trial showed 300 mg & 100 mg sc depot superior to placebo
- Blockade data: plasma concentration of 2-3 ng/ml occupies ≥ 70% of mu opioid receptors
- Safety: injection site pain, pruritus, headache more common with depot

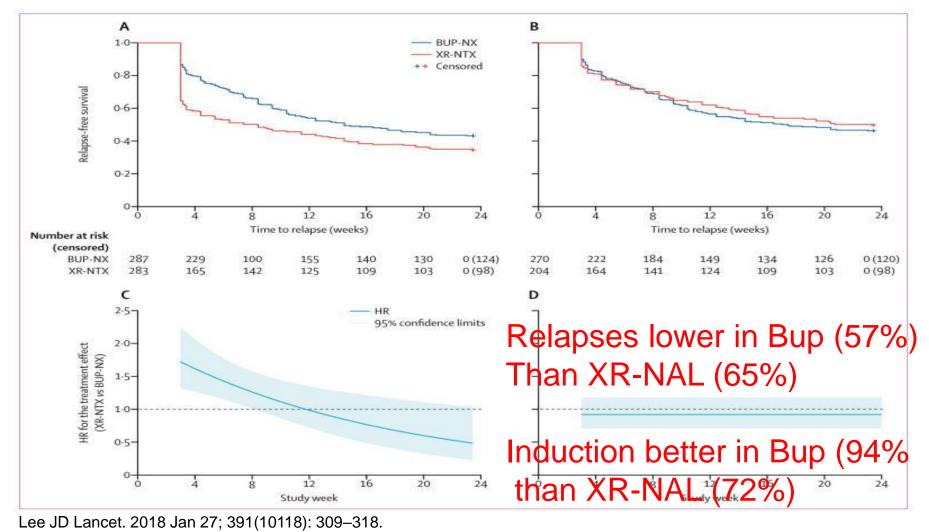
Azmi N Journal of Clinical Psychopharmacology, 2016, 36: 18–26; Voelker R

Naltrexone: Summary of Evidence

- Oral effective dose 50-100 mg/day, blocks 90% of effects of 25 mg i.v. heroin at 24-48 hrs (plasma level 1-2 ng/ml)
- Poor adherence: Average retention rate in 13 RCT: 28%
- Injectable naltrexone is a 4 week extended release formulation to address compliance

Minnozzi S Cochrane Database Syst Rev. 2011 13;(4):CD001333

Buprenorphine v/s Naltrexone Extended Release: XBOT Trial



Methadone: Summary of Evidence

- Dose related response: stabilization achieved between 60-120 mg/day
- Effective in retention and reduction in heroin use
- Has a black box warning for QTc prolongation
- Overdose risk is highest during induction phase & in combination with benzodiazepines.

Cochrane Database Syst Rev. 2016 9;(5):CD011117

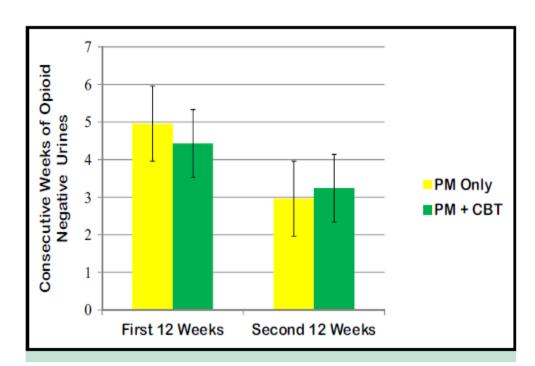
Behavioral Therapies

Treatment Intervention	Primary Target Population(s)			
	High-risk users	substance abusers	substance- dependent	
Brief intervention	\checkmark	\checkmark	\checkmark	
Motivational enhancement therapy		\checkmark	\checkmark	
Cognitive behavioral therapy			\checkmark	
Relapse prevention			\checkmark	
Self Help			\checkmark	

Moyer et al., *Addiction* (2002) 97: 279-292; Miller et al., *Addiction* (2002) 97: 265-277; O'Farrell et al., *J. Sub. Abuse. Treat.* (2000) 18: 51-54 Slide courtesy: Dr T.K. Li, Director, NIAAA

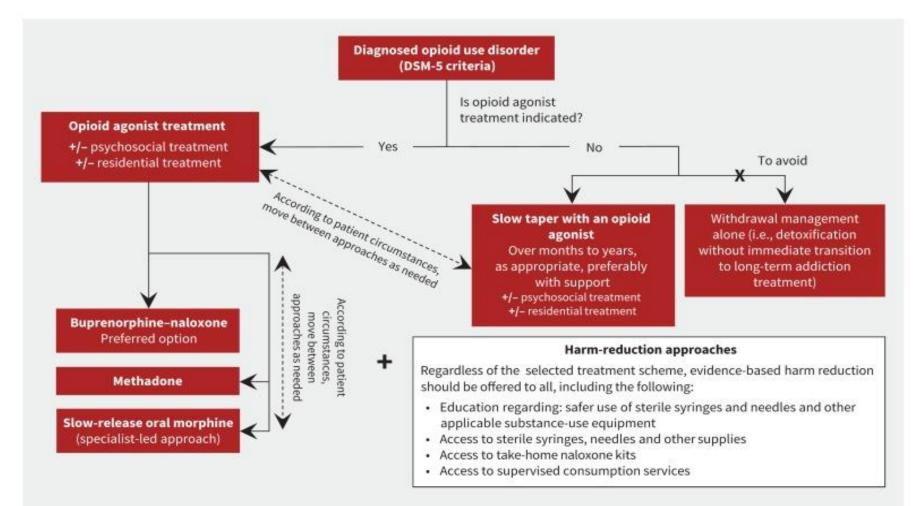
Is Intensive Behavioral Treatment Effective for Medication Assisted Therapy?

 Metanalyses of controlled trials show that additional behavioral therapy (i.e., CBT, drug counseling) does NOT significantly improve outcomes over that achieved by buprenorphine PLUS medical management or "medical counseling"



Amato L. Cochrane Database Syst Rev 2011;(10):CD004147.

Treatment Algorithm for Opioid Use Disorder: Canadian Practice Guidelines



DIVINEAU J UNIAJ. ZUTO 190(9).EZ41-EZO1.

FDA Approved Medications for Alcohol Dependence

- Naltrexone: reduces the rewarding and priming effects of alcohol.
- Disulfiram: produces aversive reaction by ↑ acetaldehyde accumulation.
- Acamprosate: maintains abstinence by improving persistent withdrawal symptoms.

O'Brien, Am J Psychiatry 2005 162:1423-8; Kranzler & Virk, 2001, Alc Clin Exp Res 25:1335-41

Benzodiazepines in Alcohol Withdrawal

- BZ are first line agents
- All BZ equally effective
- Longer acting BZ may be more effective for withdrawal seizures & less rebound symptoms
- Shorter acting BZ have less risk of over sedation but may have higher abuse potential
- Consider risk benefit ratio for long term use in substance dependence

Holbrook et al CMAJ 160:649-55, 1999

Summary of Evidence for Oral Naltrexone

- Meta-analysis of 50 RCT: 83% reduction in risk of heavy drinking
- \downarrow heavy drinking days & \downarrow relapse to heavy drinking
- Inconsistent effect on return to any drinking
- Evidence in short-term trials . Optimal duration of Rx not known.
- Side effects: mainly nausea and sedation

Rosner S Cochrane Database Syst. Rev 2010 Dec 8;(12):CD001867

Clinical Use of Oral Naltrexone

- FDA approved dose is 50 mg/day. Can increase to 100 mg/day
- Achieve few days of abstinence before Rx.
- GI (nausea) & CNS (dizziness) side effects
- Liver toxicity in doses >300 mg/day and with NSAIDs.
 Black Box warning.
- Combine with behavioral intervention.
- Confirm that patient is not abusing opiates.

Administration (US); 2009. (Treatment Improvement Protocol (TIP) Series, No. 49.)

Oral Naltrexone Reduces Relapse to Heavy Drinking

Study	Treatment n/N	Control n/N	Peto OR (95% CI fixed)	Weight (%)	Peto OR (95% CI fixed)
Anton (1999)	26/68	38/63		7.5	0.42 (0.21, 0.82)
Chick (2000)	59/90	54/85		9.2	1.09 (0.59, 2.03)
Guardia (2002)	8/101	19/101		5.4	0.39 (0.17, 0.88)
Heinala (2001)	49/63	51/58		-4.0	0.50 (0.19, 1.27)
Hersch (1998)	15/31	15/33	· · · · · · · · · · · · · · · · · · ·	3.7	1.12 (0.42, 2.98)
Kranzler (2000)	29/61	31/63		7.1	0.94 (0.46, 1.89)
Krystal (2001)	142/378	83/187		27.4	0.75 (0.53, 1.08)
Latt (2002)	19/56	27/51		6.0	0.46 (0.22, 0.99)
Monti (2001)	16/64	19/64		5.8	0.79 (0.36, 1.72)
Morris (2001)	19/55	26/56		6.1	0.61 (0.29, 1.30)
Oslin (1997)	3/21	8/23 ←		1.9	0.34 (0.09, 1.33)
O'Malley (1992)	16/52	31/52		5.9	0.32 (0.15, 0.68)
Volpicelli (1995)	10/54	17/45		4.5	0.38 (0.16, 0.93)
Volpicelli (1997)	17/48	26/49		5.5	0.49 (0.22, 1.09)
Total (95% CI)	428/1142	445/930	•	100.0	0.62 (0.52, 0.75)
verall effect: 7=4 97		.1 Favors tre	.2 1 5 atment Favors	10 control	

Overall effect: Z=4.97; P<.00001. Bouza C et al. Addiction. 2004,99.811-828.

Summary of Evidence for Inj Naltrexone

- Inj NAL (380 mg) > Placebo on:
- Number of heavy drinking days (25% \downarrow)
- Stronger effect on those who abstained for at least a week before treatment initiation
- No difference in complete abstinence (7% vs 5%)
- No effect in women
- Injection site reactions observed in 16%

Summary of Evidence for Acamprosate

- Significant effect on ↑ abstinence rate & cumulative abstinence and ↓ risk to returning to any drinking
- No effect on heavy drinking
- Strongest effect in recently detoxified alcoholics
- 3 US trials failed to separate from placebo
- Excellent evidence of tolerability

Clinical Use of Acamprosate

- Start in detoxified (5-10 days) alcoholics
- Effective Dose: 666 mg t.i.d.
- Side effects: Diarrhea, Nausea, Headache
- Not metabolized by liver
- Aim to achieve abstinence
- Combine with psychosocial treatment

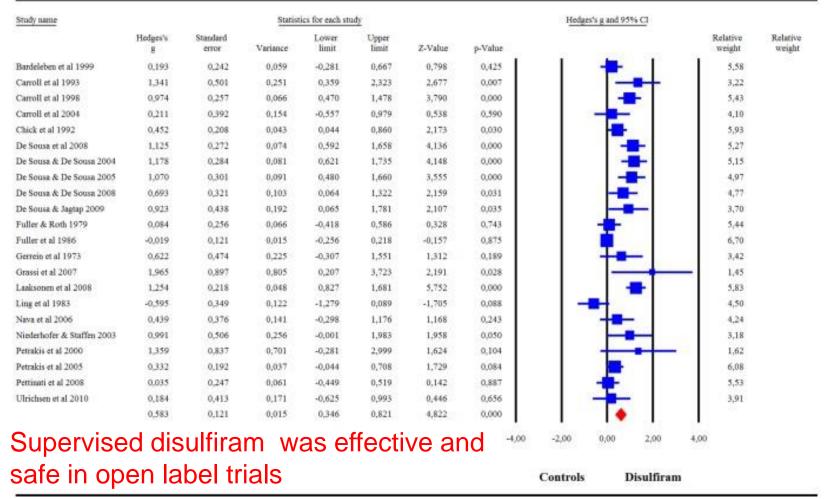
Medication Combinations for Alcohol Dependence

- COMBINE study: compared combination of Medical Management (MM) with oral Naltrexone (NAL), acamprosate (ACAM), NAL + ACAM, placebo and combination of specialized counseling (CBI) with NAL, ACAM, NAL + ACAM, and PLAC
- 1383 subjects randomized for 16 weeks
- 1 year-follow up

COMBINE Results

- MM + NAL > MM + PLA
- ACAM did not separate from placebo
- 6 to 7 patients need to be treated with MM + NAL or MM + CBI counseling or naltrexone for 1additional patient to have a good clinical outcome. This "number needed to treat" is similar to depression, or type 2 diabetes.

Disulfiram: Efficacy in Randomized Controlled Trials



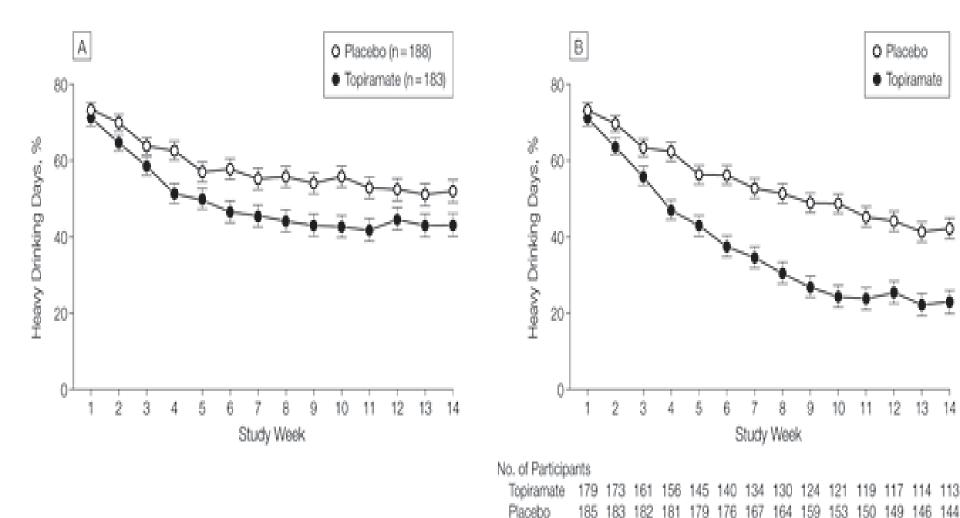
Skinner MD PLoS one 2014; 9(2): e87366.

Anticonvulsants in Alcohol Dependence

- Inhibit neuronal excitation at glutamate & GABA receptors & voltage gated ion channels
- Gabapentin and Topiramate have clinical supportive evidence
- GABA-B agonist Baclofen & 5HT3 antagonist Ondansetron showed some promise
- Topiramate is effective in reducing heavy drinking

Johnson BA Alcohol Clin Exp Res 2004, 28:291-305

RCT of Topiramate in Alcohol Dependence



Johnson, B. A. et al. JAMA 2007;298:1641-1651.

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Medications for Stimulant Dependence

- No approved medications for cocaine or methamphetamine dependence
- Modafinil, bupropion, Disulfiram & Topiramate, hold some promise.
- Cocaine vaccine under study

Sofuoglu et al: Expert Opin Emerg Drugs. 2006 Mar;11(1):91-8.

Medications for Cannabis Dependence

- No approved medications for cannabis
- Nabilone, CBD, CBD combined with nabiximol or dronabinol, gabapentin and N-acetylcysteine hold some promise.

Reversal of Opioid Overdoses Naloxone HCL (Narcan®)

- Mu-opioid receptor antagonist
- Rapid acting (< 5 minutes)
- Delivered via injection (IM, SC, IV) or nasal
- Naloxone distribution likely to reduce 6% of overdose deaths
- In most states, available without prescription through a standing order



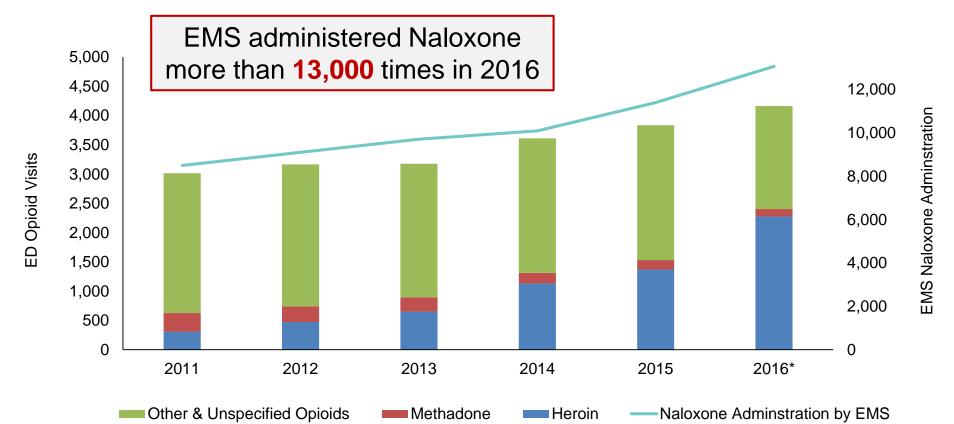
Langham S Value Health. 2018 Apr;21(4):407-415

Reversal of Opioid Overdoses Naloxone HCL (Narcan®)

- Mu-opioid receptor antagonist
- Can't get 'high' from it (no potential for abuse)
- Uses: anesthesia & emergency
- Rapid acting (< 10 minutes)
- Delivered via injection (IM, SC, IV) or nasal
- In NC, available without prescription through a standing order



Emergency Department Opioid Overdose Visits & EMS Naloxone Administration, 2011-2016[†]



⁺ICD9 to ICD10 coding changed in October 2015. Impact on surveillance is unclear. Naloxone

administration alone by EMS does not necessarily equate to an opioid overdose.

*2016 data are preliminary and subject to change

Source: NC DETECT (statewide ED data), N.C. Division of Public Health and UNC Carolina Center for Health Informatics (CCHI); EMSpic- UNC Emergency Medicine Department, N.C. Office of Emergency Medical Services (OEMS)

North Carolina Injury & Violence

What Percent of Those who Develop Alcohol Use Disorders Eventually Reach Remission/Recovery?

Study	Remission rate in total population	Remission rate in those with lifetime SUD
Dawson et al 2005	10.3% for alcohol dependence	47.7% in full remission for 1 year (18% full abstinence). 29% in remission for 5 years or more
Dawson et al, 2008	5.3% for AUD over 3 years	44% full remission
Hasin et al 1997	12.6% for AUD	61% alcohol abuse, 29% for alcohol dependence

Overall remission rate in Community samples is 43.5%. Only 18% did this through complete Abstinence. In community studies, high rate of non-abstinent remission There are over 25 million people in US who are in remission from SUD

What Percent of Those who Develop Drug Use Disorders Eventually Reach Remission/Recovery?

Study	Sample	Follow up	Recovery rate in those with lifetime SUD
Gossop (2002) UK	N=549, all drugs	1 & 2 years	Year 1 35% for residential and 15% for outpatient
Hser, 2007	N=242, heroin	33 years	43%
Hser, 2006	N=321, cocaine	12 years	52%
McLellan	N=802, Physicians	5 years	81%

Average success rate across 78 trials is 57% (Prendergast, 2002) Primary drug abstinence is often associated with continuing use of other drugs Some studies suggest patients with primary mental health problems do better.

Why do some feel that Rx does not work?

- " I know someone who has been in and out of treatment a dozen times- it just doesn't work!"
- Most Rx focused on a single episode of care. On average 3-4 Rx episodes are required for long term abstinence.
- Detoxification alone is not adequate Rx.
- Overall Rx approach should shift from acute intervention to long term management.

Precision Medicine: The Future

🧏 2016 Precision medicine for psychopharmacology a general introduction.pdf - Adobe Reader

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EXPERT REVIEW OF NEUROTHERAPEUTICS, 2016 http://dx.doi.org/10.1080/14737175.2016.1182022

REVIEW

Precision medicine for psychopharmacology: a general introduction

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ABSTRACT

Introduction: Precision medicine is an emerging medical model that can provide accurate diagnoses and tailored therapeutic strategies for patients based on data pertaining to genes, microbiomes, environment, family history and lifestyle.

Areas covered: Here, we provide basic information about precision medicine and newly introduced concepts, such as the precision medicine ecosystem and big data processing, and omics technologies including pharmacogenomics, pharamacometabolomics, pharmacoproteomics, pharmacoepigenomics, connectomics and exposomics. The authors review the current state of omics in psychiatry and the future direction of psychopharmacology as it moves towards precision medicine.

Expert commentary: Advances in precision medicine have been facilitated by achievements in multiple fields, including large-scale biological databases, powerful methods for characterizing patients (such as genomics, proteomics, metabolomics, diverse cellular assays, and even social networks and mobile health technologies), and computer-based tools for analyzing large amounts of data.

ARTICLE HISTORY

Received 16 February 2016 Accepted 20 April 2016 Published online 6 May 2016

Tavlor & Francis

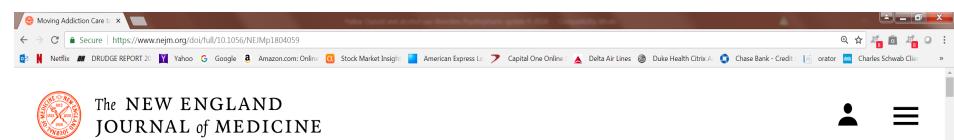
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KEYWORDS

Precision medicine; personalized medicine; psychopharmacology; pharmacogenomics; pharmacometabolomics; exposomics; connectomics; big data; electronic health record; electronic medical record

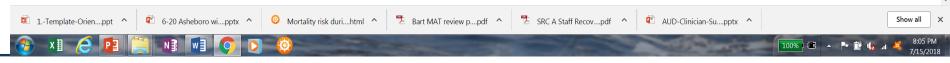
Mainstreaming Addiction Treatment



Perspective

Moving Addiction Care to the Mainstream — Improving the Quality of Buprenorphine Treatment

Brendan Saloner, Ph.D., Kenneth B. Stoller, M.D., and G. Caleb Alexander, M.D.



Conclusions

- There are effective medications for opioid and alcohol use disorders
- Pharmacotherapy should be combined with behavioral interventions for optimal outcomes
- Effective intervention should be long term.

MEDICATION-ASSISTED TREATMENT EXAMINING BIASES, PREJUDICES & IMPLICATIONS SCOTT LUETGENAU, MSW, LCAS

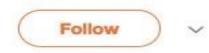
"JUST REMEMBER...,

WE'REALIN THIS ALONE." -BRIAN COON

HEROIN & OPIOIDS

KILL AN AMERICAN EVERY 16 MINUTES



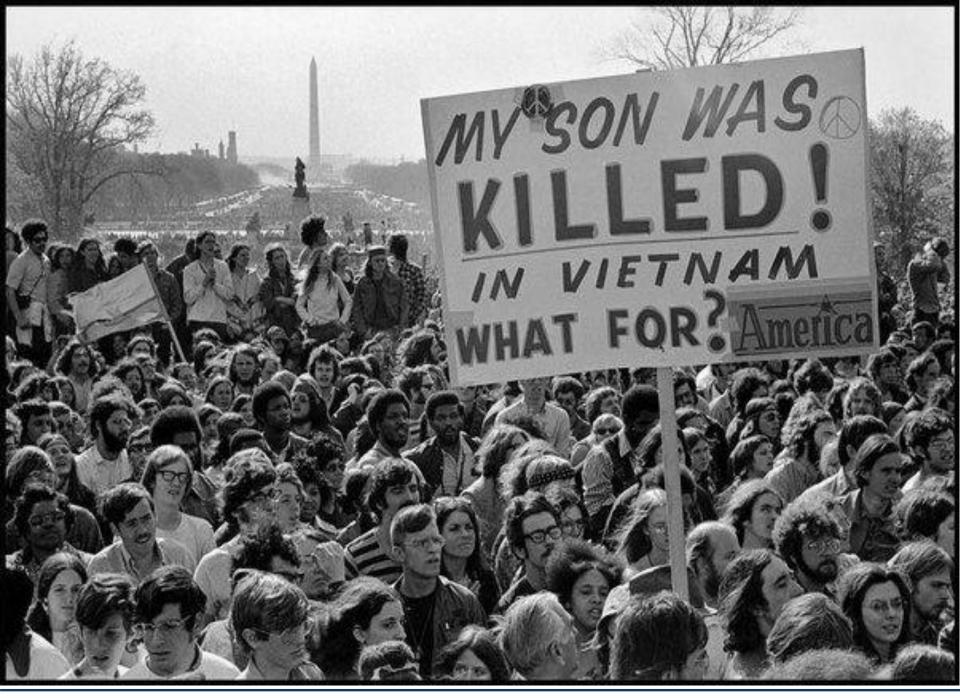


Heroin Use Spikes As Drug Deaths Are Expected To Top 70,000 This Year trib.al/wGggl4k



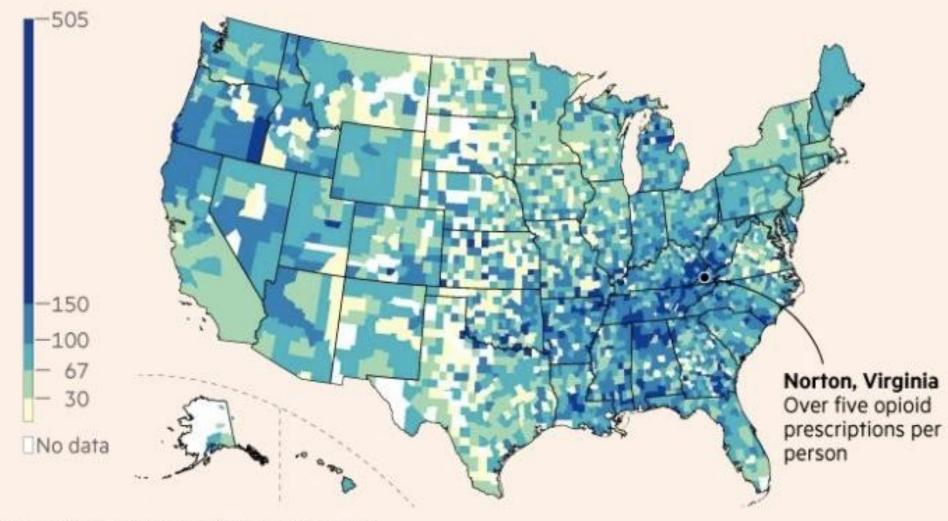
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In a quarter of US counties, opioid prescriptions exceed one per person

Prescriptions per 100 persons, by county (2015)



Source: Centers for Disease Control and Prevention © FT graphic Alan Smith, Federica Cocco

Benzodiazepines

Alcohol

Cocaine

Cannabis

Methamphetamines

Designer Drugs

Opioids are So POWERFUL...

They Change Our Brain Chemistry

Southlight OTP

History Of MAT for Opioid Use Disorders

Vincent Dole, Marie Nyswander & Mary Jeanne Kreek

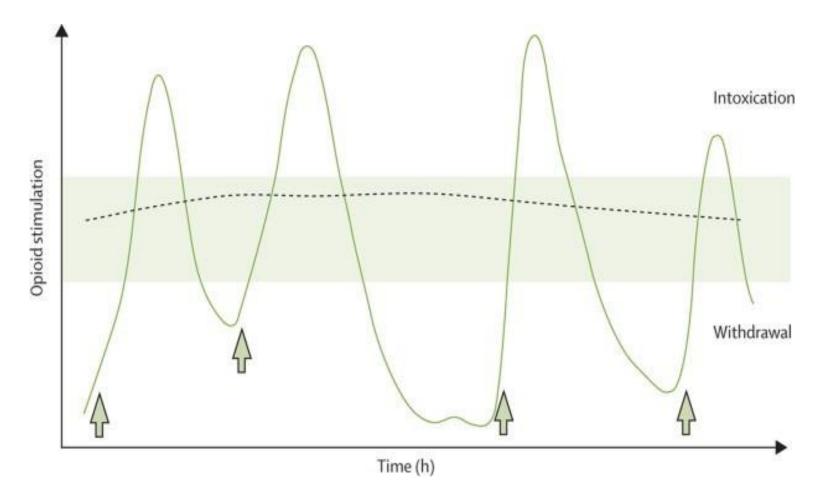
Groundbreaking research on medication-assisted treatment



- Patients did not experience euphoric or tranquilizing effects. Their affect and consciousness were normal. They were able to socialize and work normally without the incapacitating effects of short-acting opioids such as morphine or heroin.
- A therapeutic, appropriate dose of methadone reduced or blocked the effects of all other opioids.
- No change usually occurred in tolerance levels for methadone users over time, unlike other opioids; doses could be held constant for extended periods (more than 20 years in some cases).
- Half-life of 24 to 36 hours and can be taken without a syringe.
- Methadone relieved opioid cravings, found to be the major factor in relapse or continued use.
- Minimal side effects

Source: The Rockefeller University Hospital

MAT Pharmacokinetics Medication versus Illicit Opioid Substances

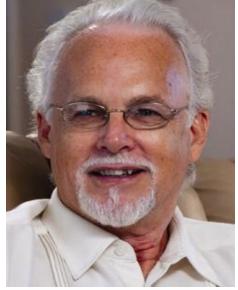


Source: The Lancet, Management of Injecting Drug Users Admitted to Hospital

"Like many addiction counselors personally and professionally rooted in the therapeutic community and Minnesota model programs of the 1960s and 1970s, I exhibited a rabid animosity toward methadone and protected these beliefs in a shell of blissful ignorance.

That began to change in the late 1970s when a new mentor, Dr. Ed Senay, gently suggested that the great passion I expressed on the subject of methadone seemed to be in inverse proportion to my knowledge about methadone. I hope this article will serve as a form of amends for that ignorance and arrogance."

William White *Methadone & the Anti-Medication Bias in*



"If you are an individual who does not believe in the efficacy of MAT, that is certainly fine, but professionally, keep your opinion to yourself."



Michael Botticelli New England Institute of Addiction Studies (2014)

"It's hard to argue when you have patients dying of overdoses. We can't just base our service on philosophy. We have to look at the data and base our treatment on the best way to safe lives."



Dr. Marvin Seppala Chief Medical Officer, Hazelden Betty Ford Foundation

Impact of Treatment

For Opioid Dependence on Fatal Drug-related Poisoning: A National Cohort Study in England

Southlight OTP Medication-Assisted Treatment

"If we were to compare people who start a medication to those who don't, the people who don't are actually at twice the risk of dying within a year from their opioid use disorder."



Recovery

• A process of change through which individuals improve their health and wellness, live self-directed lives, and strive to reach their full potential. Recovery is built on access to evidence-based clinical treatment and recovery support services for all populations.

- Four Major Dimensions of Recovery
- Health
- Home
- Purpose
- Community



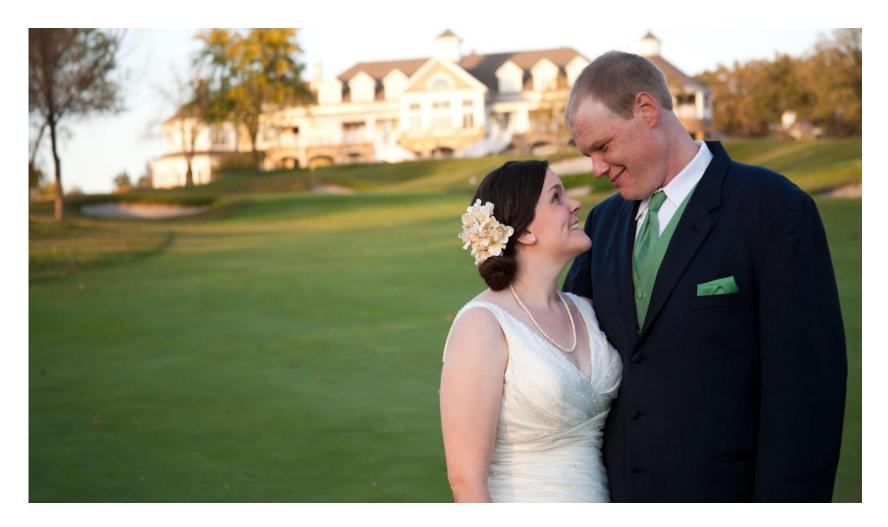




noun

 a mark of disgrace associated with a particular circumstance, quality, or person. "the stigma of having gone to prison will always be with me" synonyms: shame, disgrace, dishonor, ignominy, opprobrium, humiliation, (bad) reputation "the stigma of bankruptcy"

The Cost of Stigma Barriers to Treatment



The Cost of Stigma Barriers to Treatment



The Cost of Stigma

Mutual Aid Group Meetings



The Cost of Stigma Sober Living Facilities



The Cost of Stigma Drug Courts



The Cost of Stigma Treatment Length

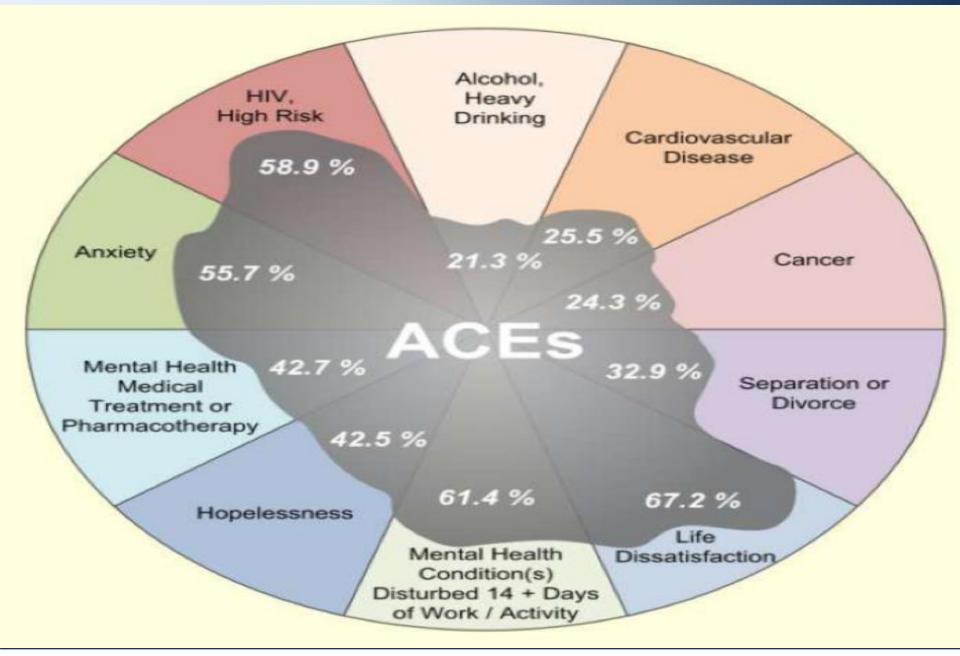


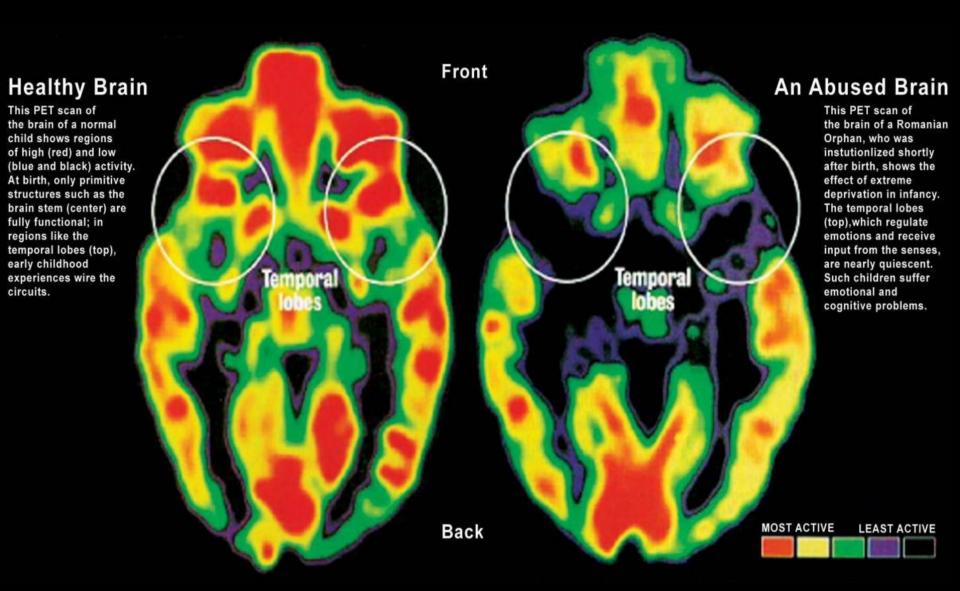
The Cost of Stigma Pregnant Women



"If the pregnant women suddenly quits opioids cold turkey, the fetus also experiences withdrawal. This can result in sudden abortion, early birth or other dangerous complications."







DIAGNOSTIC CRITERIA

- I. OPIOIDS ARE OFTEN TAKE IN LARGER AMOUNTS OR OVER A LONGER PERIOD THAN WAS INTENDED.
- 2. THERE IS A PERSISTENT DESIRE OF UNSUCCESSFUL EFFORTS TO CUT DOWN OR CONTROL OPIOID USE.
- 3. A GREAT DEAL OF TIME IS SPENT IN ACTIVITIES NECESSARY TO OBTAIN THE OPIOID, USE THE OPIOID, OR RECOVERY FROM ITS EFFECTS.
- 4. CRAVING, OR A STRONG DESIRE OR URGE TO USE OPIOIDS.
- 5. RECURRENT OPIOID USE RESULTING IN A FAILURE TO FULFILL MAJOR ROLE OBLIGATIONS AT WORK, SCHOOL OR HOME.
- 6. CONTINU OPIOID USE DESPITE PERSISTENT OR EDRECURRE SOCIALS OR INTERPERSONAL PROBLEMS. NT OCIAL. OCCUPATIONAL OR RECREATION
- NT OCIAL, OCCUPATIONAL, OR RECREATIONAL
- 7 ACTIMPTOPERSTA ARE GIVEN UP OR REDUCED BECAUSE OF USE.
- 8. RECURRENT OPIOID USE IN SITUATION IN WHICH IT IS PHYSICALLY HAZARDOUS.
- 9. CONTINUED USE DESPITE KNOWLEDGE OF HAVING A PERSISTENT PHYSIOLOGICALA OR PSYCHOLOGICAL PROBLEM.
- 10. TOLERANCE, S DEFINED BY A NEED FOR INCREASED AMOUNTS OF OPIOIDS TO ACHIEVE THE DESIRED EFFECT.

	Level 2	Level 3	Level 4	Level 5	Level 6
# of Take	2TH	4TH	5TH	бтн	13TH
Home Doses	1	1 '	1	('	1 ['
Minimum	90 days 🔲	180 days 📮	12 months	18 months	36 months
Time on	90 days 🖬	180 days 🖵	12 monuns 🛥		
Program	1 1	1 /	1 '	1 '	1 ['
Consecutive	3 months	3 months	6 months	6 months	18 months
Negative	UDS 2x mo	(6mo total)	(12mo total)	(18mo total)	(36 mo total)
Drug Screens	UDS 2X mo	(6mo total) UDS 2 x mo	(12mo total) UDS 2 x mo	(18mo total) UDS 1 x mo	(36 mo total) UDS 1 x mo
Drug Screens Minimum	Weekly	1x per	1x per	1x per month	1x per month
	Weekly 🖬	month	month	1x per montri 🖬	
Group Attendance	1 1	month 🖬	month 🖬	1 '	1 ['
			//		1x per month
Minimum	1x per month	1x per	1x per	1x per month	1x per month
Individual	month 🗖	month 🗖	month 🗖	1 '	1 ['
Attendance	0	L/	└──── ′	<u> </u>	L/
Orientation	Session 1				
.	Session 2				
	Session 3				· · · · · · · · · · · · · · · · · · ·
Syphilis Test	Completed				
Annual	Completed	Completed 🛛	Completed 🛛	Completed	Completed 🛛
Physical	L	L		L'	↓ /′
Physical	Completed 🛛	Completed 🛛	Completed 🛛	Completed 🛛	Completed 🛛
Review	L!	↓′	L'	<u> </u>	<u> </u>
Criminal	None 🗖	None 🗖	None 🗖	None 🗖	None 🗖
Activity	L	L'	L'		''
CSRS Check	Completed	Completed	Completed	Completed	Completed
Psychiatric/	Stable 🗖	Stable 🗖	Stable 🗖	Stable 🗖	Stable
Cognitive	1 '	1 /	1	1 '	1 ['
Functioning	!	·'	L'		
Behavioral	None 🗖	None 🗖	None 🗖	None 🗖	None 🗖
Issues at OTP		L'	L'	/′	
Fees	Current	Current	Current	Current	Current
Dose	Stable	Stable	Stable	Stable	Stable
Phone #/	Current	Current	Current	Current 🗖	Current 🗖
Address in	1 1	1 /	1 '	1 '	1
EHR	L!	L'	L'	<u> </u>	
Employment				Employment/disability	Employment/disability
				volunteer verified	volunteer verified
Safe Housing	Verified	Verified	Verified	Verified 🗖	Verified
and Storage	Vernieu 🖵	Vernieg 🛥	Vernieg 🛥		Vernieg 🖬
Stable Social	Verified	Verified	Verified	Verified	Verified
Relationships	Vernieu 🖵	Vernieu -	Vernieg 🛥		
Noncompliance with any of these above areas may result in loss or reduction of take home medication					

Southlight OTP Eligibility for Medication-Assisted Treatment

- Opioid Use Disorder, Severe
- Addicted One Year Prior toAdmission
- Voluntarily Chooses MAT
- MAT Clearly & Adequately Explained
- MAT Consent Forms Signed



Southlight OTP Predictors of Successful Taper

- Over 2 Years of Treatment
- No Recent Use
- Stable Living Situation
- Full-Time Employment
- No Recent Illegal Activities
- Psychiatric and Medical Stability
- Positive Social Support Network
- Good Treatment Engagement
- Continuing Care in Place

Source: AATOD Opioid Maintenance Pharmacotherapy: A Course for Clinicians



Southlight OTP Opioid Treatment Program Mission



Wrapping medication-assisted treatment within a dynamic, person/family-centered recovery culture supportive of global health and quality of life in sustained recovery...



"The only person who is educated is the one who has learned how to learn and change."

CARLROGERS

EVERY DOCTOR IN PRIVATE PRACTICE WAS ASKED!



MORE DOCTORS SMOKE CAMELS THAN ANY OTHER CIGARETTE!

This is no casual claim. It's an actual fact. Based on the statements of doctors themselves to three nationally known independent research organizations.

THE QUESTION was very simple. One that you...any smoker...might ask a doctor: "What cigarette do you smoke, Doctor?"

After all, doctors are human too. Like you, they smoke for pleasure. Their taste, like yours, enjoys the pleasing flavor of costlier tobaccos. Their throats too appreciate a cool mildness.

And more doctors named Camels than any other cigarette!

If you are a Camel smoker, this preference for Camels among physicians and surgeons will not surprise you. But if you are not now smoking Camels, by all means try them. Compare them critically in your "T-Zone" (see right).

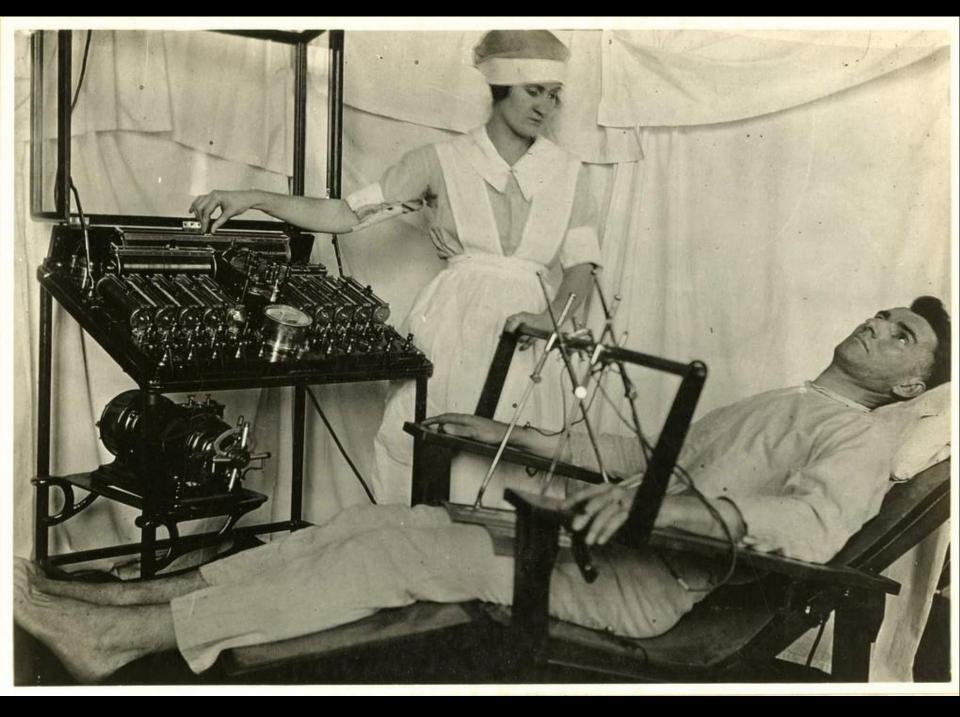
CAMEL-COSTLIER TOBACCOS

THE "T-ZONE" TEST WILL TELL YOU

GAME

The "T-Zone"-T for taste and T for throat-is your own proving ground for any cigarette. Only your taste and throat can decide which cigarette tastes best to you ... how it affects your throat. On the basis of the experience of many, many millions of smokers, we believe Camela will smir your T-Zone" to a "T."

COCAINE TOOTHACHE DROPS Instantaneous Cure! PRICE 15 CENTS. Prepared by the LLOYD MANUFACTURING CO. 219 HUDSON AVE., ALBANY, N. Y. For sale by all Druggists. (Registered March 1885.) See other side.





"Before coming to SouthLight, I was a sad, broken, shell of a person My daughter once asked me 'mom, how come jou're always sick? You never play with me anymore: I realized then that I needed to sit back, and stop driving the car; I couldn't be my own doctor anymore. Through the services offered at SouthLight, I have been given the chance to put my life back together; the medication has been my parachute keeping me safe from relapse, and I've adored working with my counselor-she knew exactly what I needed Today I am a confident, loyal, and dependable person, and am working on tapering off my medication completely.

Kathryn Meyer 7/25/18



"Ive been dealing with addiction all my life. Ive been in and out of all types of programs, but they never did any good. Sixteen months ago I came to SouthLight and turned my life around. This program is wonderful; my counselor is so helpful, and I love going to my art therapy and coping in recovery groups. Ive never been much of a talker, but I feel comfortable in my groups; we share our experiences, give advice to each other, and have a good time. When I first came to SouthLight, I was a wreck. Today, I'm a much better person in every way:.

Elandra Peterkin



"I was out of control and at deaths door. I was putting drugs before everything else in my life, and it caused to me to lose everything I knew I had to do something different. Three years ago I came to Southlight, and it was the best decision I ever made. I've been through some really tough things, but the people here have helped me put my life back together... without them, I really don't think I would have made it. My life is the way it should be now; my family trusts me again, I'm more organized, and I don't have to deal with the chaos and drama of addiction anymore. I am proud of where I am today".

Lisa Frankfin

8/09/18



The decisions I'd made in my life left me alone, homeless, and afraid that I was going to die Addiction took away everything that I had, but Southlight has everything to help; they provide counseling, healthcare, assistance with housing- abartever it is, there's somebody here that can help you find it, and achieve it. If you're ready to be serious about your recovery and you've made the decision to get better, then this is the place to be. Southlight saved me, and my life is totally different now. Today, I am an outreach coordinator and a general manager, I have a great relationship with my family, and there are people in the recovery community that respect me and my opinions. In one month I will be tapered off my medication completely, and that is a great feeling.

Edward Antonineci

7/26/2018



"In the beginning, I could use, forget my problems and be happy. But it reached a point where I would cry when I used; I would cry because I missed my daughter, I would cry because I had track marks on my arms. I tried to control my use-but there was no controlling it for me... Southlight helped me break the cycle, they helped me arrest my disease. This program is what you make of it-if you want help and you want recovery, you can find it here. I came to Southlight because I wanted to change my life, and I am so grateful to them for helping me do that. They helped me find myself. Today, I am humble, appreciative, and worthy of trust. I am a mom, a daughter, a friend, and a child of God. I am Monique again".

Monique Baker

7/25/18

Soutlight OTP Current Barriers to Evidence-Based Care

- Medical Provider Availability
- A True Peer Support Model
- Funding for Medication
- Funding for Transportation
- Disjointed System of Care
- Recovery Housing
- Competently & Consistently
 Addressing Co-Occurring Disorders



Southlight OTP Suggested Resources



- OPIOIDX: The Opioid Crisis in America (Free online course from Harvard)
- SAMHSA: Substance Abuse and Mental Health Services Administration
- William White Papers: Selected Monographs and White Papers
- CASA: The National Center on Addiction and Substance Abuse
- The Governor's Institute on Substance Abuse in North Carolina
- American Association for the Treatment of Opioid
 Dependence

Medication-Assisted Recovery

Lona

The Growing Edge: The Expanding Realm of Peer Support Services in Western North Carolina

Justin Wright

Relationship Is Magic



The Growing Edge

- Howard Thurman, The Growing Edge:
- "Look well to the growing edge. All around us worlds are dying and new worlds are being born; all around us life is dying and life is being born. The fruit ripens on the tree, the roots are silently at work in the darkness of the earth against a time when there shall be new leaves, fresh blossoms, green fruit. Such is the growing edge. It is the extra breath from the exhausted lung, the one more thing to try when all else has failed, the upward reach of life when weariness closes in upon all endeavor. This is the basis of hope in moments of despair, the incentive to carry on when times are out of joint and men and women have lost their reason, the source of confidence when worlds crash and dreams whiten into ash. Such is the growing edge incarnate. Look well to the growing edge."

What is Peer Support

- Certified by NC PSS Board
- Experiential Component MH and/or SU
- Horizontal Power Differential.
- VET X (Veterans Certification)
 - Peer Led Mental Health recovery
 - Started 2009 @ Hampton Virginia VA Medical Center
 - Veteran are the Tx Team for Veterans (this IS PEER SUPPORT

- Program success lies in the way it taps into Military culture.

The Sunrise Community for Recovery and Wellness

- Started in 2014 as a volunteer organization/service
- Became non profit after merging with Mountain Coalition for Wellness and Recovery
- Opened first Recovery Community Center in WNC in 2016

Offering:

Community Outreach Services (Haywood St Congregation) Blair H. Clark Respite Center **Recovery Community Center** Sunrise Felony Drug Diversion (JRC) Peer Mentoring and Peer Internship Jail to Community Reentry Services **Dual Recovery Groups** Free CEU's towards certification/recertification Kairos West Community Center (in house peer support) MRT and WRAP services

Sunrise Felony Drug Diversion

- Offered for persons charged with Schedule 1 and Schedule 2 substances, first time offenders
- Other detention based services including Morale Reconation Therapy (MRT), in house jail groups

Recovery Community Center

- "A Recovery Community Center (RCC) is a resource for skill-building education, information, support and socialization for those in recovery and their loved ones. It makes real the belief that recovery from addictive disorders is possible. The basis for available services and programming through an RCC are Peer=Based Recovery Support Services (P-BRSS).
- These are non-clinical services that focus on removing barriers and providing invaluable resources to those who are seeking to achieve and maintain long-term recovery. Peer-driven and peer-delivered support services are fueled by the energy of volunteers who seek to share their experience and knowledge with others. The support offered is not meant to replace treatment, Twelve-Step support or other Mutual Aid support groups. RCCs acknowledge multiple pathways to recovery.
- A Recovery Community Center promotes improving quality of life, preventing relapse and sustaining recovery. It is a place where life's challenges are faced with solutions and guidance. It is a place where skills are shared and learned. It is a place where isolation becomes inclusion and strangers become friends."

Peer Mentoring and Internship

- Peer University
- Experiential Learning (at all volunteer locations in community)
- Free training towards CEU's for peer certification

Support Groups

- Recovery and Wellness meets at Sunrise Tuesday 10am and Friday 11am
- JRC PEER SUPPORT RAW group Monday 1130am-1230pm
- Dual Recovery at Sunrise Monday 1-2pm
- Mothers of Addicts Support Circle Tuesday 7-8:30pm
- SMART Recovery Friday 2pm
- WRAP Skills group Wednesday 10am
- REFUGE Recovery meets 3:30pm Monday and 6:30pm Thursday
- Heroin Anonymous meets 8:00pm on Saturday
- Spiritual Fitness (women's group) meets on Wednesday 7:30pm and Sunday 10:45am
- Bill's Kitchen (men's AA) meets Sunday at 7pm

Community Outreach Peer Support

- New Office at Haywood St Congregation offering peer support services
- Collaborating with local law enforcement and first responders
- On the Spot crisis de-escalation

Wellness Recovery Action Plan Services

- Sunrise Peer Support has WRAP Facilitator trained peers
- Offering Level One and Level Two WRAP trainings

Community Partners/ Affiliations

- Haywood St Congregation
- Buncombe County Health and Human Services
- A Hope Day Shelter/Homeward Bound
- Dale Fell Center
- The Justice Resource Center (Buncombe County Courthouse)
- Steady Collective
- First of Blue Ridge Inc
- Crestview Recovery
- Buncombe County Justice Resource Center
- Vaya Health
- NC Harm Reduction Coalition

What To Expect

- Peer support is an evidence based, SAMHSA validated recovery process
- Better outcomes for people we serve.

**TO BE CLEAR: Outcomes= Healthy life change.

- Help to those served in forming healthy connections to community
- A reliable referral pipeline and pipeline navigation
- Formation of community partnerships

Peer Support is the glue that connects people to healthy environments. Peer Support is the glue that connect people to healthy relationships. Peer Support is the glue that connect people to existing community resources. Peer Support is the glue that prevents people from falling through system gaps.

Peer Support is the most basic benevolence of humankind, the vocation whose motto is "ME TOO".

Questions?

"I see all"



Panel: Peer Supports Role in Recovery

Justin Wright, Troy Manns and Robert Thomas

Spotlight: Different Pathways to Recovery

NCDHHS, Division of Public Health | OPDAAC Meeting | December 14, 2018

Pathways to Recovery: Syringe Exchange Programs in North Carolina

Lillie Armstrong

NC Syringe Exchange

- Legalized in NC July 11, 2016 (NCGS § 90-113.27)
- NC Safer Syringe Initiative
- Coordination, TA, best practices, support to new SEPs
- 2017 STOP Act
- InjuryFree NC Academy
- Opioid Action Plan, 2017-2021

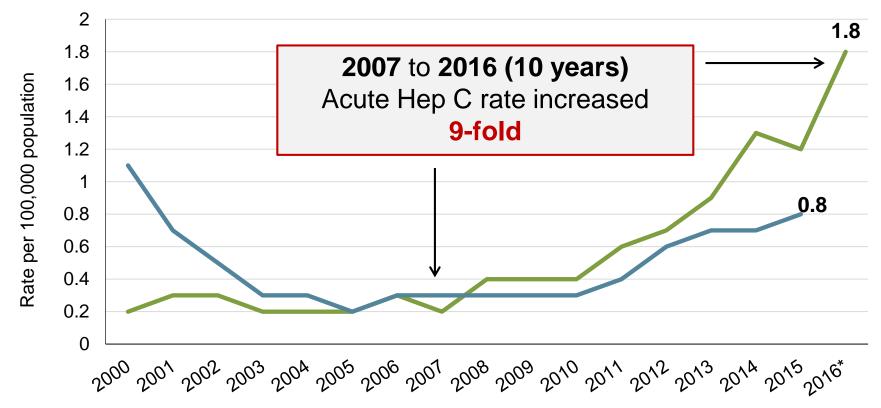






Increase in Acute Hepatitis C Cases[^] North Carolina, 2000–2016

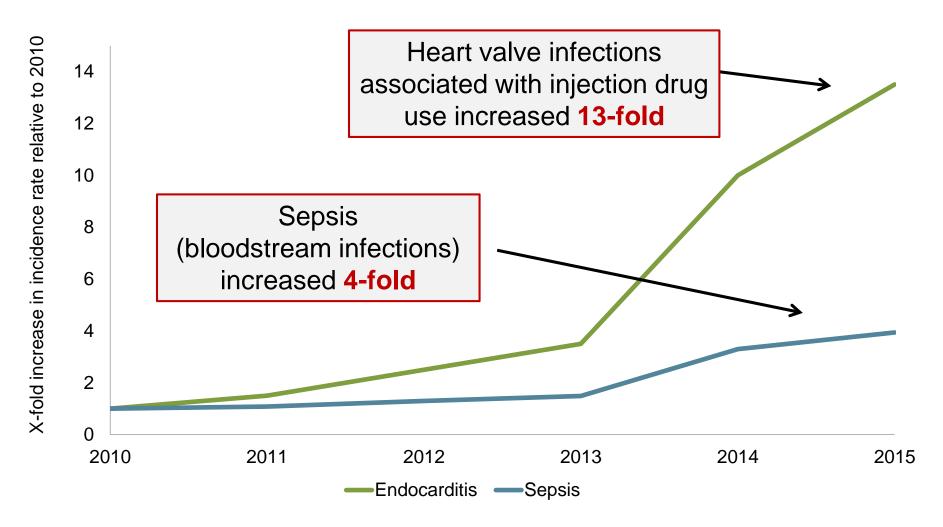
-NC Rate -US Rate



Note: Case definition for acute Hepatitis C changed in 2016. ^ Estimated true number 10–15x higher than number of reported cases

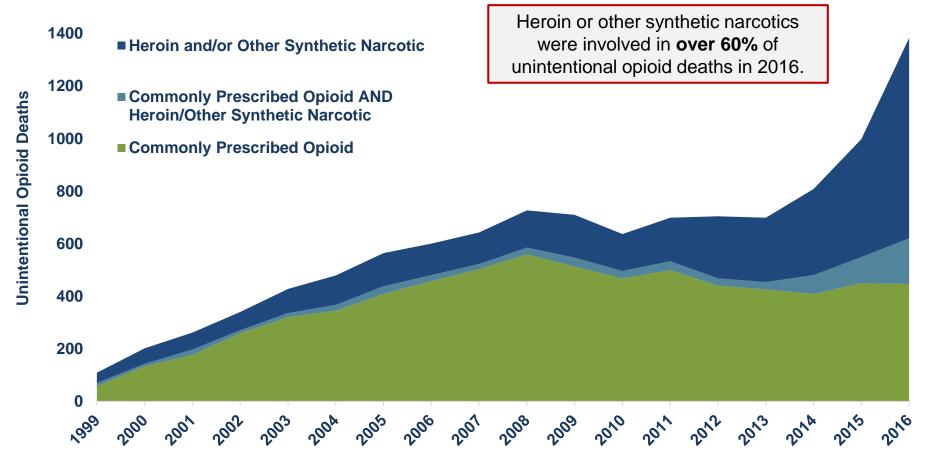
Source: NC Electronic Disease Surveillance System, 2000-2016 Analysis by NC DPH Epidemiology Section, Communicable Disease Branch

Drug-Associated Endocarditis & Sepsis, North Carolina, 2010–2015



Source: NC Division of Public Health, Epidemiology Section, NC Hospital Discharge Database

Unintentional Opioid Overdose Deaths by Opioid Type North Carolina Residents, 1999-2016



Source: N.C. State Center for Health Statistics, Vital Statistics-Deaths, 1999-2016 Unintentional medication/drug (X40-X44) with specific T-codes by drug type, Commonly Prescribed Opioid Medications=T40.2 or T40.3; Heroin and/or Other Synthetic Narcotics=T40.1 or T40.4. Analysis by Injury Epidemiology and Surveillance Unit North Carolina Injury & Violence PREVENTION Branch

Syringe Exchange Programs



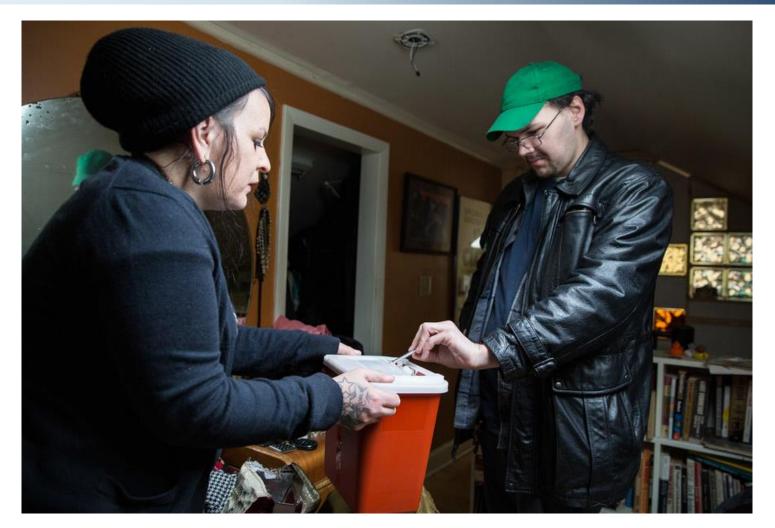
Distribute sterile syringes and collect used syringes for disposal.



Syringe exchange starts a conversation.



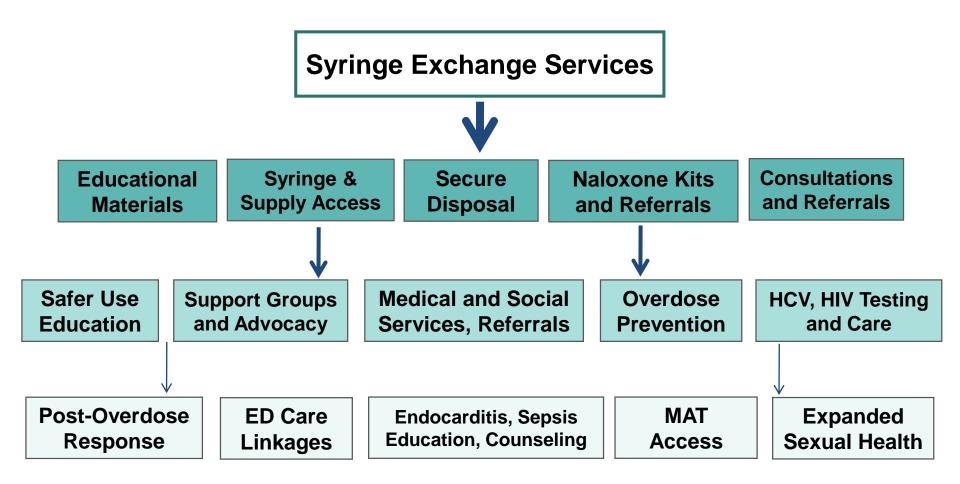
Overdose Prevention and Response



Communicable Disease and Infection Prevention and Response



Connection to SUD Treatment, Engagement with Recovery Community



People who use exchanges care about their health and the health of their communities

Summary of 2017-2018 Data

29 participating SEPs

5,352 unique SEP participants

18,464 total contacts

1,587,112 sterile syringes distributed

472,409 syringes collected

<u>Naloxone</u>

- 19,217 naloxone kits distributed
- 6,195 referrals to naloxone provided

2,660 overdose reversals with naloxone reported to SEPs

Testing & Referrals

1,014 referrals to mental health and substance use disorder treatment

Approximately 3,385 people tested for HIV

Approximately 1,400 people tested for hepatitis C

Why Harm Reduction?

• Respond to overdose, disease, and death burden

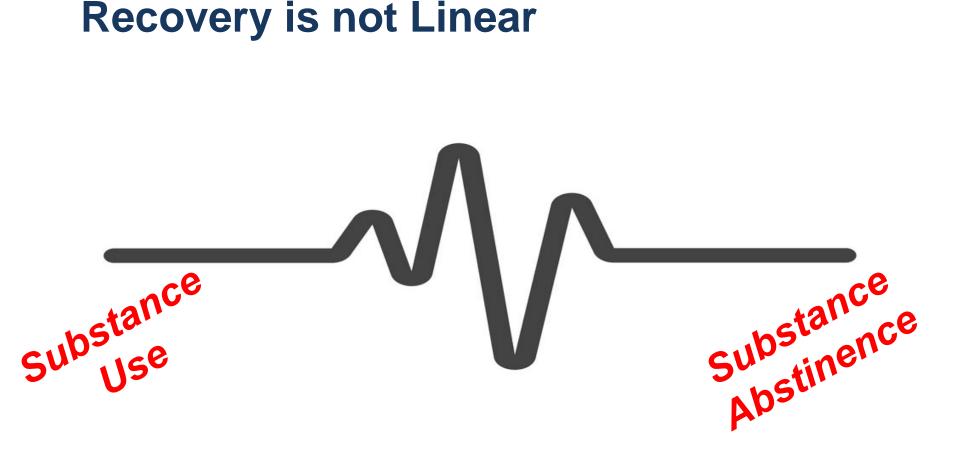
 Connect directly with people who use drugs

 Maintain engagement as drug use changes

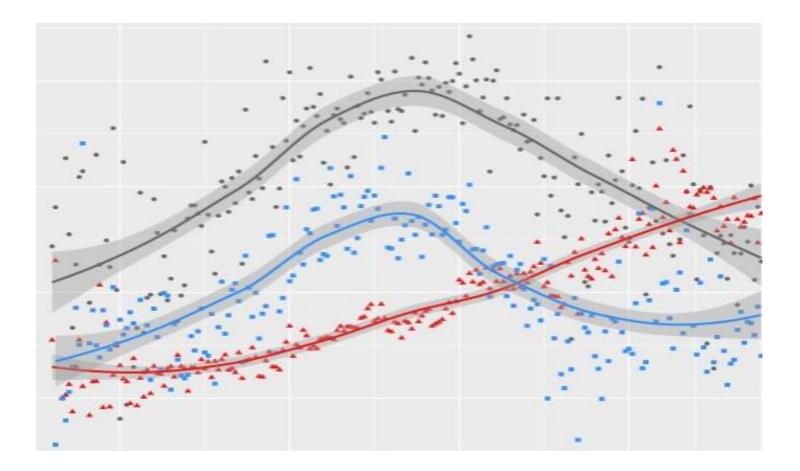


Different Pathways to Recovery: One Harm Reductionist's Perspective

Michelle Mathis



Recovery is not Binary



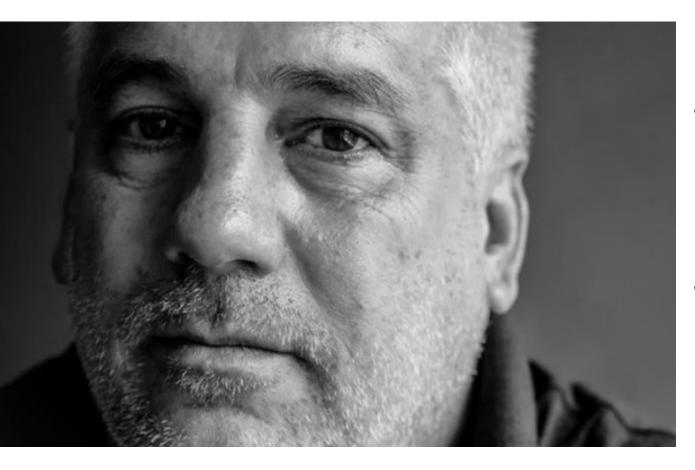
Recovery is Unique to the Individual



Harm Reduction

- It involves many programs, policies, and practices.
- It challenges policies and practices that maximize harm.
- It celebrates the values of incremental gains.
- It is about dignity and compassion.
- It looks different for each individual.
- It is a philosophy ...

Harm Reduction



- Recovery is what an individual says it is.
- Recovery is
 "Any positive change"

Questions?

Michelle Mathis Executive Director Olive Branch Ministry 828.291.7023 olivebranchgals@gmail.com www.olivebranchministry.org

Wrap up and THANK YOU!

- Optional Break-outs (12:30 1:30 PM)
- Opioid Action Plan Version 2.0
- Groups are welcome to discuss any part of the Action Plan

Room 1D: Providers and Health Systems

- Room 7B: Harm Reduction
- Room 8A: Community Prevention

Room 8B: Law Enforcement and Justice Involved Persons