PRISMA HEALTH℠

Opioid Crisis in South Carolina

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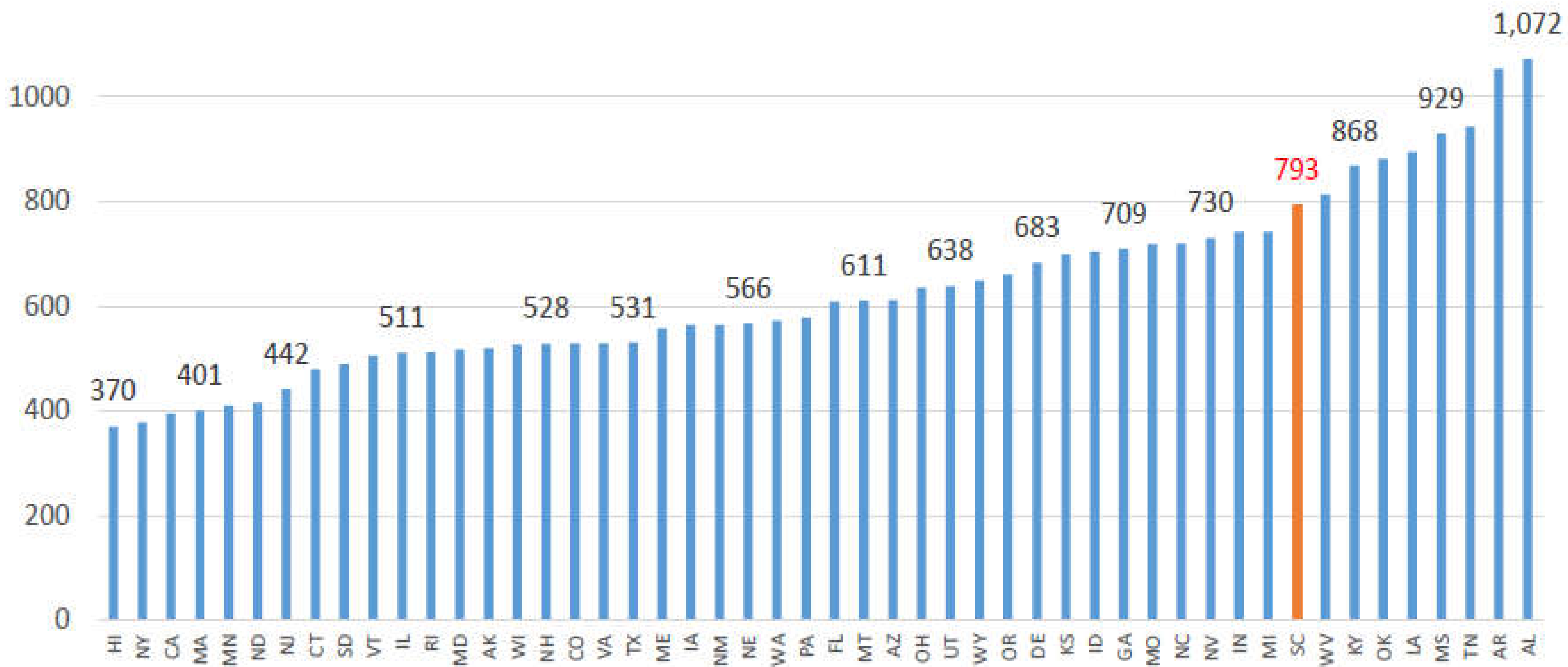
Disclosure

- Advisory board-Heron Therapeutics

Objectives

- Review the history of opioid use and the impact of the current opioid epidemic in the U.S.
- Review national and state legislation to mitigate the opioid epidemic
- Assess resources available to health care practitioners to provide guidance in managing acute and chronic pain
- Discuss strategies that health care practitioners can undertake to serve their patients and communities in combatting this epidemic
- Path of Opioid Abuse and Prevention Strategies

Why are we talking about this?



South Carolina Rank: 9th

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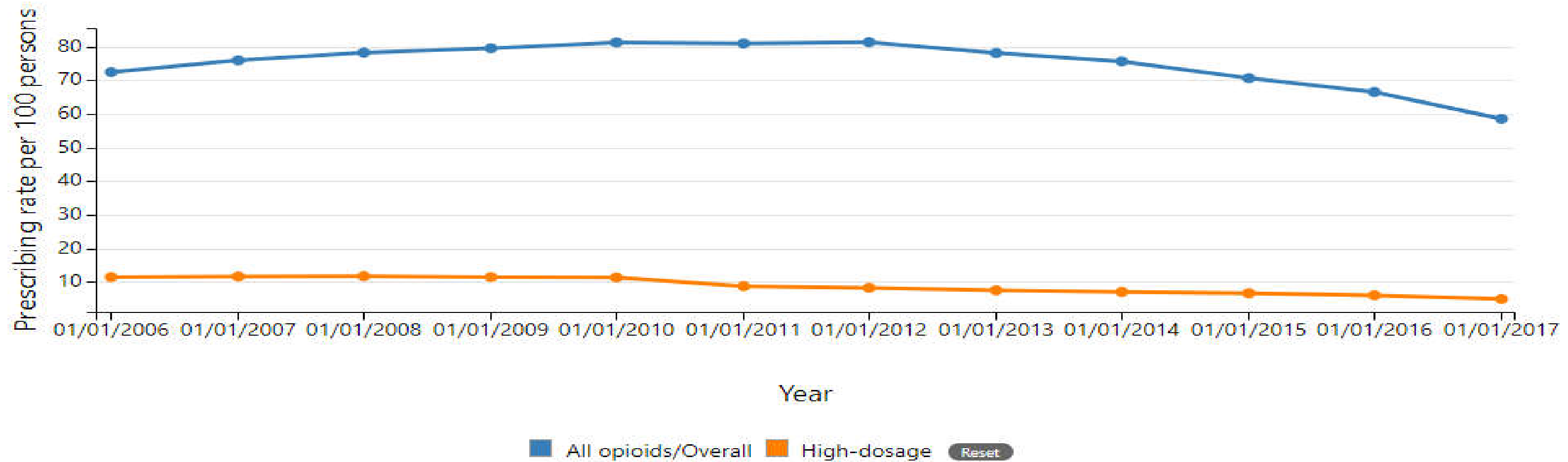
Decrease in prescribing

Trends in Annual Opioid Prescribing Rates by Overall and High-Dosage Prescriptions



Source: IQVIA® Transactional Data Warehouse

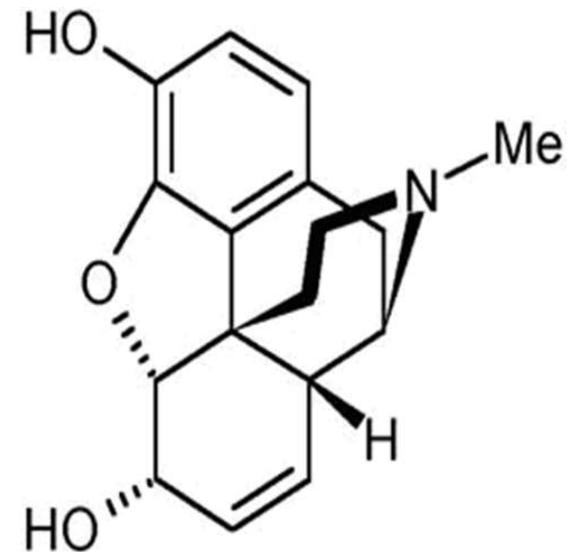
Data Table

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
All opioids/Overall	72.4	75.9	78.2	79.5	81.2	80.9	81.3	78.1	75.6	70.6	66.5	58.5
High-dosage	11.5	11.7	11.8	11.5	11.4	8.8	8.3	7.6	7.1	6.7	6.1	5

https://www.cdc.gov/drugoverdose/data/prescribing/prescribing-practices.html

History of Opioids

- Opium was first reported in 3400 B.C. in Mesopotamia (Southwest Asia)

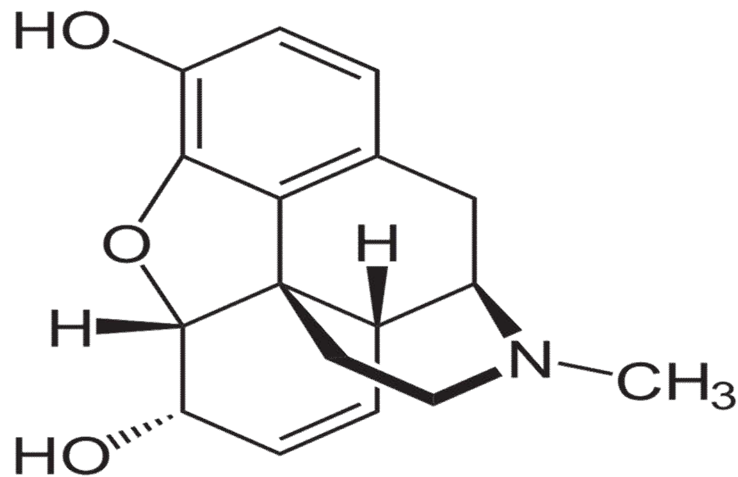


History of Opioids

- Opium used in numerous cultures for religious purposes or "alleviate" pain and suffering
  - Sumerians referred to it as "Joy Plant"
- Cultivation spread through Asian Silk Roads
  - "Sharing the wealth" - Addiction spread in China
- Opium Wars: 1800's between China & Britain
- Chinese immigrants brought opium to the US with the expansion of the railroad industry
  - "Opium Dens" began to form in industrial era
- "Benefits" were seen leading to….

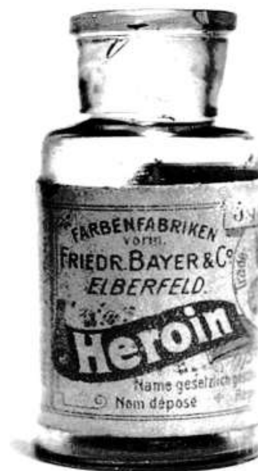
History of Opioids

- Morphine
  - Isolated by a German chemist in 1803-1804
  - Roughly 10X more potent than processed opium
  - “Miracle Drug” used only for severe war injuries and the mentally ill

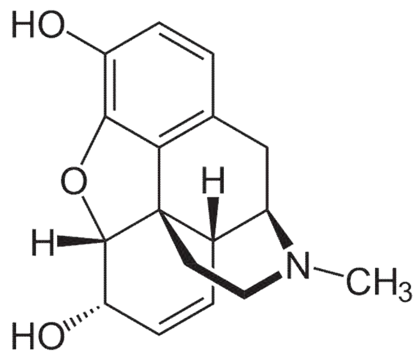


History of Opioids

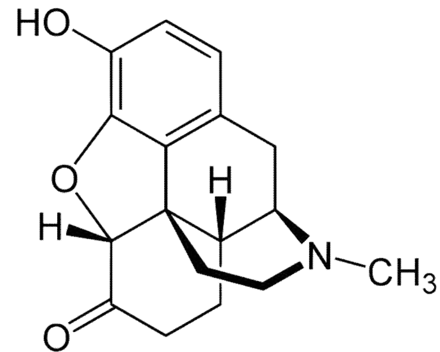
- Morphine molecule’s addictive and dependency quickly escalated
  - Then family tragedy hit …
- Heroin synthesized from morphine in 1874
  - Made commercially available by Bayer in 1898



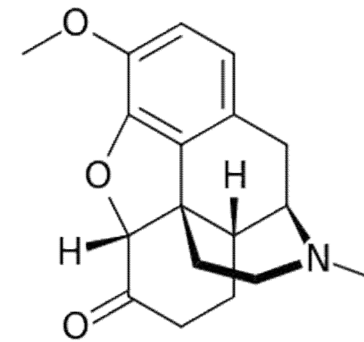
Opioids



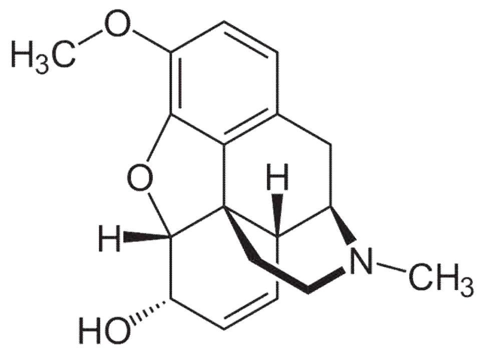
morphine



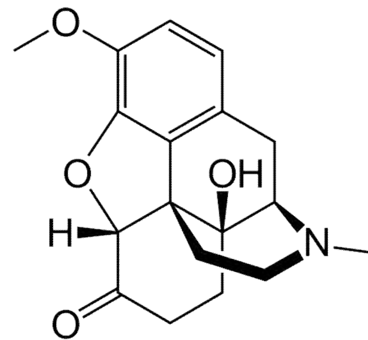
hydrocodone



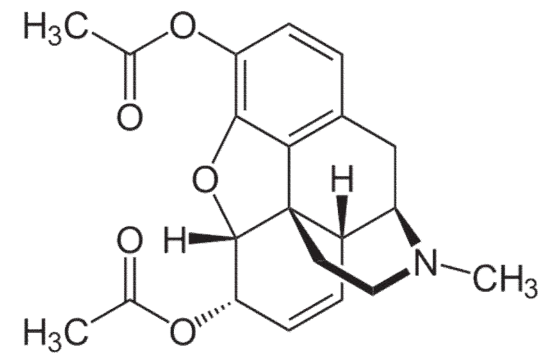
hydromorphone



codeine



oxycodone



heroin

How Did We Get Here?

- Opioids used sparingly in extreme injury or trauma
- 1980: Jick and Porter letter to the editor

Pain. 1986 May;25(2):171-86
American Journal of Public Health. 2009;99(2):221-227. doi:10.2105/AJPH.2007.131714
www.cdc.gov/drugoverdose/epidemic/index.html

Letter to the Editor

ADDICTION RARE IN PATIENTS TREATED WITH NARCOTICS

To the Editor: Recently, we examined our current files to determine the incidence of narcotic addiction in 39,946 hospitalized medical patients[1] who were monitored consecutively. Although there were 11,882 patients who received at least one narcotic preparation, there were only four cases of reasonably well documented addiction in patients who had no history of addiction. The addiction was considered major in only one instance. The drugs implicated were meperidine in two patients,[2] Percodan in one, and hydromorphone in one. We conclude that despite widespread use of narcotic drugs in hospitals, the development of addiction is rare in medical patients with no history of addiction.

JANE PORTER
HERSHEL JICK, M.D.
Boston Collaborative Drug Surveillance Program
Boston University Medical Center
Waltham, MA 02154

How Did We Get Here?

- Opioids used sparingly in extreme injury or trauma
- 1980: Jick and Porter letter to the editor
- 1986: Portenoy and Foley publish a "ground breaking" paper (misconceptions of opioids)
  - <1% adverse effects using opioids for chronic pain
- Healthcare and welfare reform in 90s
  - ↑ Restrictions on disability claims for chronic pain
- Late 1990's to 2000's: Pharma markets long acting opioids to control pain and cited a low risk of abuse and addiction

Pain. 1986 May;25(2):171-86
American Journal of Public Health. 2009;99(2):221-227. doi:10.2105/AJPH.2007.131714
www.cdc.gov/drugoverdose/epidemic/index.html

Post-Operative Opioid Dependency

- Lee et al showed > 10% risk of chronic opioid usage after "cancer" surgery
- Brummett et al showed between 5-6% risk of persistent usage of opioids post operatively
- Hill et al showed roughly 15-25% of post op prescriptions were consumed
- 50% of opioids used for nonmedical purposes are obtained from friends or relatives

J Clin Oncol. 2017 Dec 20;35(36):4042-4049
AMA Surg. 2017 Jun 21;152(6)
Ann Surg. 2017 Apr;265(4):709-714

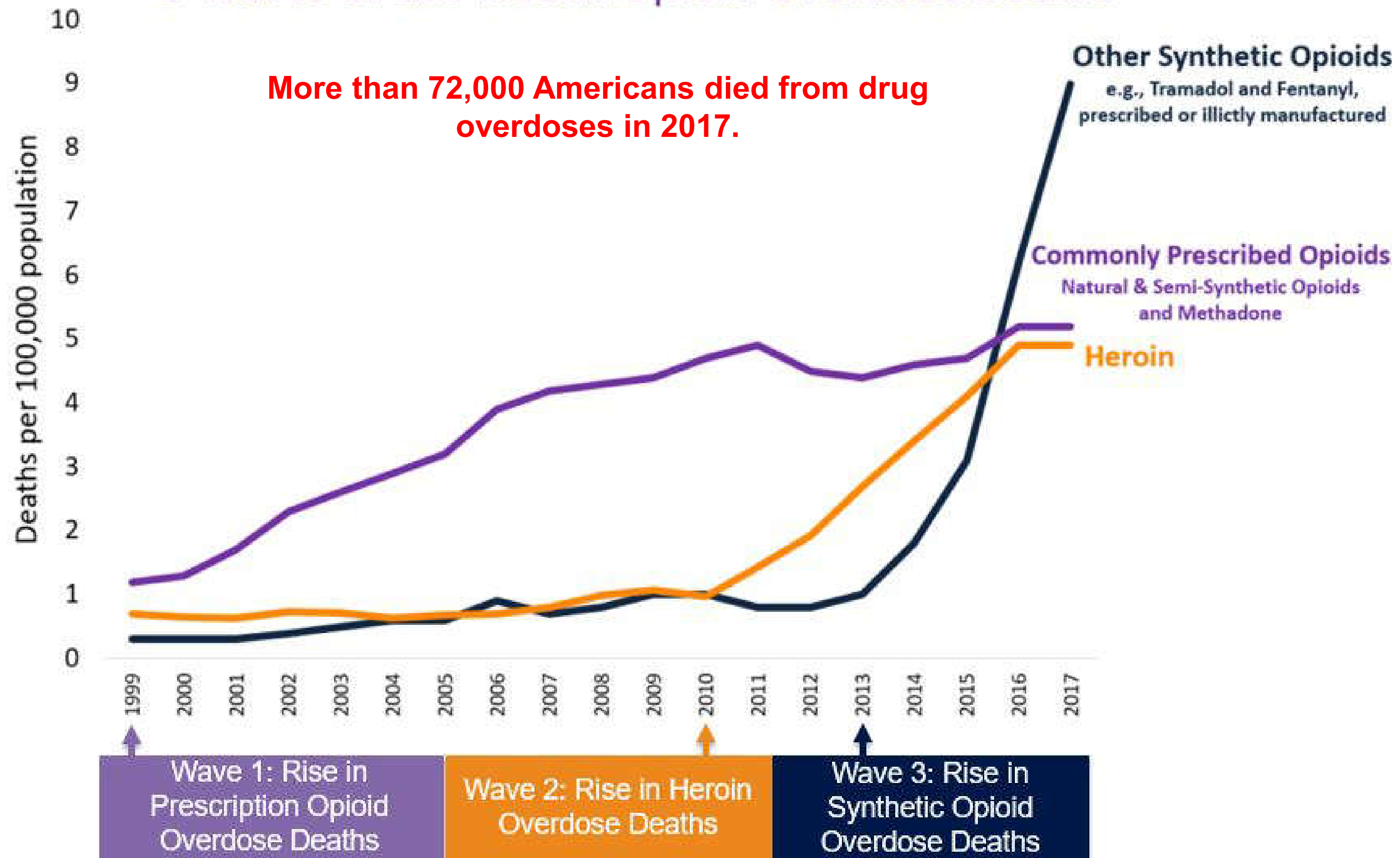
Prescription Opioid Use

- **Opioid-related overdose <u>deaths</u> and <u>hospitalizations</u> have increased in <u>parallel</u> to increases in opioids <u>prescribed</u> in the US**
  - 20% of chronic opioid users started for acute pain
  - Among opioid users who take opioids as prescribed for a year, about 5% develop an addiction disorder

4 of 5 new heroin users describe starting with prescription opioids

HHS Opioid Initiative. CDC, 2016.
CDC MMWR 2017;66:697–704.
Opioids and Chronic Pain. NIH Medline Plus, 2011: 6(1) 9.

3 Waves of the Rise in Opioid Overdose Deaths



SOURCE: National Vital Statistics System Mortality File.

HEALTH

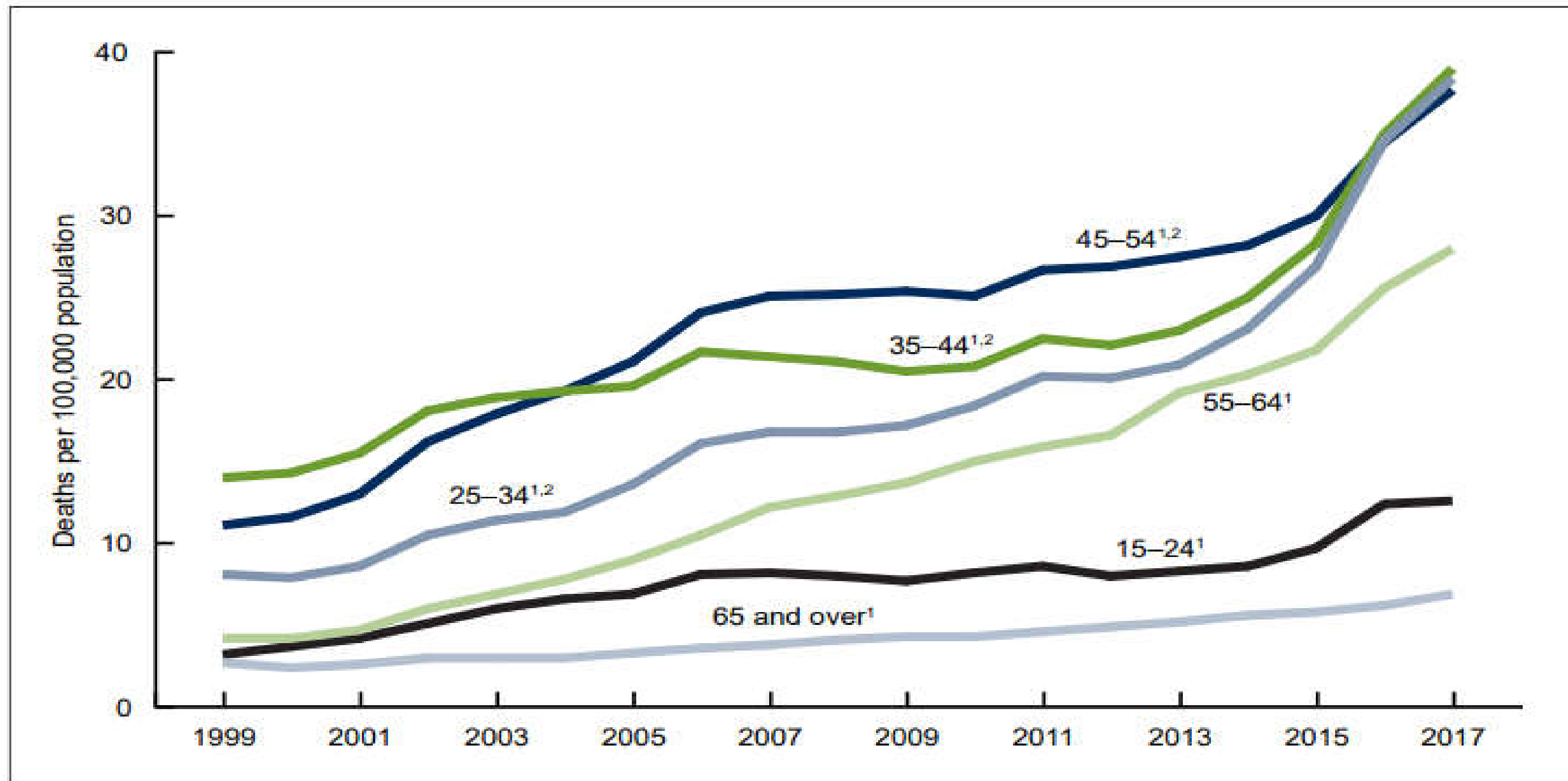
Opioid Epidemic !!!

CENTRAL NEW YORK STATE OF ADDICTION
OBSERVER-DISPATCH
uticaOD.com
EYEWITNESS NEWS
WUTR abc

STATE OF ADDICTION

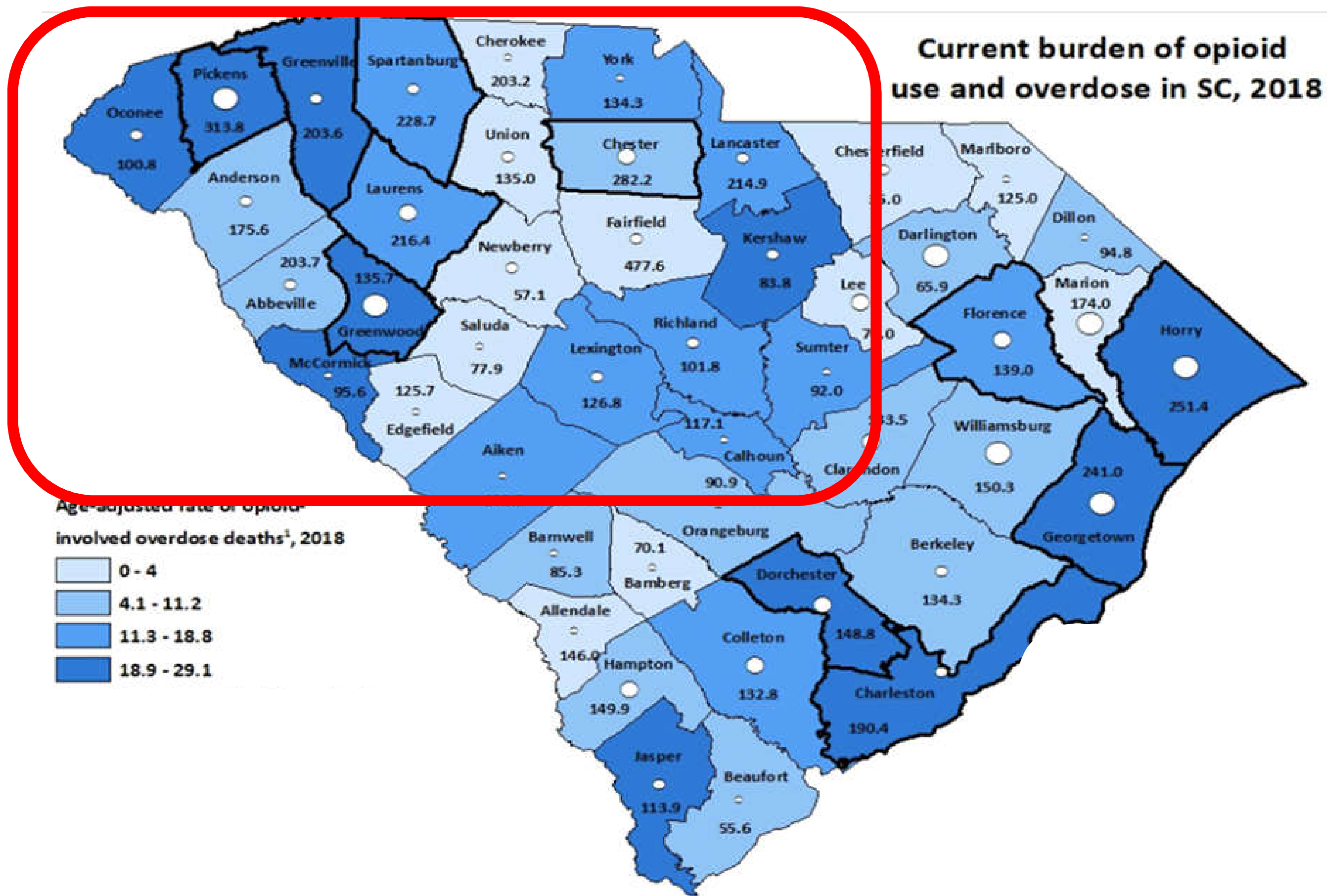
CHRONICLE
STATE OF ADDICTION
WEDNESDAY, MARCH 22 AT 8PM

Overdoses rise



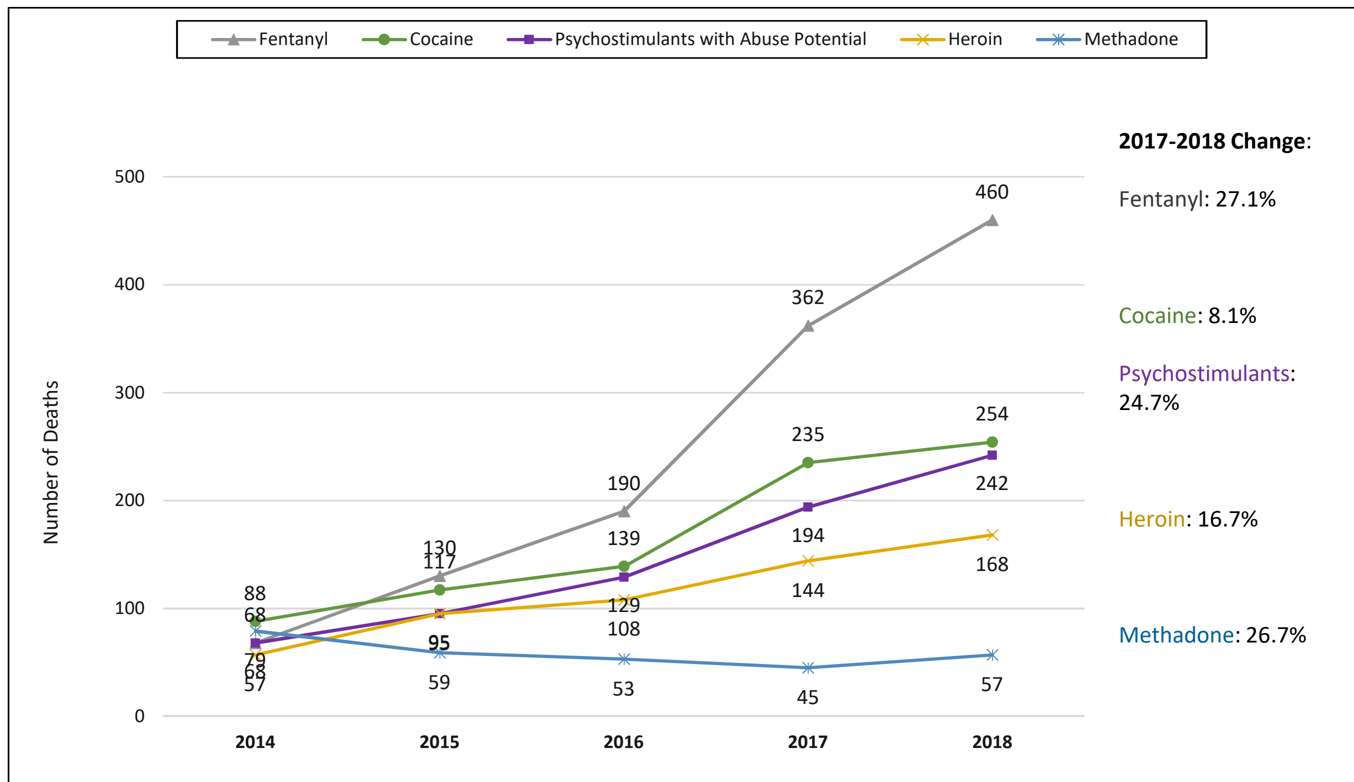
https://www.cdc.gov/nchs/data/databriefs/db329-h.pdf

Case for Change: Prisma Health



https://www.scdhec.gov/Health/Opioids/

Drug Overdose Deaths by Selected Drug Category, 2014-2018



Local Facts: Greenville County

- Number of prescriptions including opioids and benzodiazepines?

  637,788

- Number of recipients of prescriptions including opioids and benzodiazepines?

  170,616

- Number of pills dispensed in Greenville county?

  41,120,306

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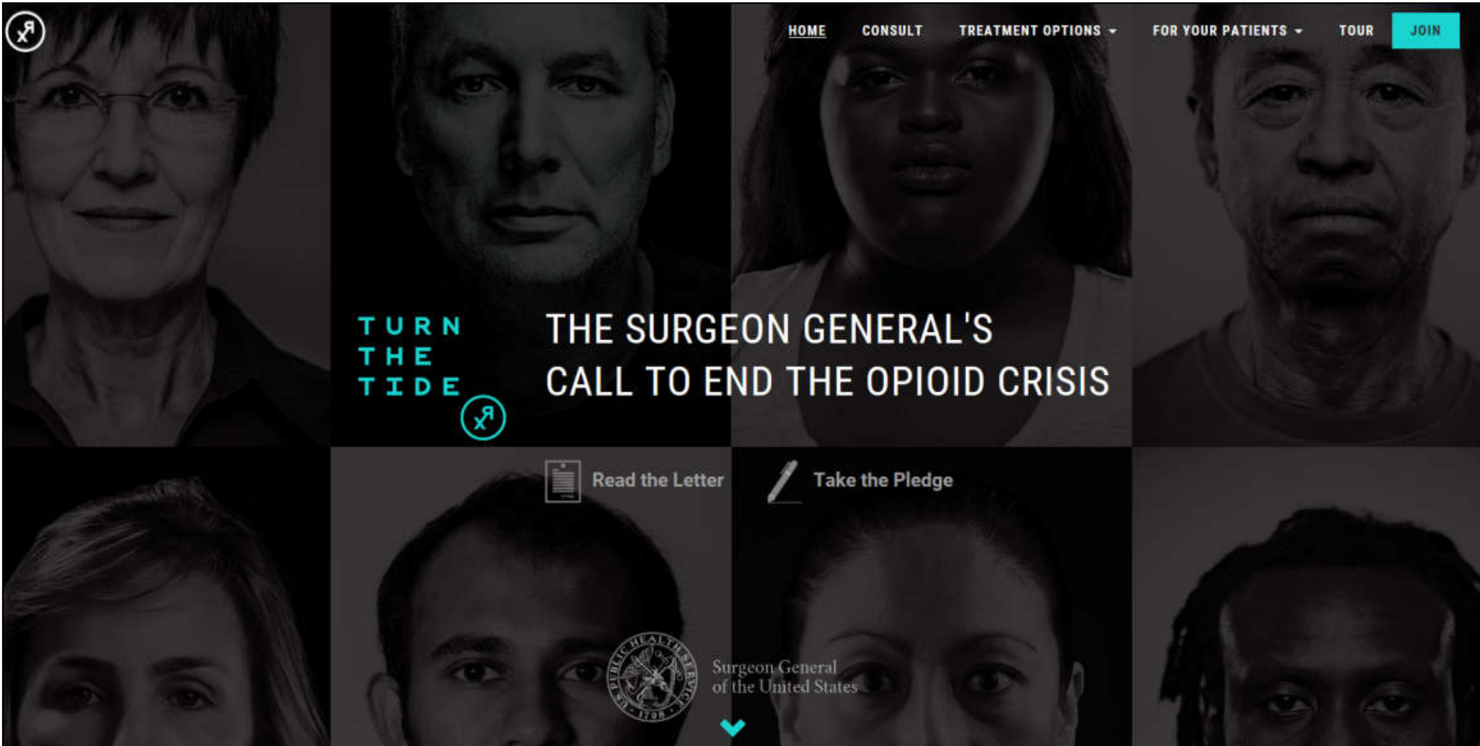
Federal and State Legislation

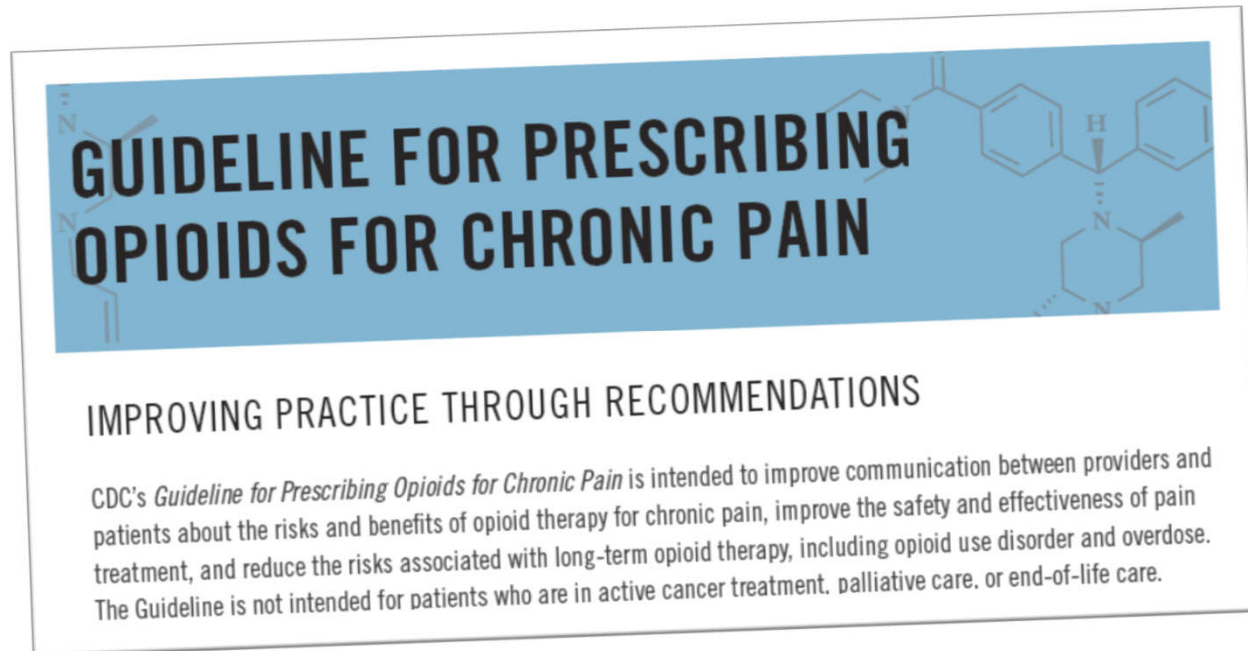
Surgeon General

"**Turn the Tide**" Campaign to reverse the Opioid Epidemic



Federal Oversight

- 2014: C-II designation for hydrocodone
- 2016: CDC Guidelines on Chronic Pain



GUIDELINE FOR PRESCRIBING OPIOIDS FOR CHRONIC PAIN

IMPROVING PRACTICE THROUGH RECOMMENDATIONS

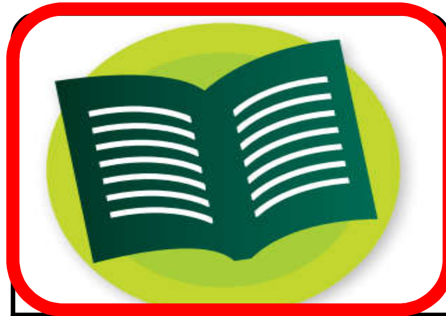
CDC's *Guideline for Prescribing Opioids for Chronic Pain* is intended to improve communication between providers and patients about the risks and benefits of opioid therapy for chronic pain, improve the safety and effectiveness of pain treatment, and reduce the risks associated with long-term opioid therapy, including opioid use disorder and overdose. The Guideline is not intended for patients who are in active cancer treatment, palliative care, or end-of-life care.

Comprehensive Addiction & Recovery Act (CARA) of 2016

Comprehensive Response to Addiction
Expand prevention and education efforts • Aimed at teens, parents, caretakers, elderly • To prevent abuse of substances and promote treatment and recovery
Expand availability of naloxone to law enforcement agencies and first responders
Expand resources to identify and treat incarcerated individuals suffering from addiction through collaboration with criminal justice stakeholders
Expand disposal sites for unwanted/unused prescription medications to keep them out of unintended hands
Launch evidence-based opioid and heroin treatment and intervention program
Strengthen prescription drug monitoring programs
Medicare Part D enrolled patients: “lock-in provisions” • Discourage at risk beneficiaries from obtaining excessive quantities of opioids by limiting patients to using designated pharmacies

Comprehensive Addiction and Recovery Act (CARA). CADCA, 2016.
Traynor K. New federal law aims to stem opioid abuse. Pharmacy News. 15 Aug 2016. AJHP News.

National Safety Council



Mandatory Prescriber Education

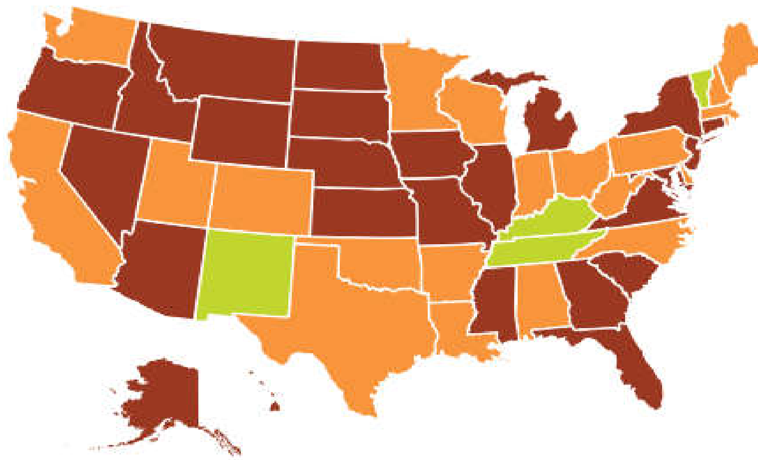
Opioid Prescribing Guidelines

Eliminating Pill Mills

Prescription Drug Monitoring Programs

Increased Access to Naloxone

Availability of Opioid Use Disorder Treatment



47 STATES NEED TO IMPROVE!

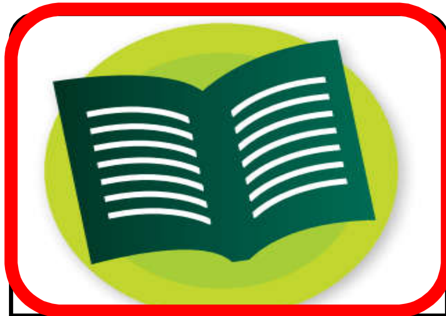
26 STATES are "FAILING"

4 STATES are "MAKING PROGRESS"

FAILING			LAGGING BEHIND		MAKING PROGRESS	
MEET ZERO INDICATORS	MEETS 1 INDICATOR	MEETS 2 INDICATORS	MEETS 3 INDICATORS	MEETS 4 INDICATORS	MEETS 5 INDICATORS	MEETS 6 INDICATORS
THREE HAVE MET ZERO INDICATORS.	Alaska	Arizona	Arkansas	Alabama	Kentucky	ZERO HAVE MET ALL 6 INDICATORS.
Michigan	District of Columbia	Connecticut	Colorado	California	New Mexico	NO STATES
Missouri	Hawaii	Florida	Delaware	Indiana	Tennessee	
Nebraska	Idaho	Georgia	Louisiana	New Hampshire	Vermont	
3 STATES	Kansas	Illinois	Maine	North Carolina		
	Montana	Iowa	Massachusetts	Ohio		
	Wyoming	Maryland	Minnesota	Rhode Island		
		Mississippi	Oklahoma	West Virginia		
		Nevada	Pennsylvania	Wisconsin		
		New Jersey	Texas			
		New York	Utah			
		North Dakota	Washington			
		Oregon				
		South Carolina				
		Virginia	South Carolina			

NSC. 2016 RxReport.

National Safety Council



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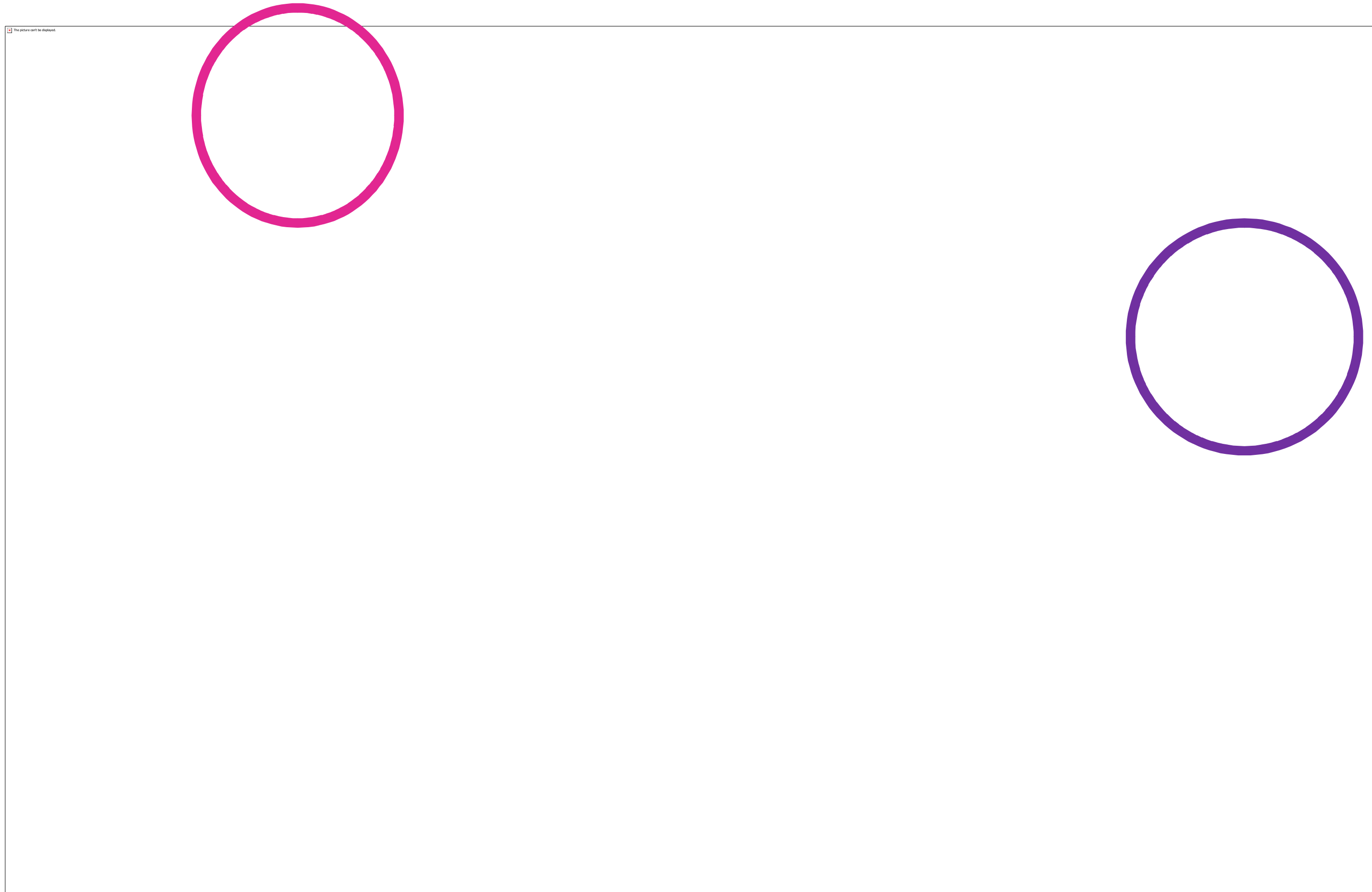
Naloxone (Narcan)

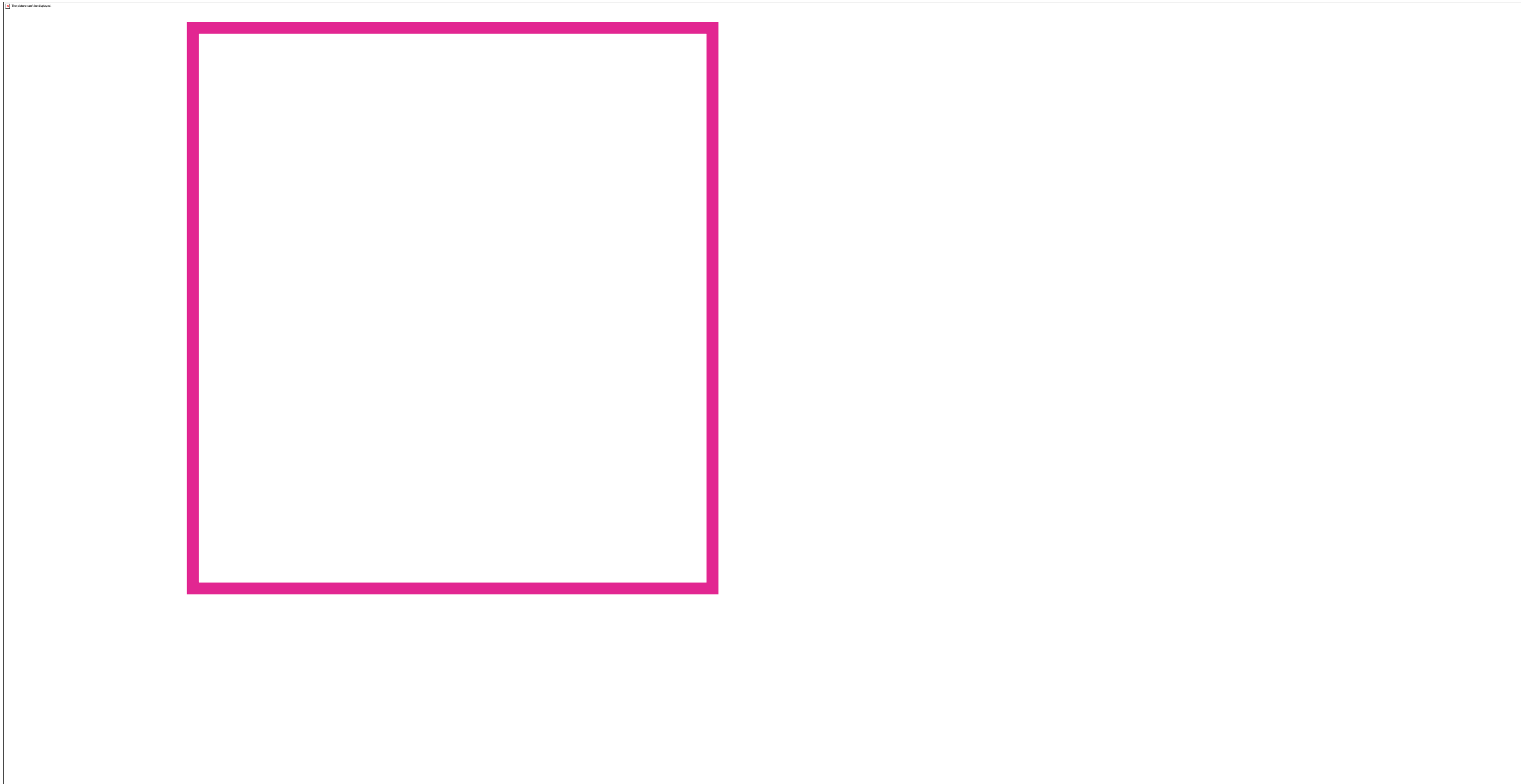
- Naloxone
  - Pure opioid antagonist
  - Precipitates immediate withdrawal reaction in people who are physically dependent on opioids
    - Dosing: 0.2mg IV every 2-3 minutes to response
- Law Enforcement Officer Naloxone (LEON) program
  - Equipped officers with nasal naloxone for on site administration for drug overdoses
    - Dosing: 4mg / spray in one nostril – may repeat in 5 minutes

First responders administered approximately
6940 doses in 2017 (↑)

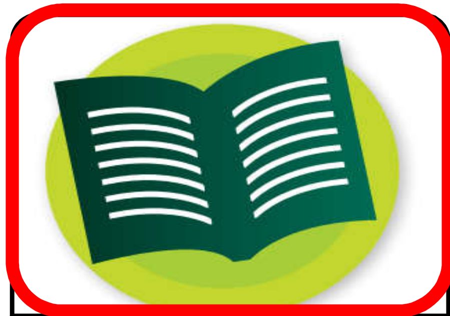
2017: Naloxone Administration



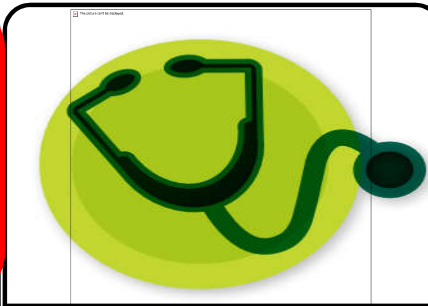
Top Ten Counties of Opioid Reversals



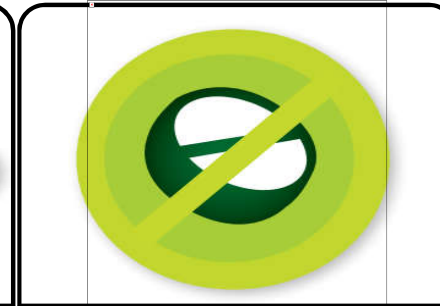
National Safety Council



Mandatory Prescriber Education



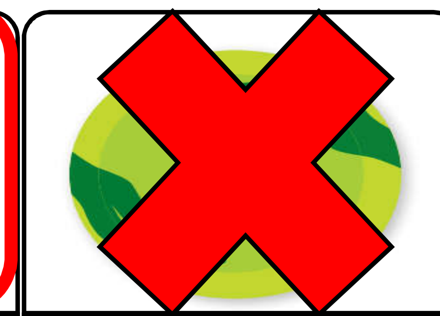
Opioid Prescribing Guidelines



Eliminating Pill Mills

Prescription Drug Monitoring Programs

Increased Access to Naloxone



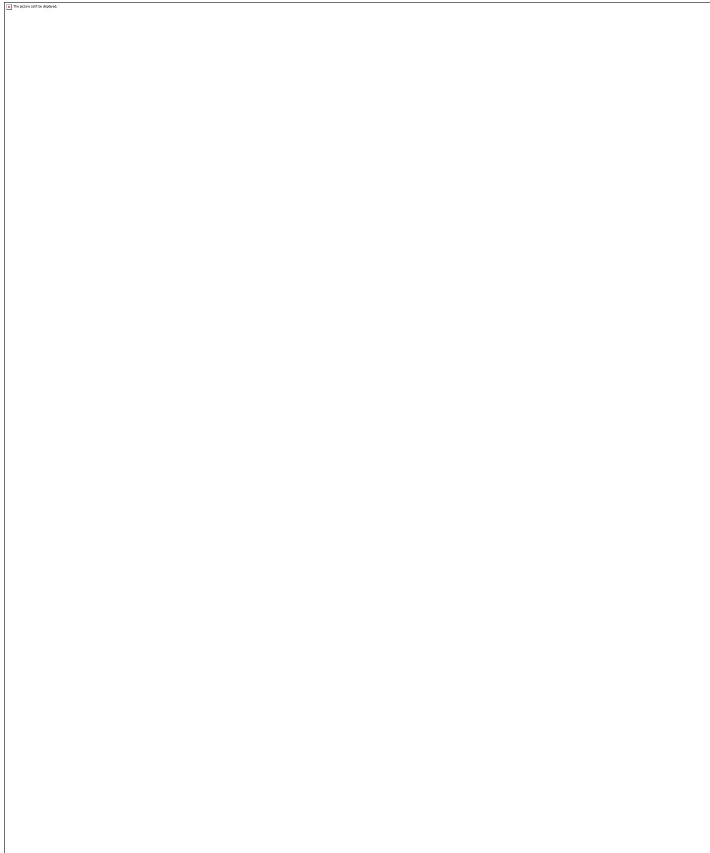
Availability of Opioid Use Disorder Treatment

Thoughts on this Picture?

Should the hand that writes the opioid, write the naloxone?

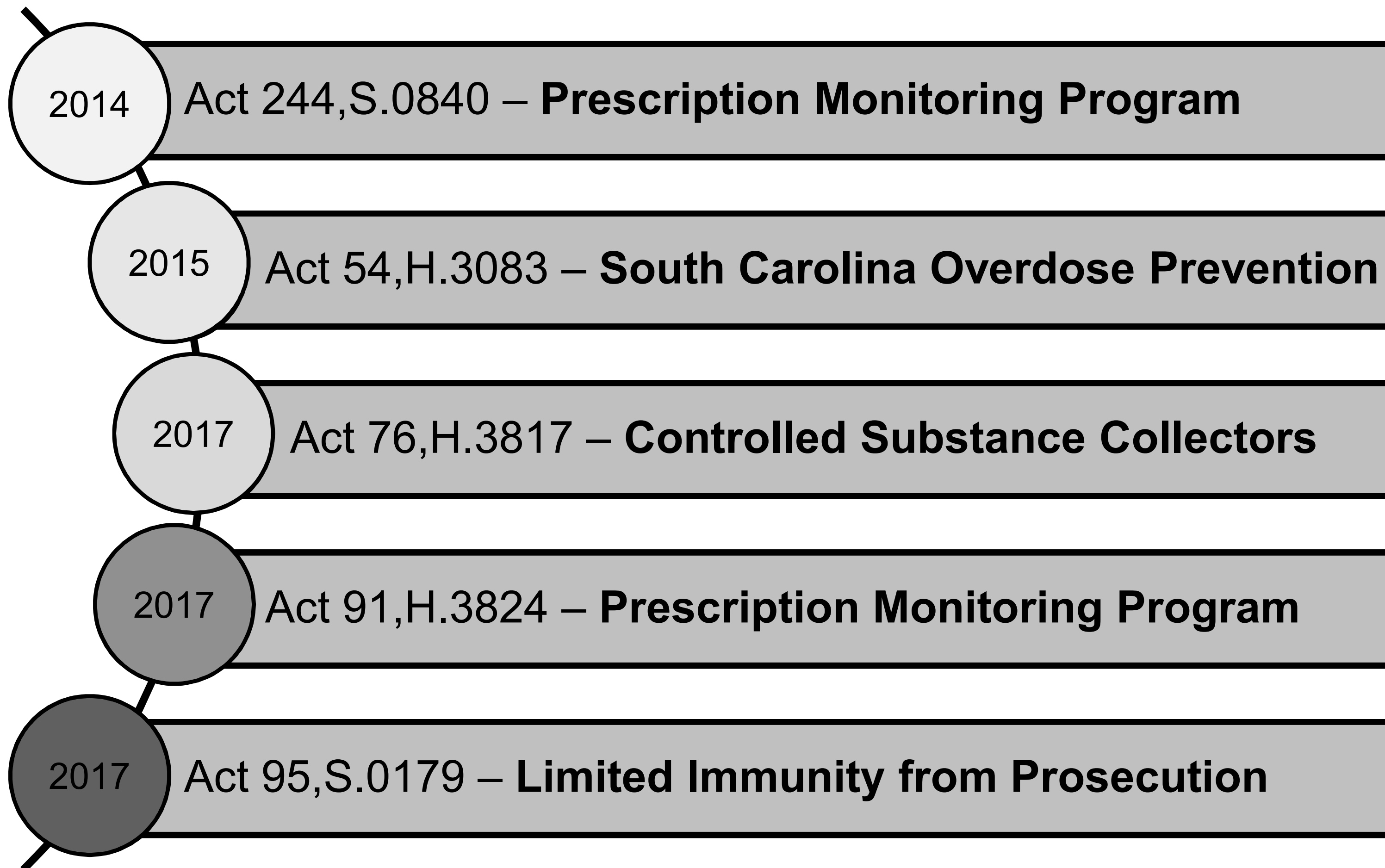
Should Dr. Smith reconsider the amount of opioid prescribed?

Dangerous Trends



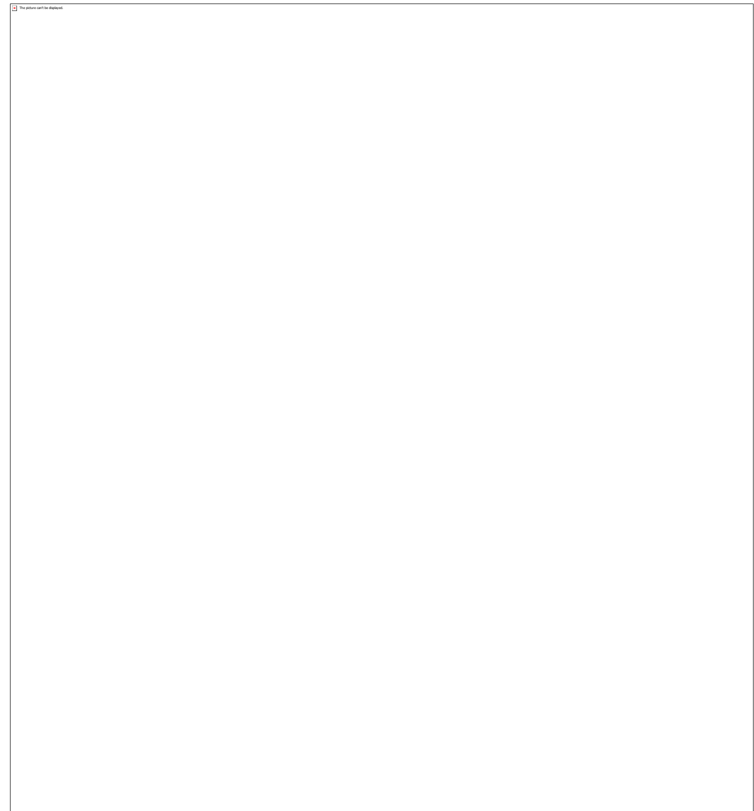
State Legislation

Recent State Laws



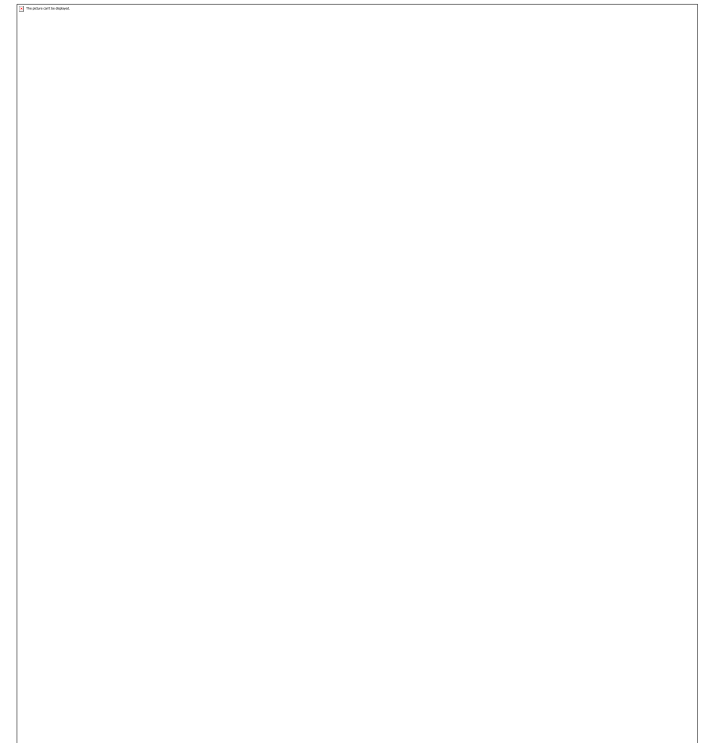
SC Governor

- December 2017:
  - "Declares a public health emergency"
- June 2018:
  - Signs 9 bills to "combat" the opioid crisis



June 2018 Bills

- H 3819: Prescription to minors
- H 3822: Controlled substance scheduling
- H 3826: Prescription-counterfeit proof
- H 4117: Confidentiality exception – drug court
- H 4487: Controlled substance rescheduling
- H 4488: Confidentiality exception – coroner
- H 4600: Opioid Antidote, prescription to community organization
- H 4601: Addiction Counselors
- S 918: Opioid prescription limits, prescriber report cards



2019 SC Opioid Bills

- First responders and hospitals will be required to report naloxone administration
  - Hospital data specific to the Emergency Department
  - Information to be integrated into the PDMP

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Key Treatment Strategies

Who’s Responsible?

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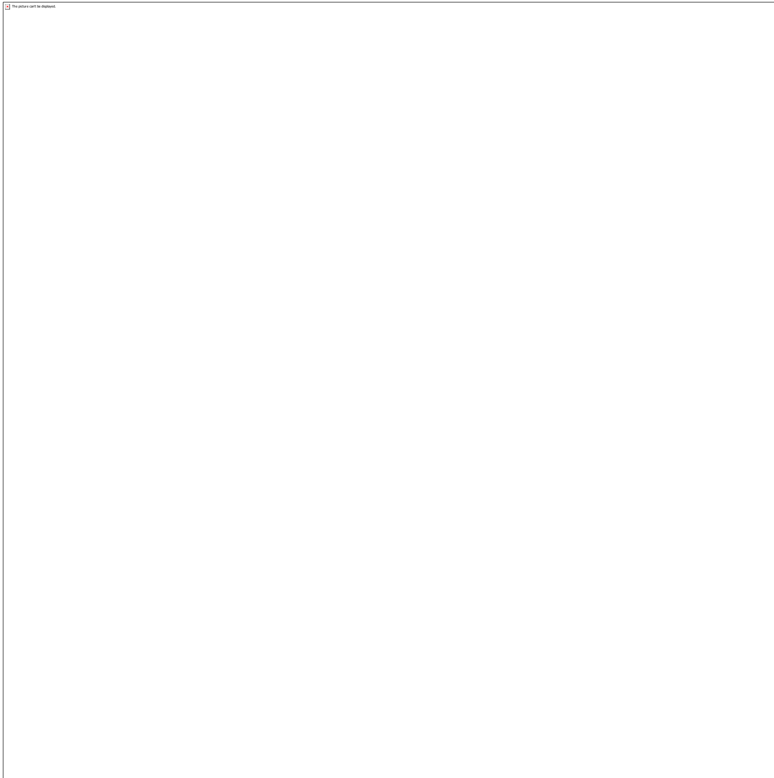
What Can We Do?



- **<u>HUGE</u>** cultural change
  - Physicians
  - Dental professionals
  - Pharmacists
  - Nursing
- **<u>OWN</u> this challenge**
- Minimize childhood exposure to opioids
- Patient and family-centric education
- Community Outreach

Key Strategies

- Education
- Prescription Drug Monitoring
- Appropriate prescribing for acute pain
- Careful management of chronic pain
- Patient and practitioner advocacy

Patient Education

- Get an accurate medication history
- Set realistic pain expectations for patient
- Focus on ADLs with acceptable pain levels
- Educating patients and families
  - Why certain medications may be more beneficial for the type of pain experienced (NSAIDs)
  - Utilize non-pharmacological therapies first-line
  - Explain risks and safe use of opioids

Prescription Drug Monitoring Program

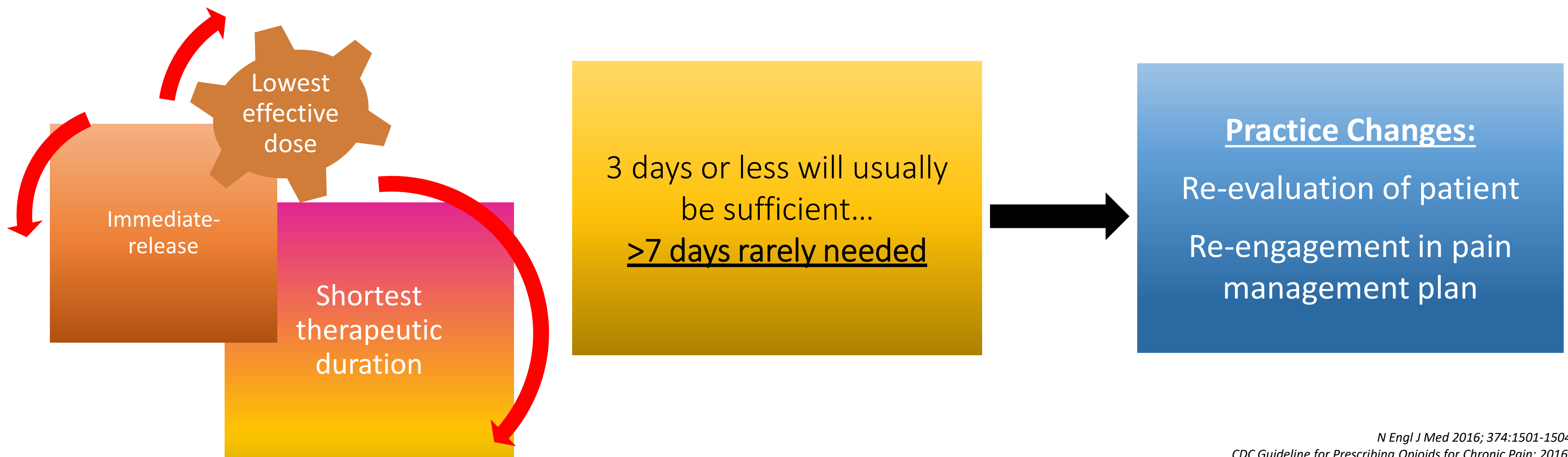
- Prescription data available to prescribers and pharmacists
- Early studies showed lower Schedule II prescribing rates in PDMP states
- Recent studies found no significant difference in opioid prescribing and no reduction of overdose mortality in PDMP states
- **Key question: How do practitioners use PDMP and integrate the information into their prescribing ?**

JAMA. 2015;313:891-892.

PDMP Successes

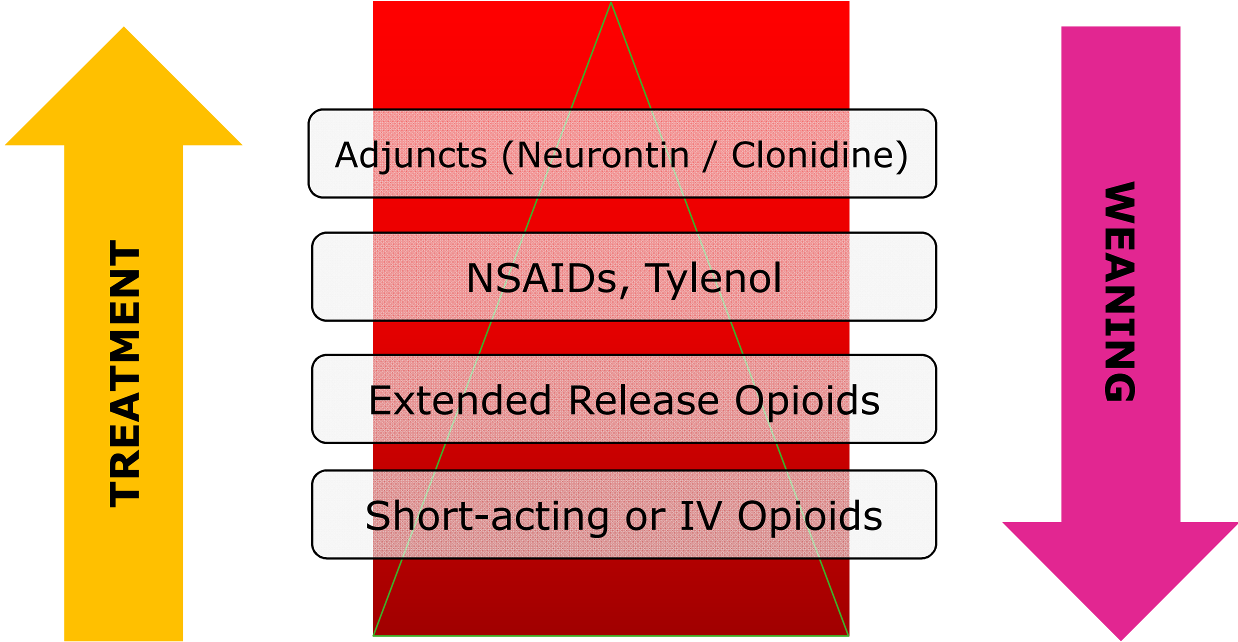
Treatment of Acute Pain

- Chronic opioid use often starts with treatment of acute pain
- **1 of 8** opioid naïve patients who receive narcotics after a procedure becomes persistent users
- Patients traditionally use less than **15% of total opioid RX**

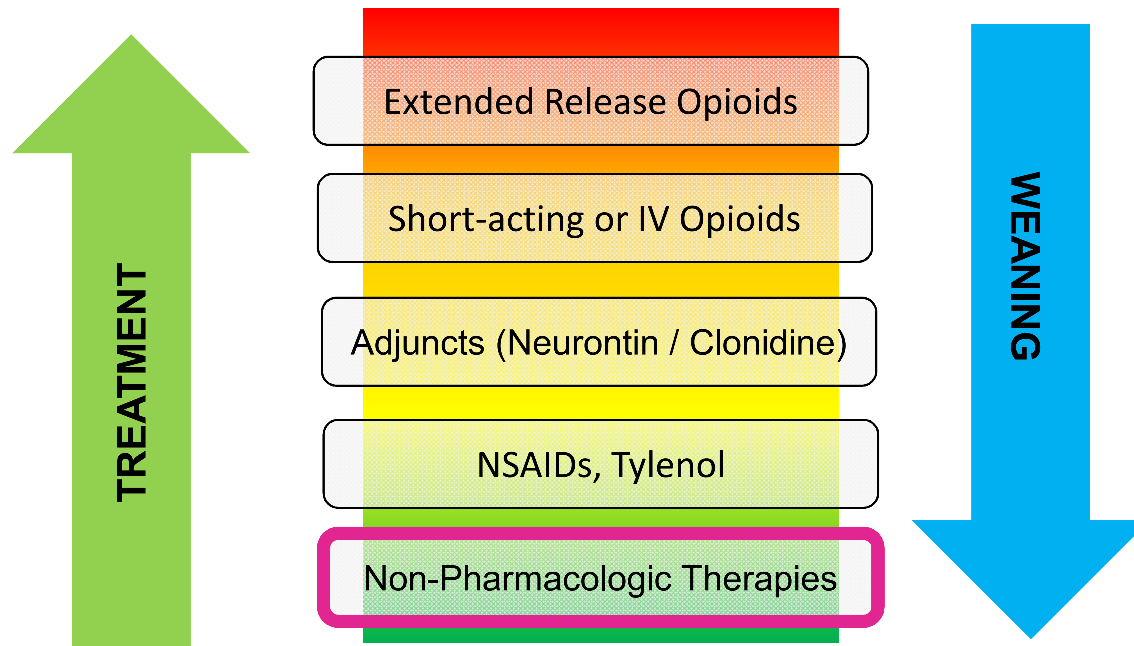


N Engl J Med 2016; 374:1501-1504
CDC Guideline for Prescribing Opioids for Chronic Pain; 2016.
http://turnthetiderx.org/treatment/

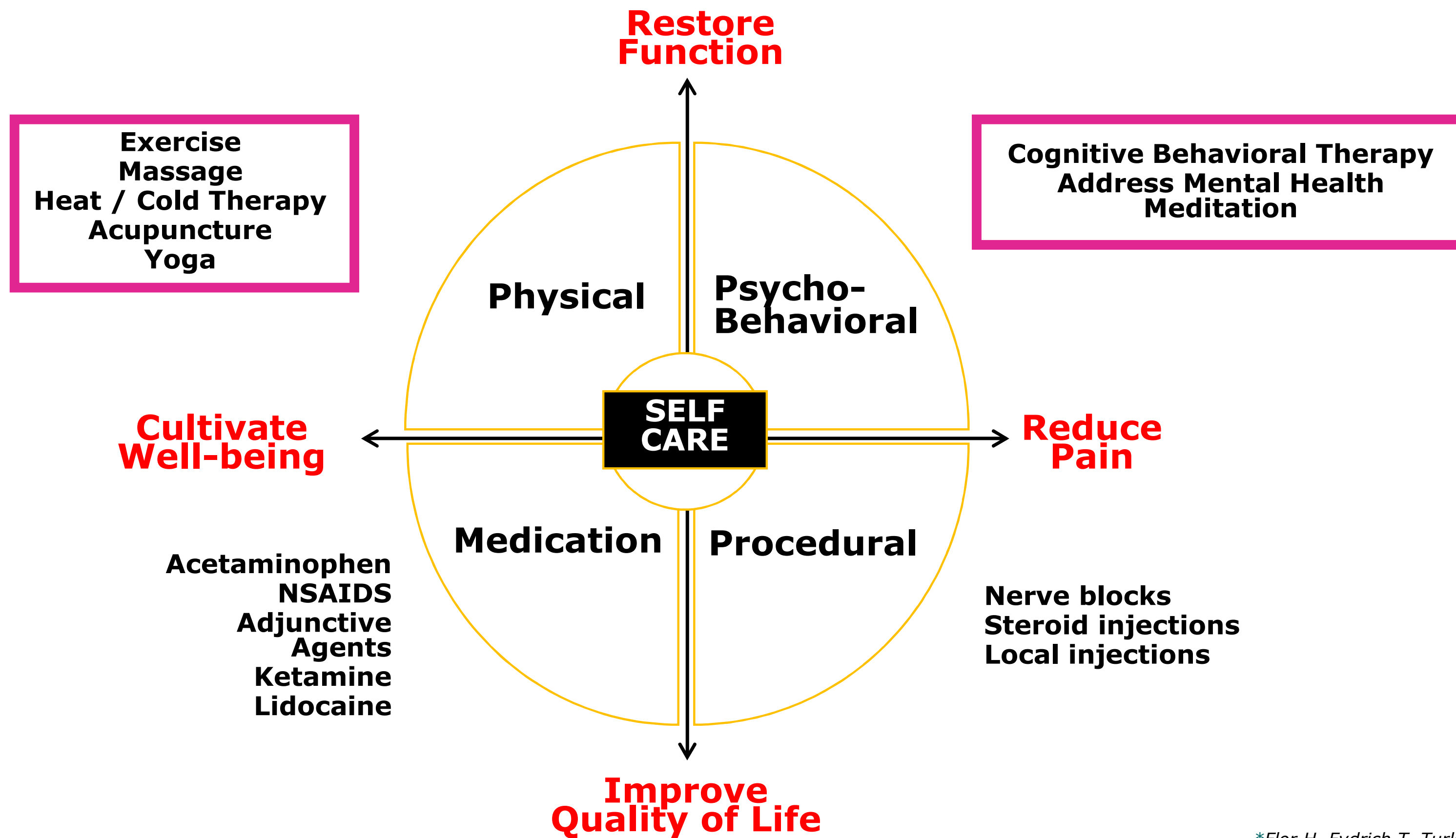
Culture Change – Old Practice



Culture Change – Future Practice



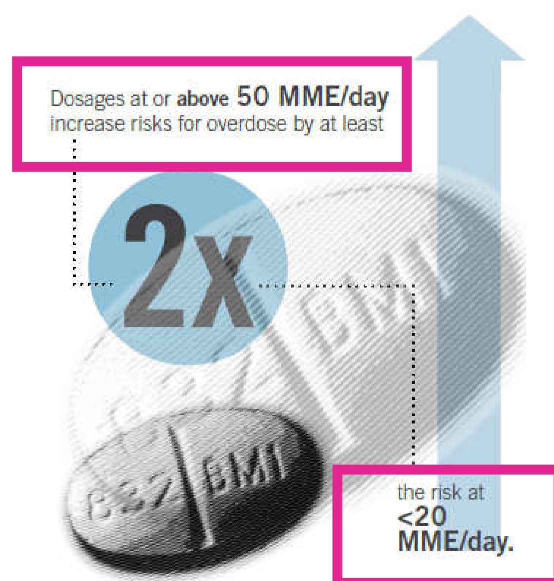
Multi-Dimensional Care



*Flor H, Fydrich T, Turk DC. Pain. 1992;49:221-230.
*Gatchel RJ, Okifuji A.J Pain. 2006;7:779-793.
Kamper SJ et al. Cochrane Database Syst Rev. 2014:CD000963.

2016: The CDC Weighs In

- SPEAK ONE COMMON LANGUAGE for opioids
  - **Morphine Milligram Equivalents (MME)**
    - Close monitoring
    - Reduction or tapering of daily dose



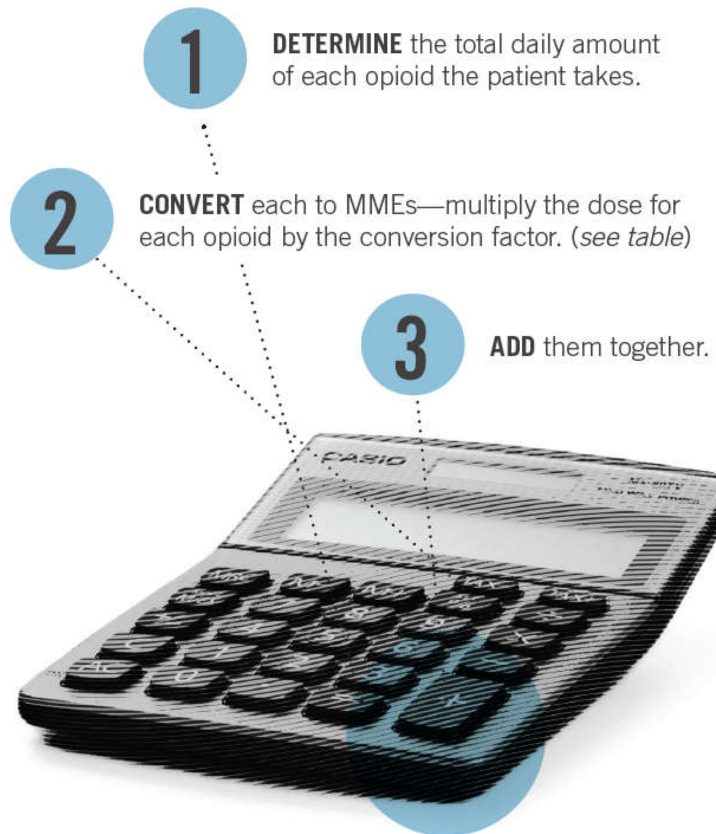
90 MME – Risk of overdose death increases **10X**

JAMA 2016;315(15):1624-45.
Dowell. MMWR Vol 65;No 1, 3/2016.

Putting it into Perspective

50 MME / Day	90 MME / Day
50 mg of hydrocodone 10 tablets of Norco 5/325	**90 mg of hydrocodone** 9 tablets of Norco 10/325
30 mg of oxycodone 6 tablets of oxycodone 5 mg	**60 mg of oxycodone** 12 tablets of oxycodone 5 mg
12 mg of hydromorphone 3 tablets of hydromorphone 4 mg	**24 mg of hydromorphone** 6 tablets of hydromorphone 4 mg

Calculating MMEs



Calculating morphine milligram equivalents (MME)

OPIOID (doses in mg/day except where noted)	**CONVERSION FACTOR**
Codeine	0.15
Fentanyl transdermal (in mcg/hr)	2.4
Hydrocodone	1
Hydromorphone	4
Methadone	
1-20 mg/day	4
21-40 mg/day	8
41-60 mg/day	10
≥ 61-80 mg/day	12
Morphine	1
Oxycodone	1.5
Oxymorphone	3

These dose conversions are estimated and cannot account for all individual differences in genetics and pharmacokinetics.

https://www.cdc.gov/drugoverdose/prescribing/guideline.html

Display of Total MME

Outpatient Morphine Equivalent Daily Dose (MEDD)

7/22/19 - 7/21/20 95 mg MEDD

Order Name	Dose	Route	Frequency	Maximum MEDD
hydrocodone-homatropine (HYCODAN) 5-1.5 mg/5 mL (5 mL)	5 mL	Oral	Every 6 hours PRN	20 mg MEDD
HYDROcodone-acetaminophen (NORCO) 5-325 mg per tablet	1 tablet	Oral	Every 4 hours PRN	30 mg MEDD
traMADol (ULTRAM) 50 mg tablet	50 mg	Oral	Every 8 hours PRN	15 mg MEDD
hydrocodone-homatropine (HYCODAN) 5-1.5 mg/5 mL (5 mL)	5 mL	Oral	Every 4 hours PRN	30 mg MEDD
Total Potential Daily Morphine Equivalence				**95 mg MEDD**

Calculation Information

7/22/20 and after 80 mg MEDD

Order Name	Dose	Route	Frequency	Maximum MEDD
hydrocodone-homatropine (HYCODAN) 5-1.5 mg/5 mL (5 mL)	5 mL	Oral	Every 6 hours PRN	20 mg MEDD
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hydrocodone-homatropine (HYCODAN) 5-1.5 mg/5 mL (5 mL)	5 mL	Oral	Every 4 hours PRN	30 mg MEDD
Total Potential Daily Morphine Equivalence				**80 mg MEDD**

Calculation Information

<20 MME/Day >50 MME/Day >90 MME/Day

EMR-Messaging and 24 hour stops

You selected:
HYDROmorphone (PF) (DILAUDID) injection: Intravenous, starting today at 0709, For 1 day

Details

Opioid Stewardship Recommendation

GHS is committed to instituting processes that ensure the safe and appropriate prescribing of IV opioid medications. Therefore, IV opioids will continue to be restricted for use in Severe Pain (7-10 / BPS 9-12) or Breakthrough Pain only.

Clinicians are encouraged to use an oral alternative offered below if possible.

morphine 5 mg IV = HYDROmorphone 0.5 mg IV

Other therapy options for pain not offered below include but are not limited to:
- Scheduled PO alternating acetaminophen and ibuprofen
- Post-op pain Adults ONLY: pregabalin (LYRICA) PO twice daily

Continue with:
○ HYDROmorphone (PF) (DILAUDID) injection: Intravenous, starting today at 0709, For 1 day

Impact on Prescribing

- State legislature limits “acute pain” prescriptions to less than 7 days
  - Exceptions for chronic or cancer pain
    - Associate diagnosis codes with prescriptions
- Opioid duration and MME / Day restrictions
  - Retail pharmacies
    - 2020 some will only accept eSCRIBE RXs for controls
  - Insurance companies
    - Consider limiting RXs to less than 20-30 MME / Day

PRISMA HEALTH℠

Path to Opioid Abuse and Prevention Strategies

Risk Factors

Risk Factors for Prescription Opioid Pain Reliever Abuse and Overdose

Obtaining overlapping prescriptions from multiple providers and pharmacies.

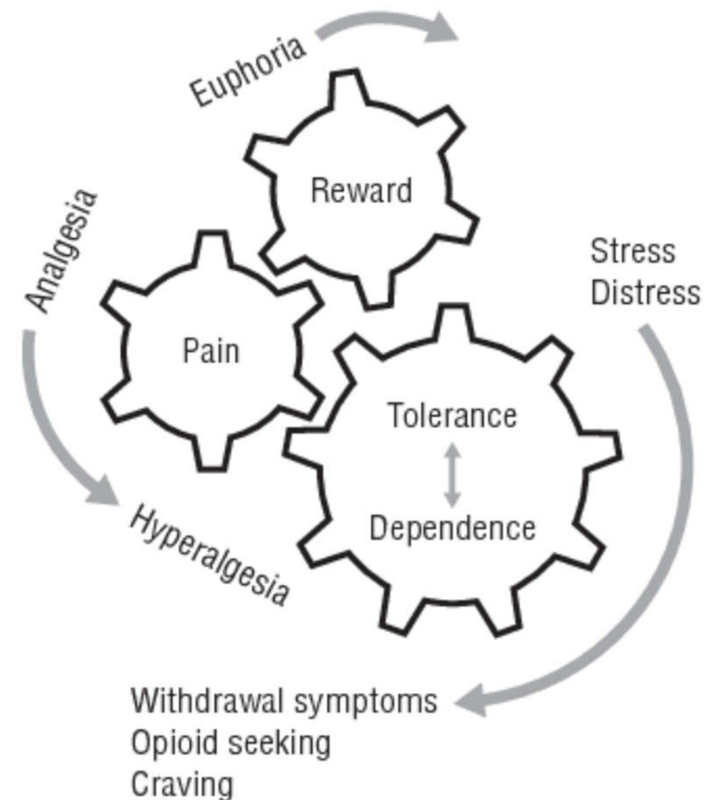
Taking high daily dosages of prescription opioid pain relievers.

Having mental illness or a history of alcohol or other substance abuse.

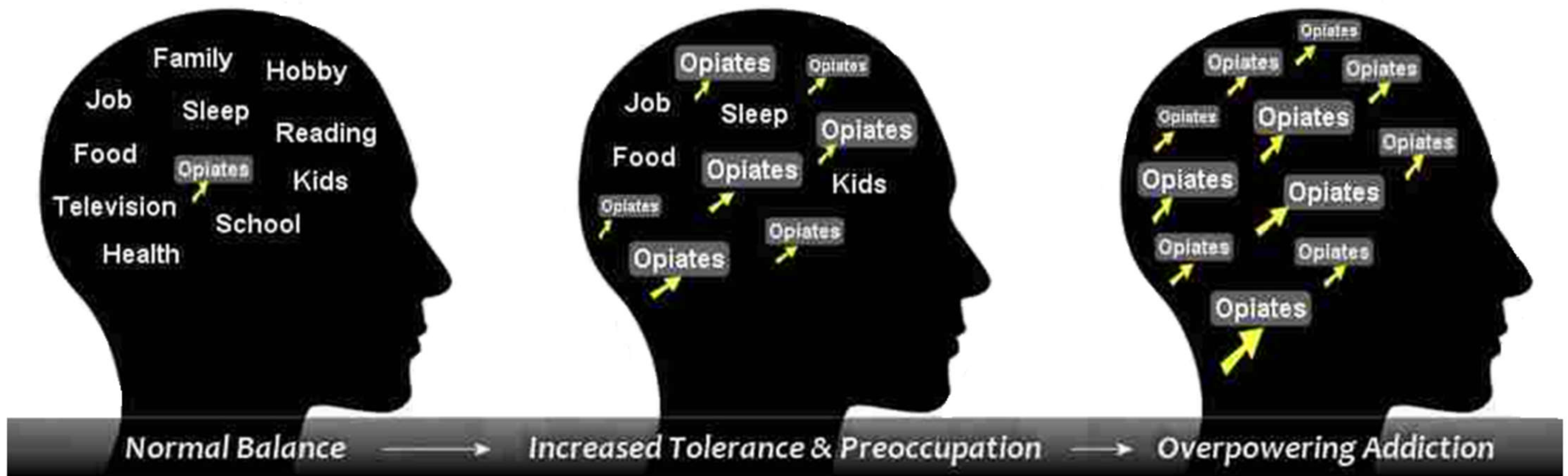
Living in rural areas and having low income.

Effects of Opiate Exposure

- Everyone
  - Short Term
    - Pain relief
  - Long Term (interpatient variability)
    - Tolerance
      - ↑ ↑ Amount of drug = Same effect
    - Dependence
      - Physiologic reliance on drug
      - Must experience withdrawal upon discontinuation of drug



Progression to Addiction



Opioid Pendulum

“Opiophobia”

“No pain left behind”

The Real Problem…

People understand me so poorly that they don't even understand my complaint about them not understanding me.

Soren Kierkegaard

FDA identifies harm reported from sudden discontinuation of opioid pain medicines and requires label changes to guide prescribers on gradual, individualized tapering

FDA Drug Safety Communication

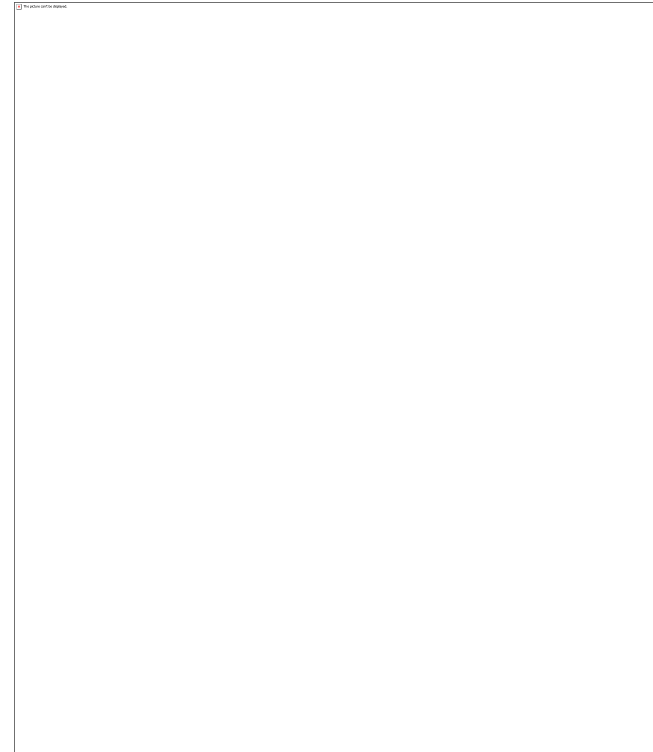
Opioid Misuse Risk Stratification

- **Universal precautions**
  - Identifying potential opioid misuse is difficult
  - Assume that all patients prescribed opioids have some degree of risk
  - Reduces stigma of addiction within the office
- **Individualize care** based on level of risk
  - Assess and discuss level of concern with patient
  - Need for pain and/or addiction consult
  - Some patients may be too risky

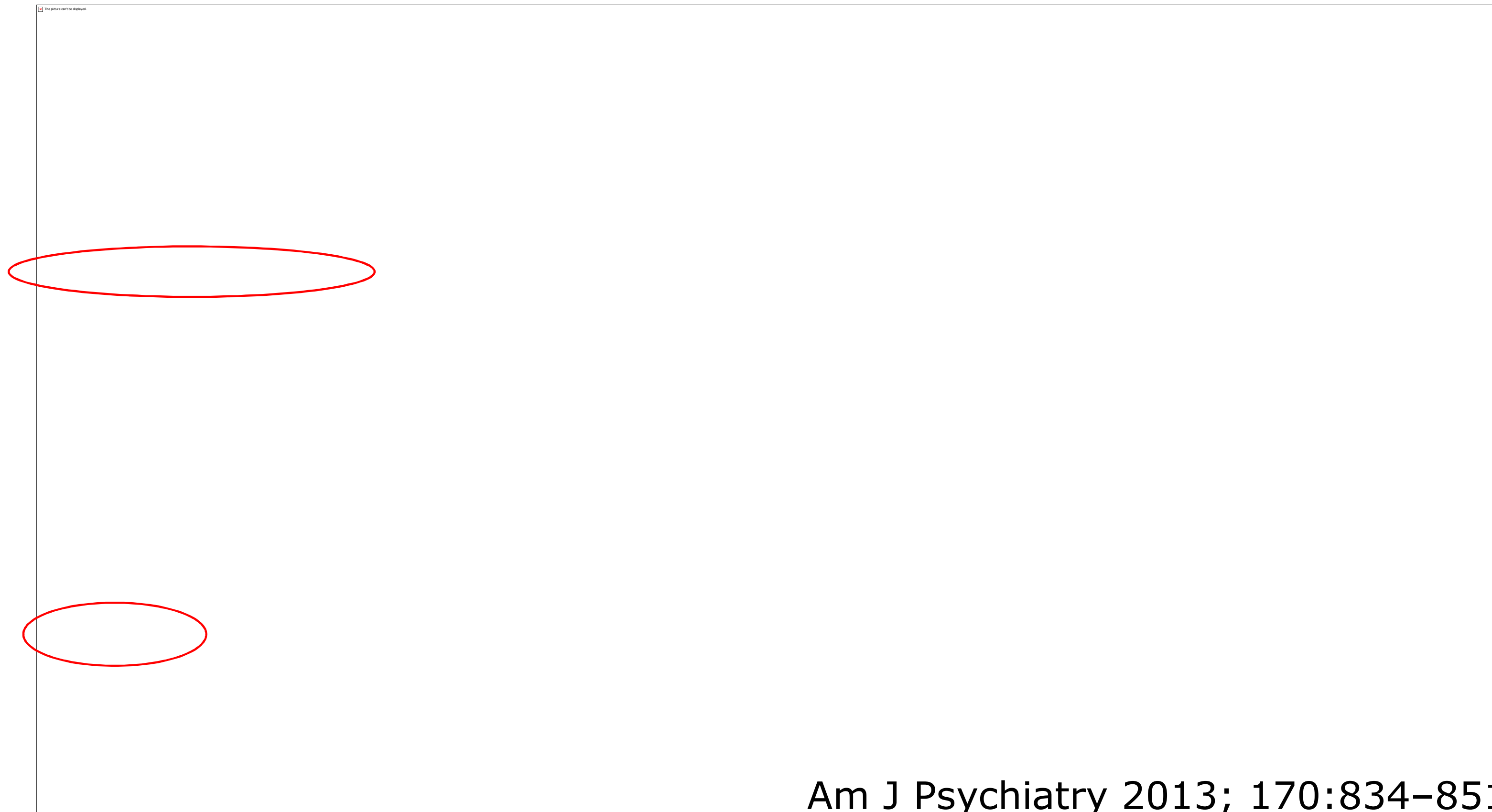
Pain Med. 2005;6:107-112.

Substance Use Disorder (SUD)

- Was redefined with the transition of DSM-IV to DSM-V
- Combination of Substance Abuse and Substance Dependence



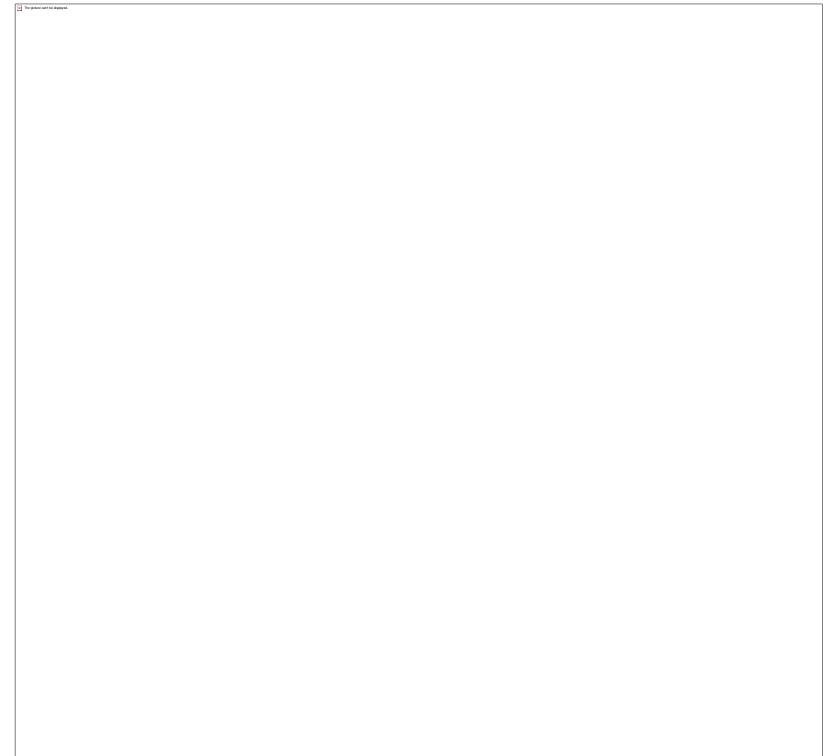
SUD



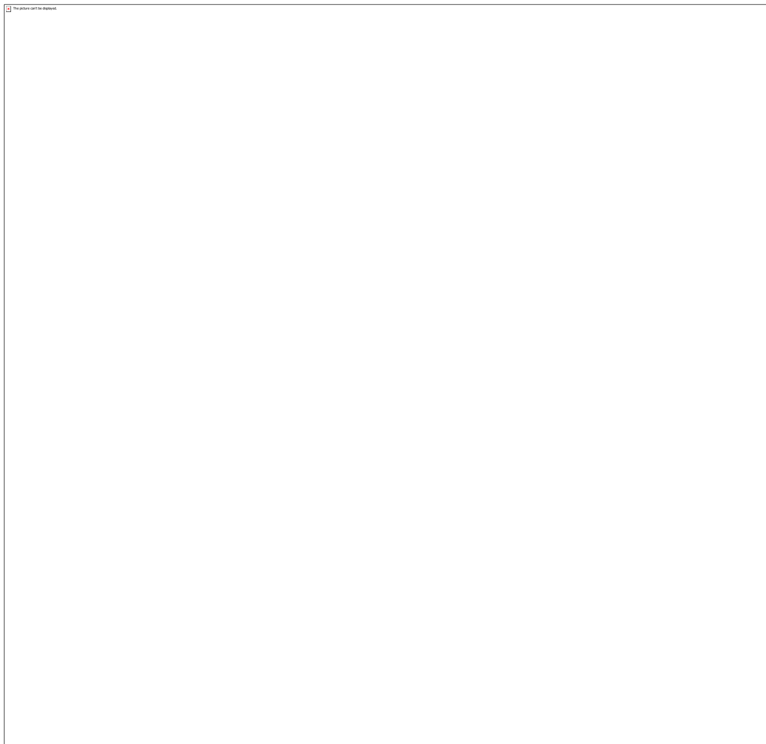
Am J Psychiatry 2013; 170:834–851

Treatment for Substance Use Disorder

- Medication assisted treatment
  - Treat withdrawal symptoms only!!
    - Buprenorphine
    - Methadone
- **Psycho-Social support**
  - Behavioral counselling
  - Family/social support network
- ↓ Triggers
- Improve coping strategies



Mitigating Opioid Risks

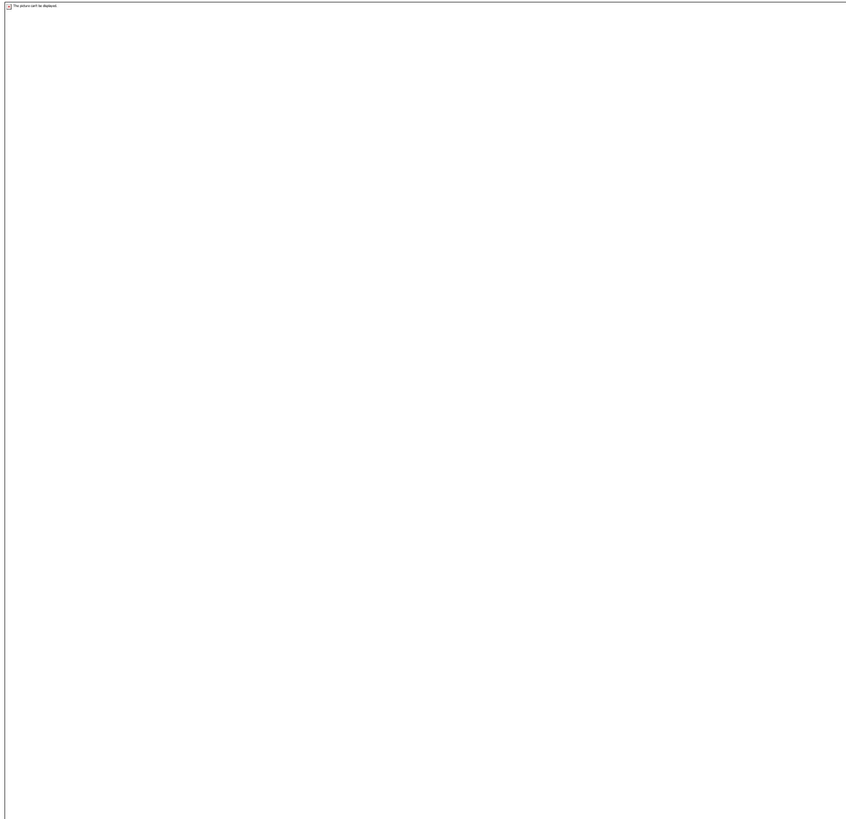


- Mitigating Risks
  - Safe storage
  - Educate family re: risks
  - **Know poison control #**
    (800) 222-1222
  - Proper disposal of medications

FDA Launches New Drug Disposal Program

Remove the RISK

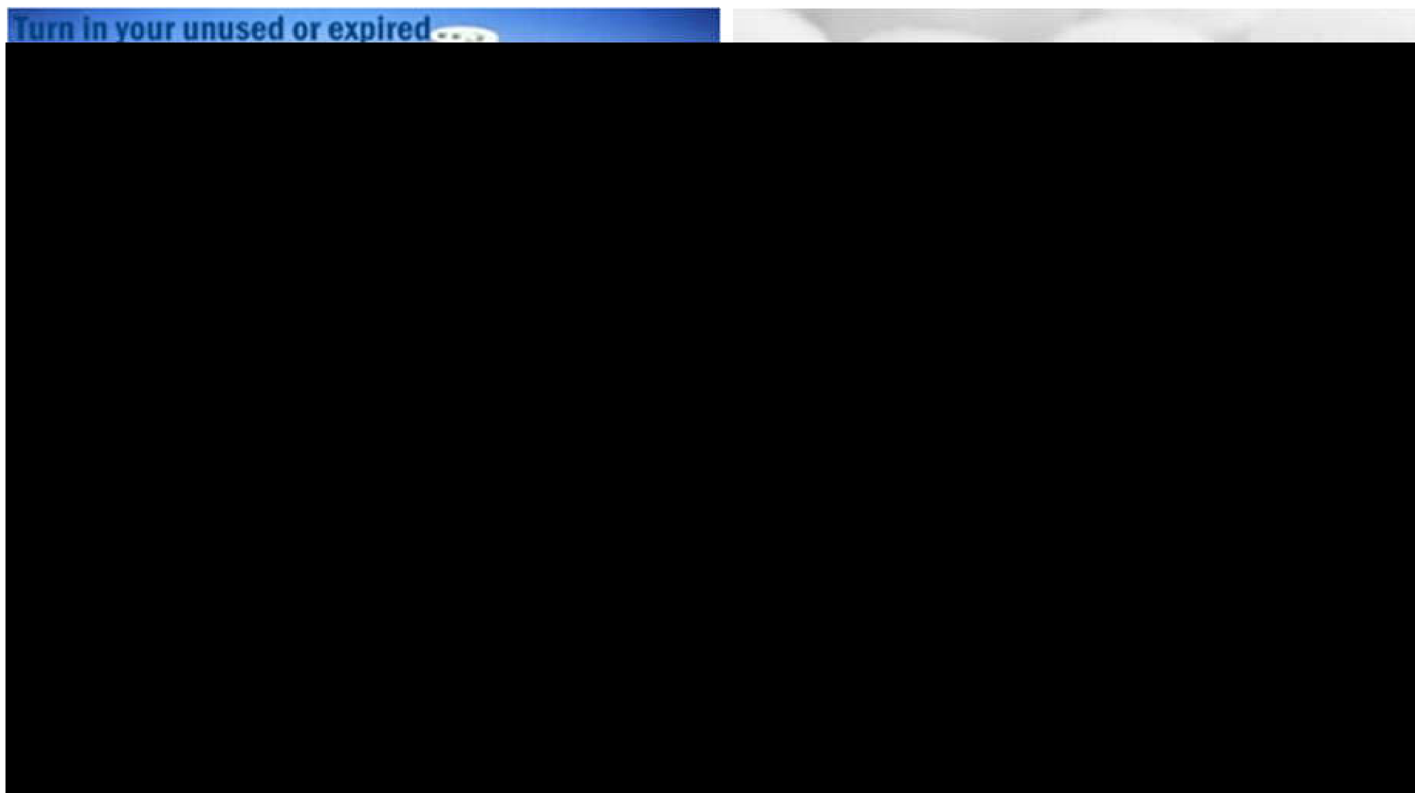
Safe Disposal of Opioids



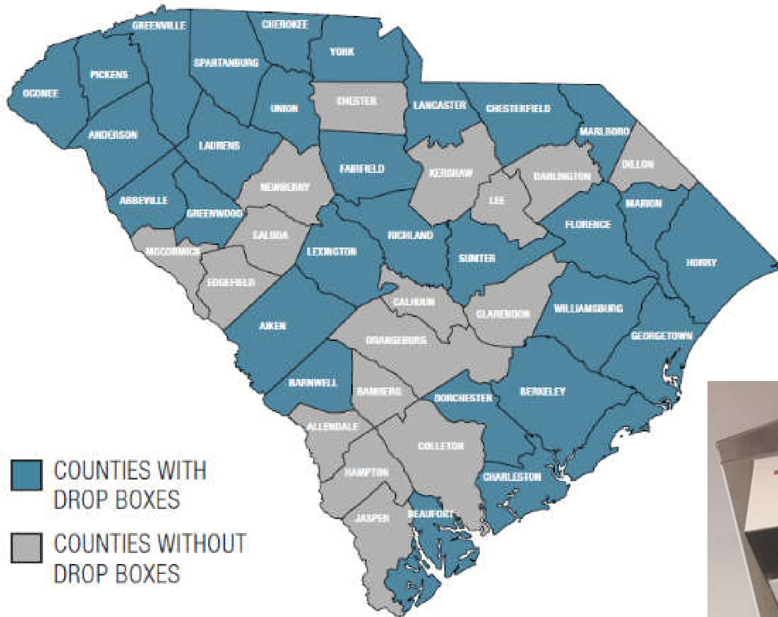
FDA Medicines Recommended for Disposal by Flushing	
Buprenorphine	Methadone
Fentanyl	Methylphenidate
Diazepam	Morphine
Hydrocodone	Oxycodone
Hydromorphone	Oxymorphone
Meperidine	Tapentadol

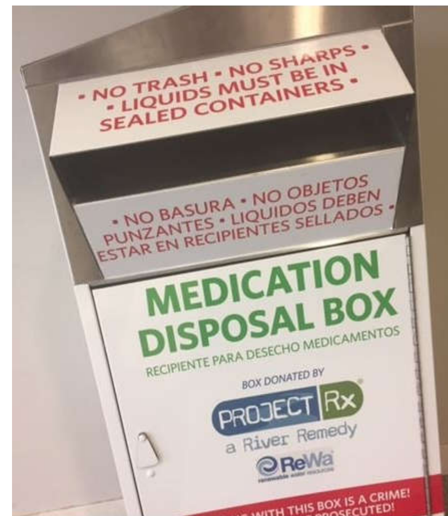
For disposal information, specific to another medication you are taking please **visit Drugs@FDA**

Drug Take Back Programs



South Carolina Drop Boxes





Medication Drop Boxes

- Greenville Memorial
- Greer Memorial
- Oconee Medical Center
- Hillcrest Memorial
- Laurens County Memorial
- Greer Police Dept.
- Travelers Rest Police Dept.

Community Outreach

- Education in schools on the dangers of opioids
  - **Estimate 50% exposed to opioids by 8th grade**
  - Targeting children at or before 5th grade
    - Opioid misuse decreased to 4.2% (excluding heroin)
- E.C.H.O. Empowering Communities for Health Outcomes
- Governor's Opioid Summit
- Appalachian Council of Governments
- South Carolina Medical Association

National Institute on Drug Abuse, NIH; HHS. 2017.

Summary

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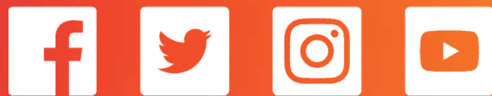
PrismaHealth.org



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