Emerging from the Darkness:

The End of the Drug War and the Rise of Recovery

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Dawn Farm Educational Series
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Solitary Confinement

- Isolation/Lack of human touch
- Complete lack of control
- Total dependency on guards/staff
- Unable to tell time of day
- Continuous lighting/ventilation noise
- Unpredictability of contact/conflict
- Misunderstanding/miscommunication interpreted as defiance

Effects of Solitary Confinement

- Perceptual changes (hallucinations)
- Depersonalization
- Self-harm (cutting, suicide)
- Depression
- Apathy
- Delirium
- Paranoia
- Lifelong increased suicide risk

Solitary Confinement (personally)

- Intense memories
- Heightened sense of smell
- Change in eyesight (near > far)
- Awareness of the very small
- Panic on opening of cell door unexpectedly
- Sense of impending doom

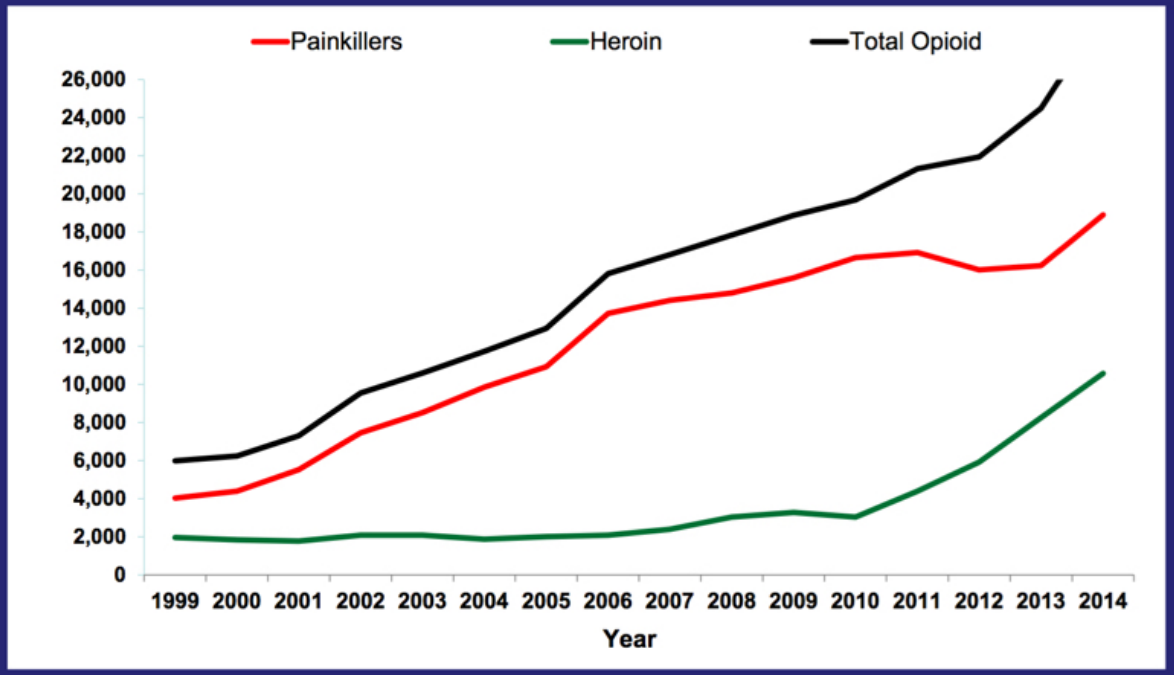
Long-term effects (personally)

- Social Phobia
- Desire to hide/be invisible
- Appreciation of compact environments
- Panic episodes
- Toxic shame
- Irrational anger/rage/hostility towards the general public (misanthropy)

Critical Criminology

- Crime occurs in a social and historical context
- What constitutes “criminal behavior” has varied throughout history
- Laws redefine what was previously accepted behavior as criminal (and vis-versa) ex. In 1932 alcohol was illegal in the U.S. and marijuana was legal
- Certain acts are crimes because certain people have the power to make them so and structural inequalities exist in the process of creating and enforcing laws
- Crime emerges from economic conflict inherent in the processes of capitalism
- Problem: people with addiction can create very real harm

Opioid Related Overdose Deaths
United States, 1999-2014



CDC, National Center for Health Statistics, National Vital Statistics System, CDC Wonder. Updated with 2010 mortality data.

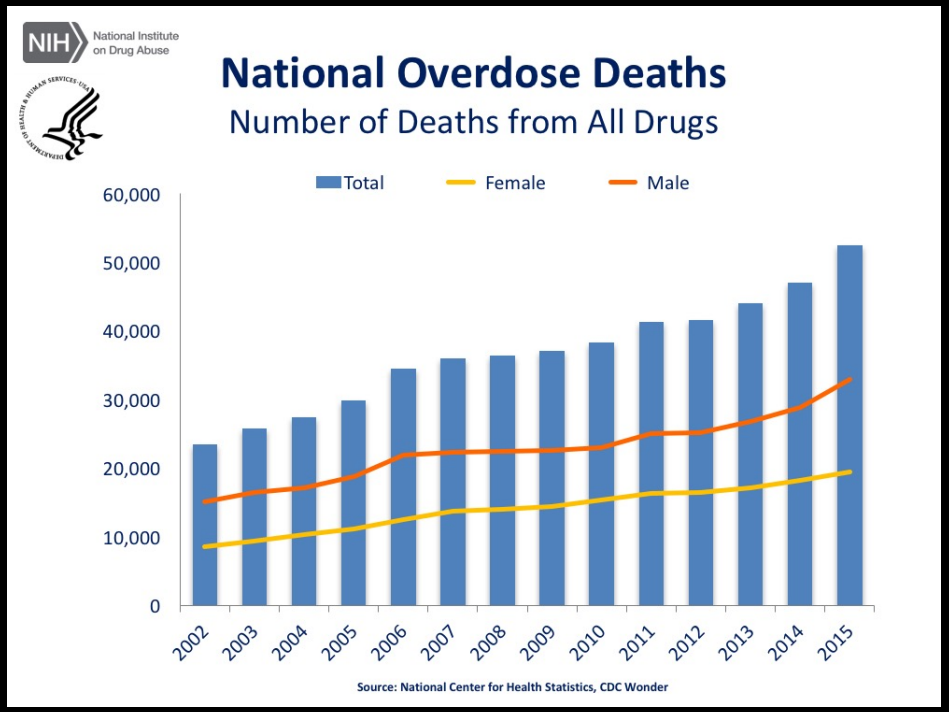
In 2014

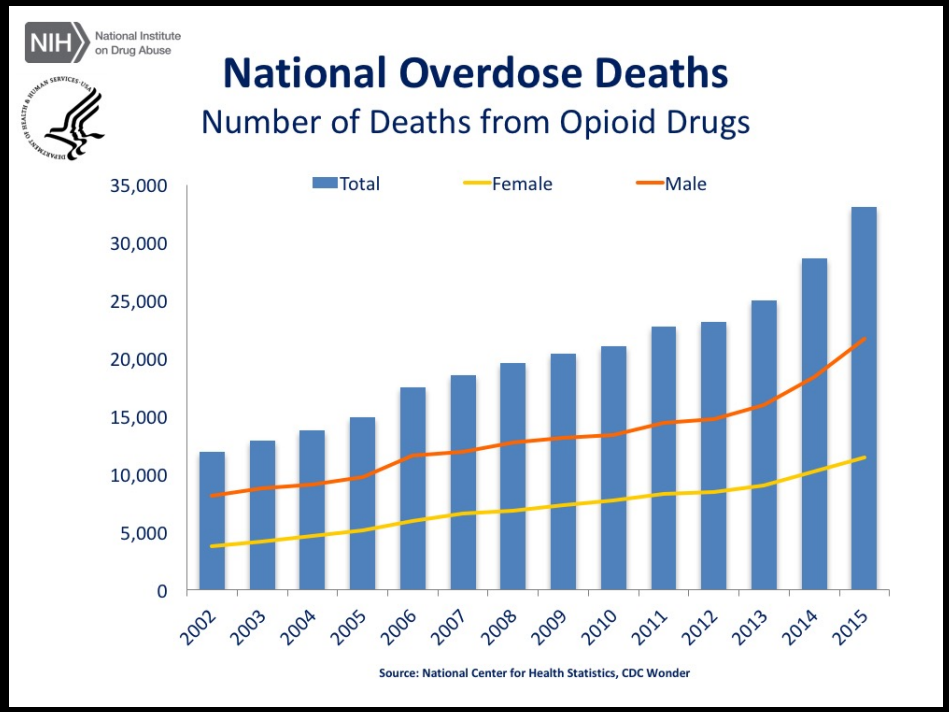
47,055 drug overdose deaths in U.S.

28,647 involved an opioid (61%)

Rapid increases in deaths due to heroin and synthetic opioids other than methadone

CDC /NCHS





In 2015

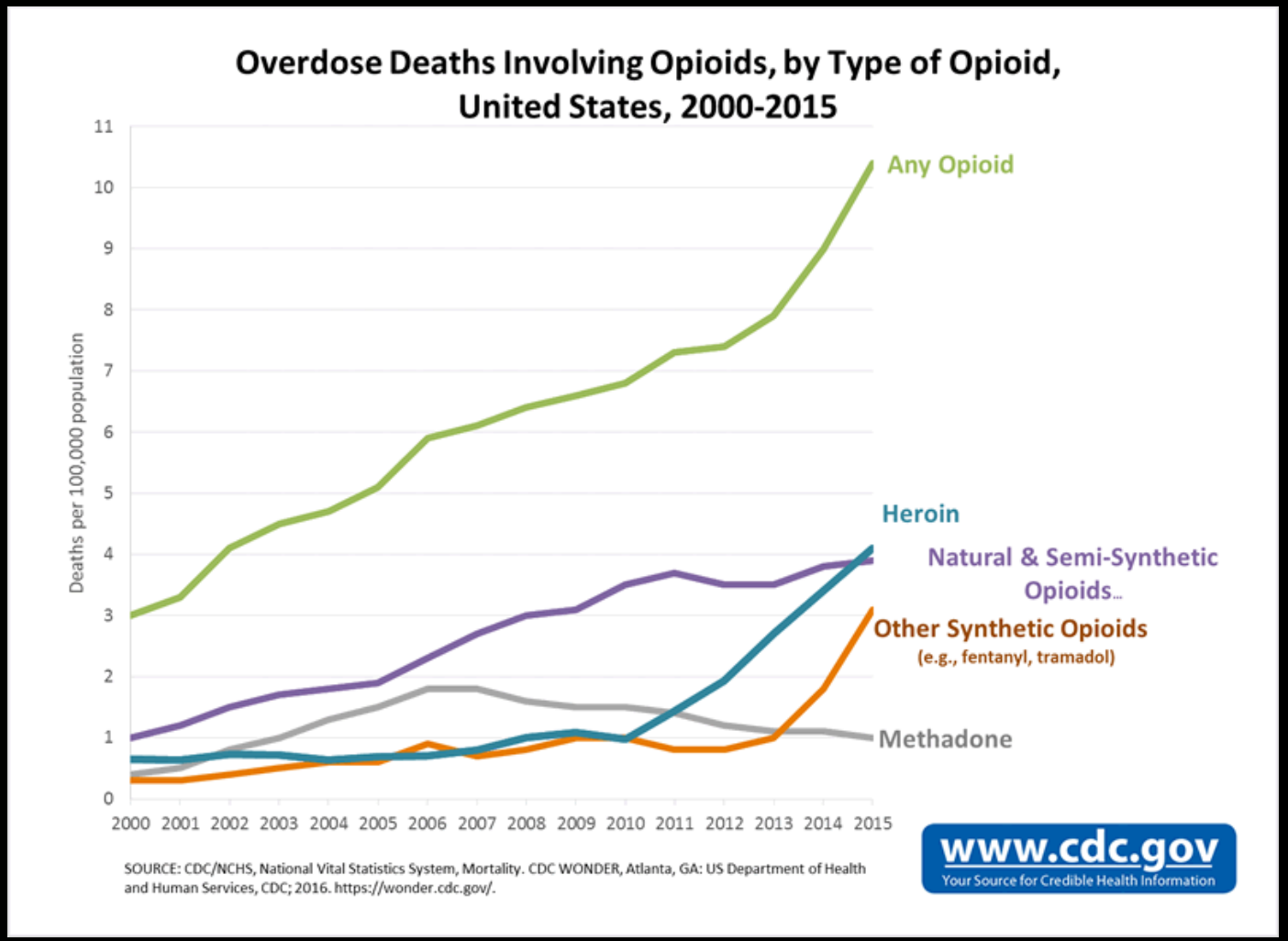
52,404 drug overdose deaths in the U.S. (+ 5,349)

33,091 involved an opioid (63.1%)

heroin death rate increased by 20.6%

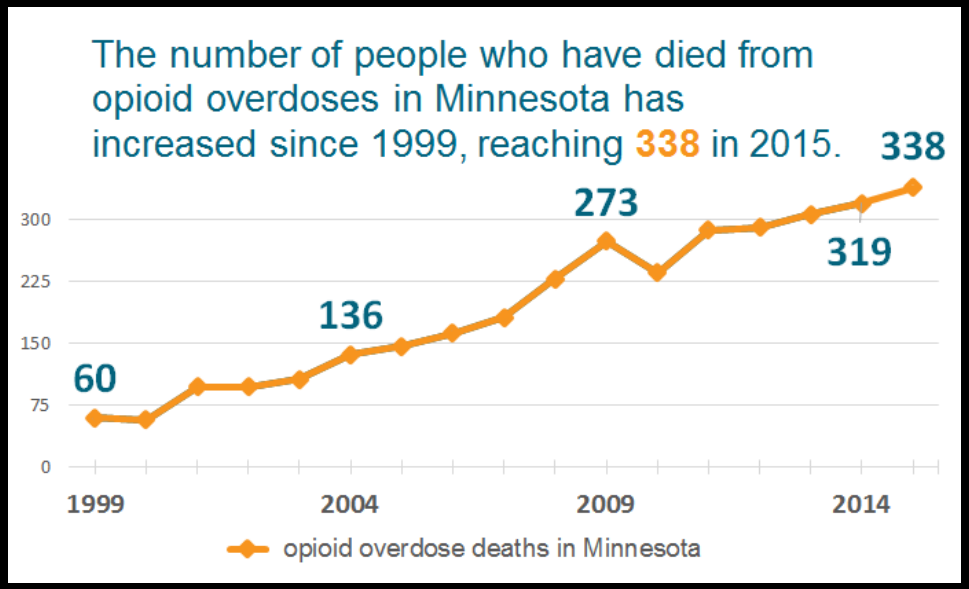
synthetic opioids (other than methadone) death rate increased by 72.2%

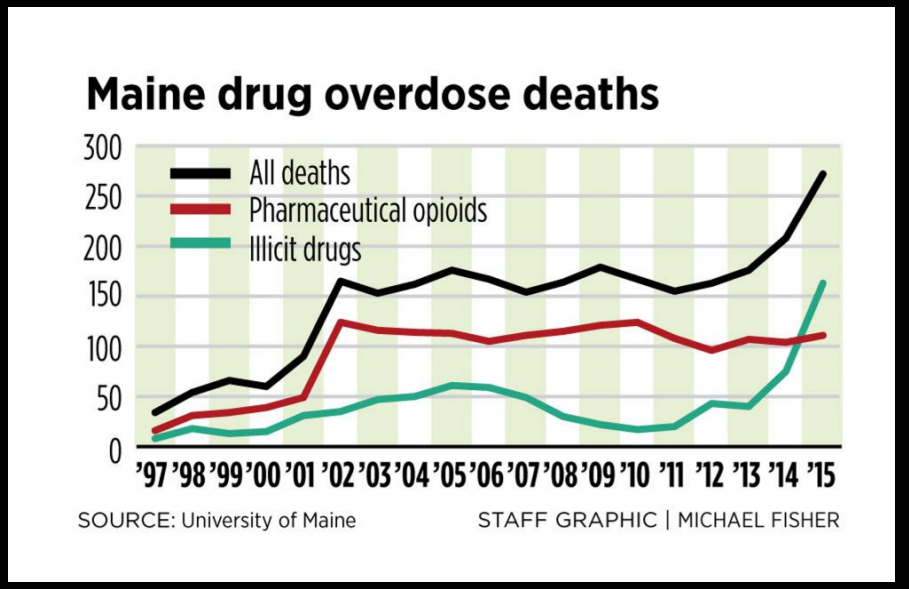
CDC/WONDER 2016

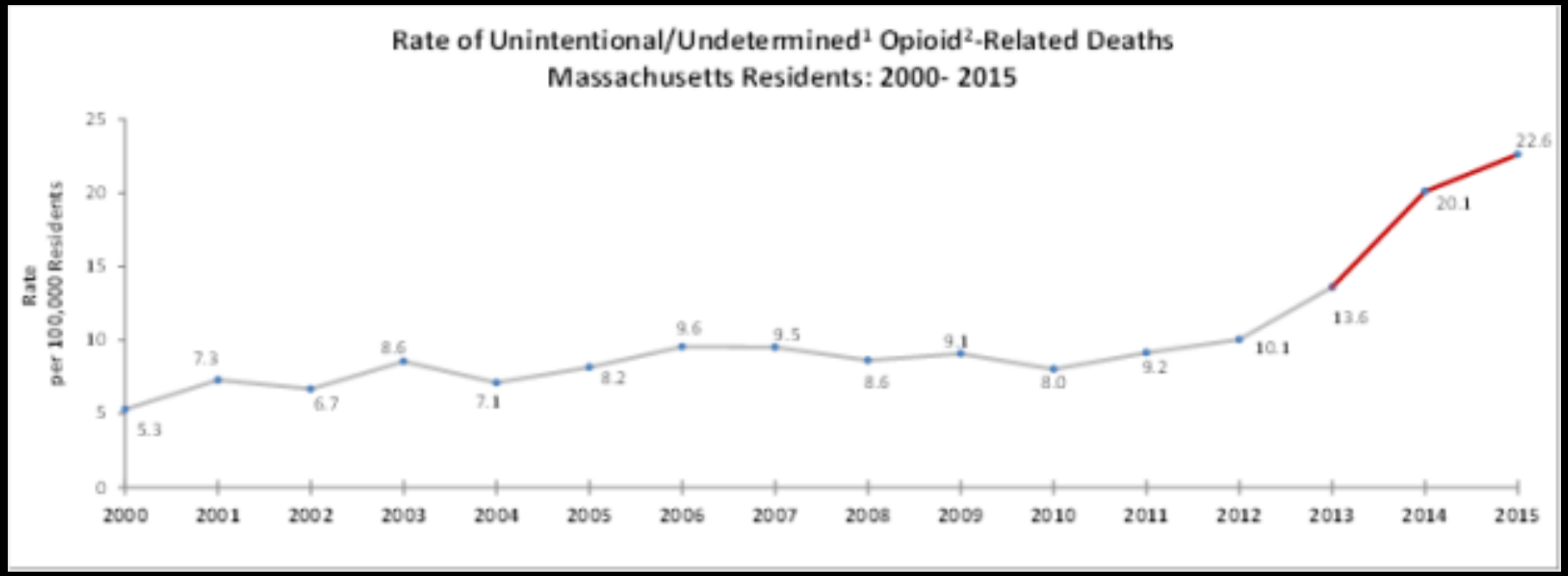


91 Americans die every day from an opioid overdose

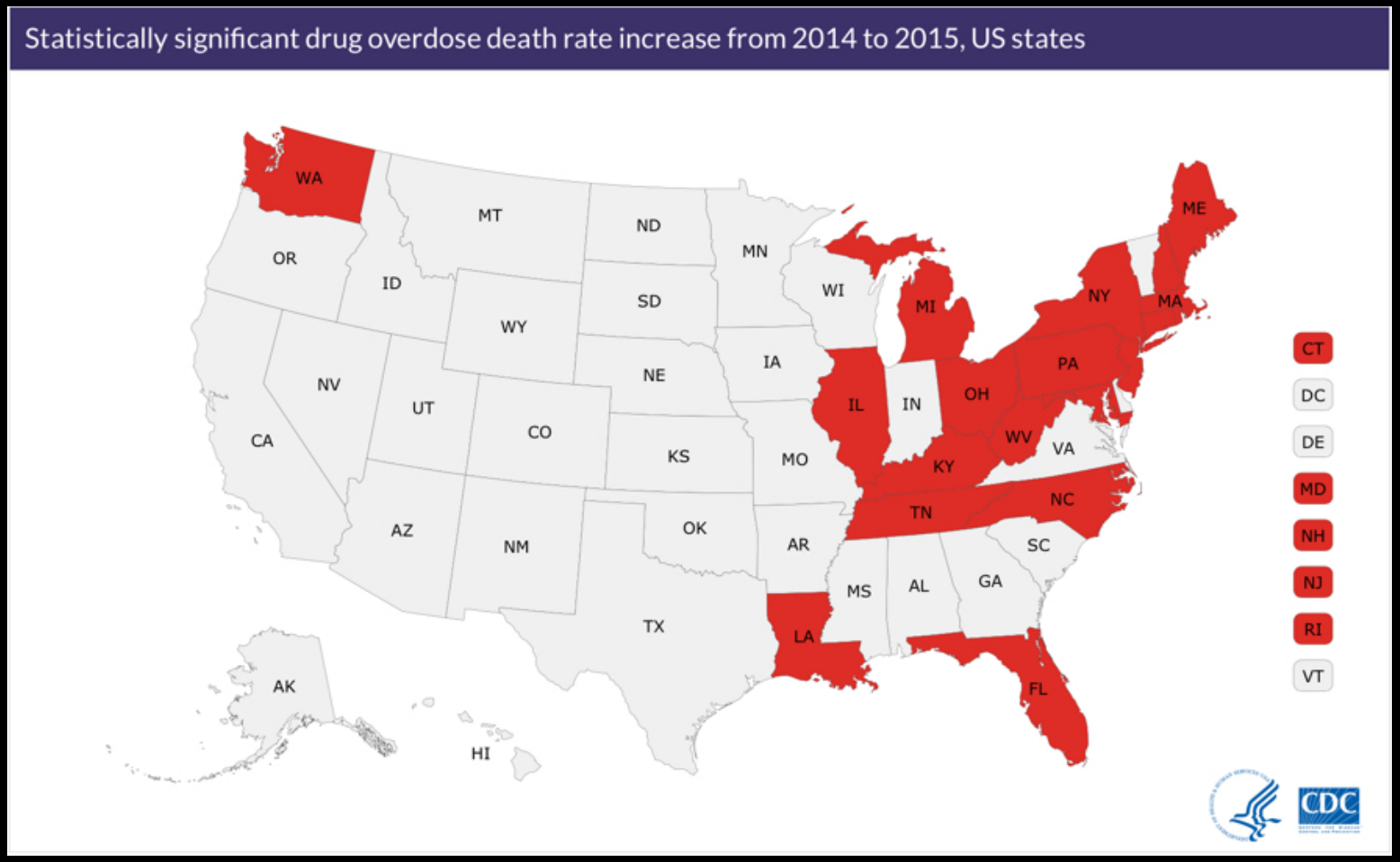
(includes prescription ORPs, heroin and synthetic opioids)


The number of people who have died from opioid overdoses in Minnesota has increased since 1999, reaching 338 in 2015.
338
273
319
136
60
300
225
150
75
0
1999
2004
2009
2014
opioid overdose deaths in Minnesota


Maine drug overdose deaths
300
250
200
150
100
50
0
All deaths
Pharmaceutical opioids
Illicit drugs
'97 '98 '99 '00 '01 '02 '03 '04 '05 '06 '07 '08 '09 '10 '11 '12 '13 '14 '15
SOURCE: University of Maine
STAFF GRAPHIC | MICHAEL FISHER


Rate of Unintentional/Undetermined[1] Opioid[2]-Related Deaths
Massachusetts Residents: 2000- 2015
Rate per 100,000 Residents
25
20
15
10
5
0
5.3
7.3
6.7
8.6
7.1
8.2
9.6
9.5
8.6
9.1
8.0
9.2
10.1
13.6
20.1
22.6
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015

33,091 opioid-related deaths in 2015



Five states with the highest rate of death: WV, NH, KY, OH, RI

Officer Safety Alert

Drug Enforcement Administration

Carfentanil: A Dangerous New Factor in the U.S. Opioid Crisis

Carfentanil is a synthetic opioid approximately 10,000 times more potent than morphine and 100 times more potent than fentanyl. The presence of carfentanil in illicit U.S. drug markets is cause for concern, as the relative strength of this drug could lead to an increase in overdoses and overdose-related deaths, even among opioid-tolerant users. The presence of carfentanil poses a significant threat to first responders and law enforcement personnel who may come in contact with this substance. **In any situation where any fentanyl-related substance, such as carfentanil, might be present, law enforcement should carefully follow safety protocols to avoid accidental exposure**.

Officer & Public Safety Information

Carfentanil and other fentanyl analogues present a serious risk to public safety, first responder, medical treatment, and laboratory personnel. T
blotter paper, tablets, patch, and spray.
inhaled. If encountered, responding pe

- **Exercise extreme caution.** Only p
should handle any substance suspe
encountered, contact the appropria
- **Be aware of any sign of exposure**
drowsiness, disorientation, sedatio

Opioid Epidemic: 3 things happened

1. Increased emphasis on effective pain management in 1990s led to increased use of prescription opioid pain relievers (OPRs)

Changes in Pain Management

- American Pain Society: “Pain is the fifth vital sign”
- JCAHO and VA framed untreated pain as a quality of care issue
- “Opiophobia” (fear of opioids by doctors)
- “Pseudoaddiction” (an addiction-like syndrome that occurs when doctors have opiophobia)
- Some voices of dissent, especially when patient satisfaction surveys pressured providers to prescribe

Pain
the 5th vital sign™
American Pain Society

TAKE 5
Pain: The 5th Vital Sign™
™& Trademark of the American Pain Society

The GOLD Standard in Pain Assessment.

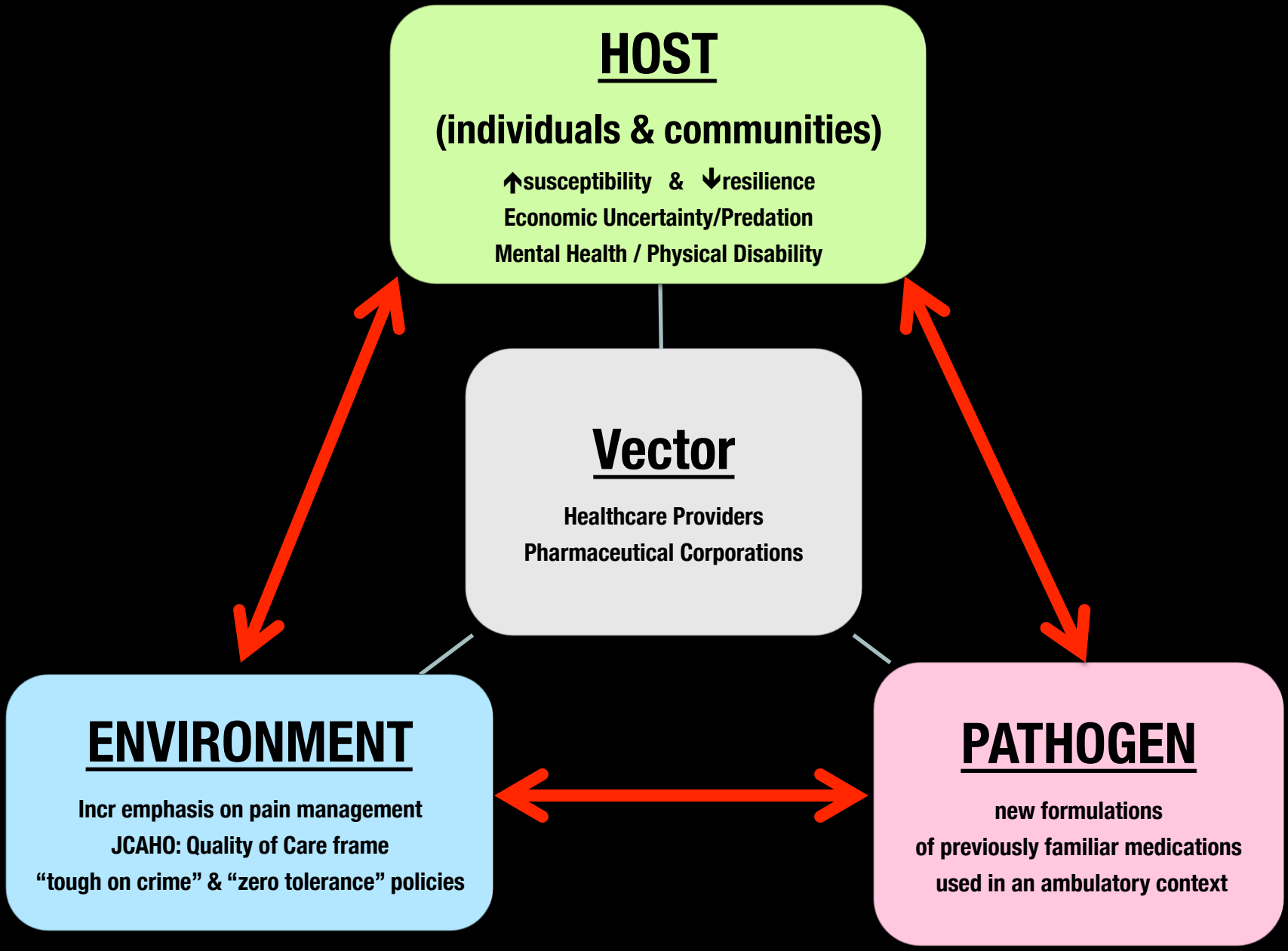
Opioid Epidemic: 3 things happened

1. Increased emphasis on effective pain management in 1990s and increased use of prescription opioid pain relievers (OPRs)
2. New formulations of previously familiar opioids came to market with far greater amounts of opioid per product

New Formulations of Old Drugs

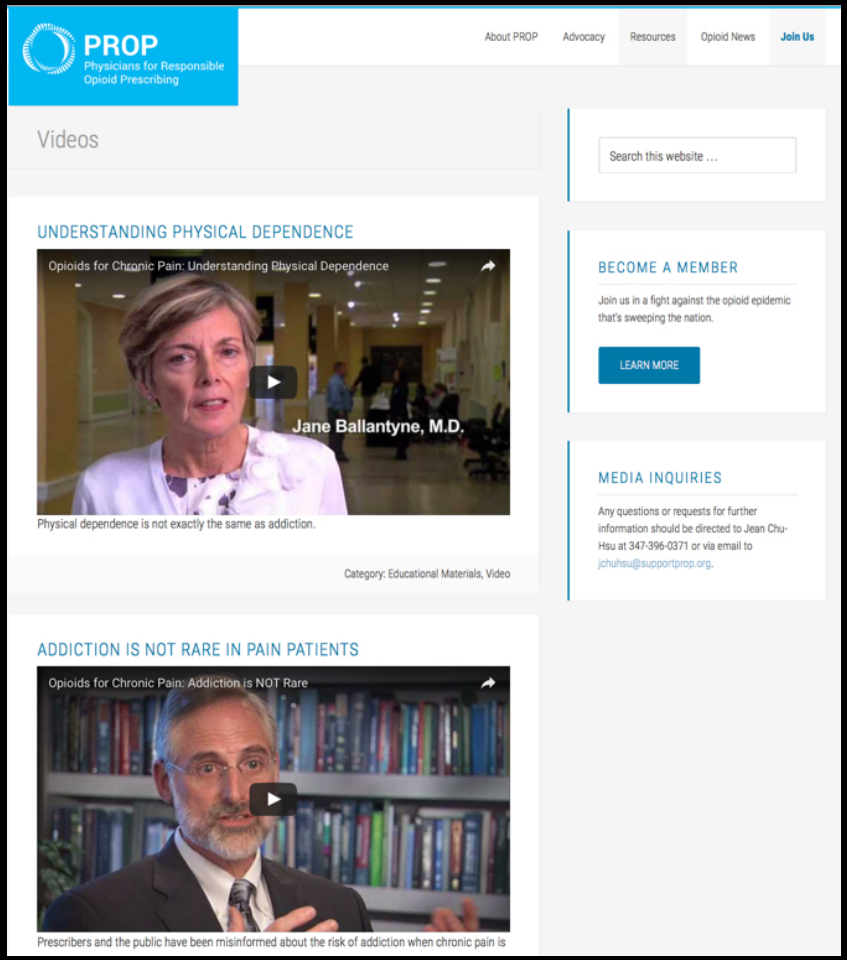
Opioid Epidemic: 3 things happened

1. Increased emphasis on effective pain management in 1990s and increased use of prescription opioid pain relievers (OPRs)
2. New formulations of previously familiar opioids came to market with far greater amounts of opioid per product
3. Aggressive marketing campaign designed to lower barriers to use in prescribers, and encourage opioid therapy for chronic, non-cancer pain

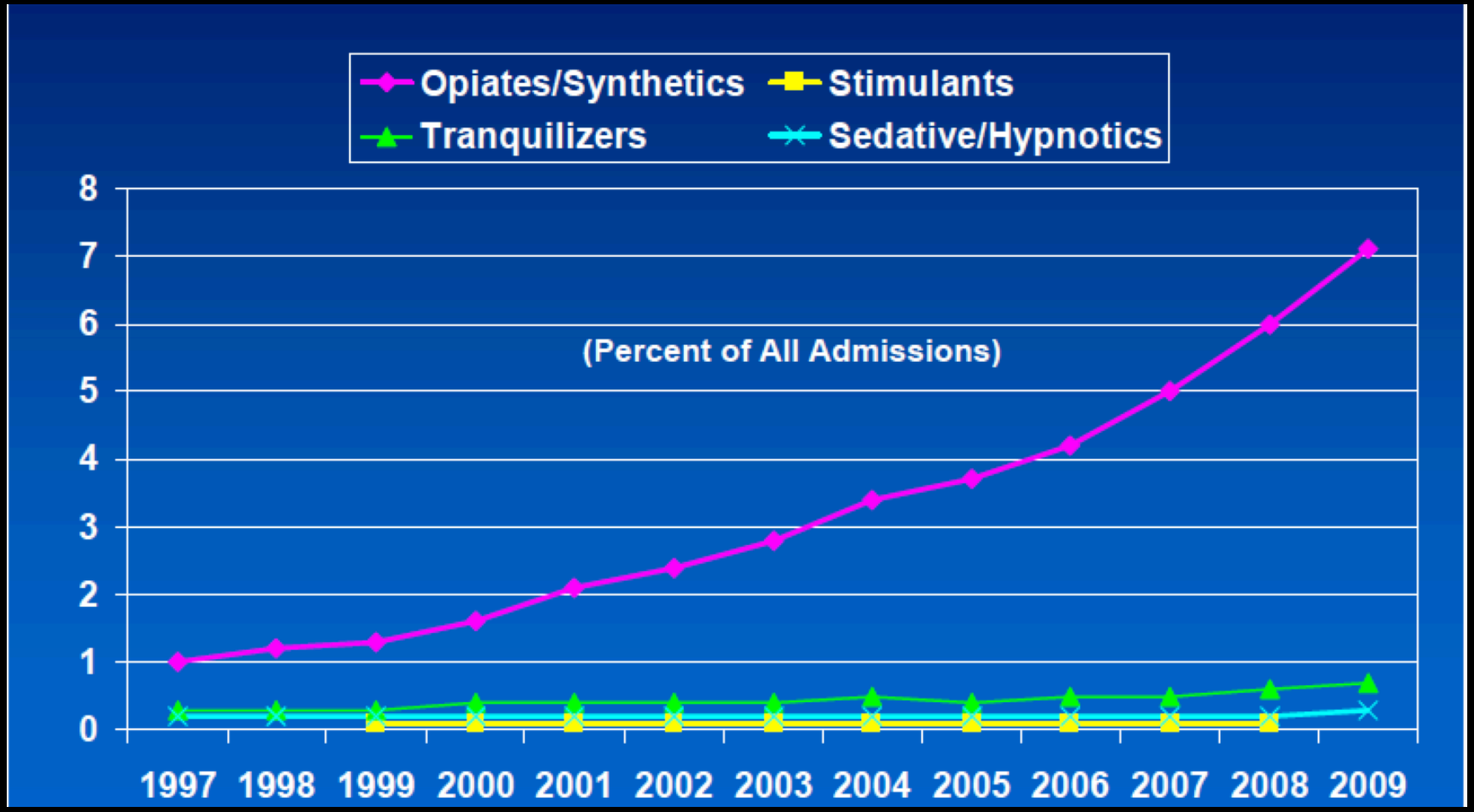

HOST
(individuals & communities)
↑susceptibility & ↓resilience
Economic Uncertainty/Predation
Mental Health / Physical Disability
Vector
Healthcare Providers
Pharmaceutical Corporations
ENVIRONMENT
Incr emphasis on pain management
JCAHO: Quality of Care frame
“tough on crime” & “zero tolerance” policies
PATHOGEN
new formulations
of previously familiar medications
used in an ambulatory context

www.supportprop.org

Andrew Kolodny, MD
Chief Medical Officer,
Phoenix House Foundation
Executive Director,
Physicians for Responsible Opioid Prescribing

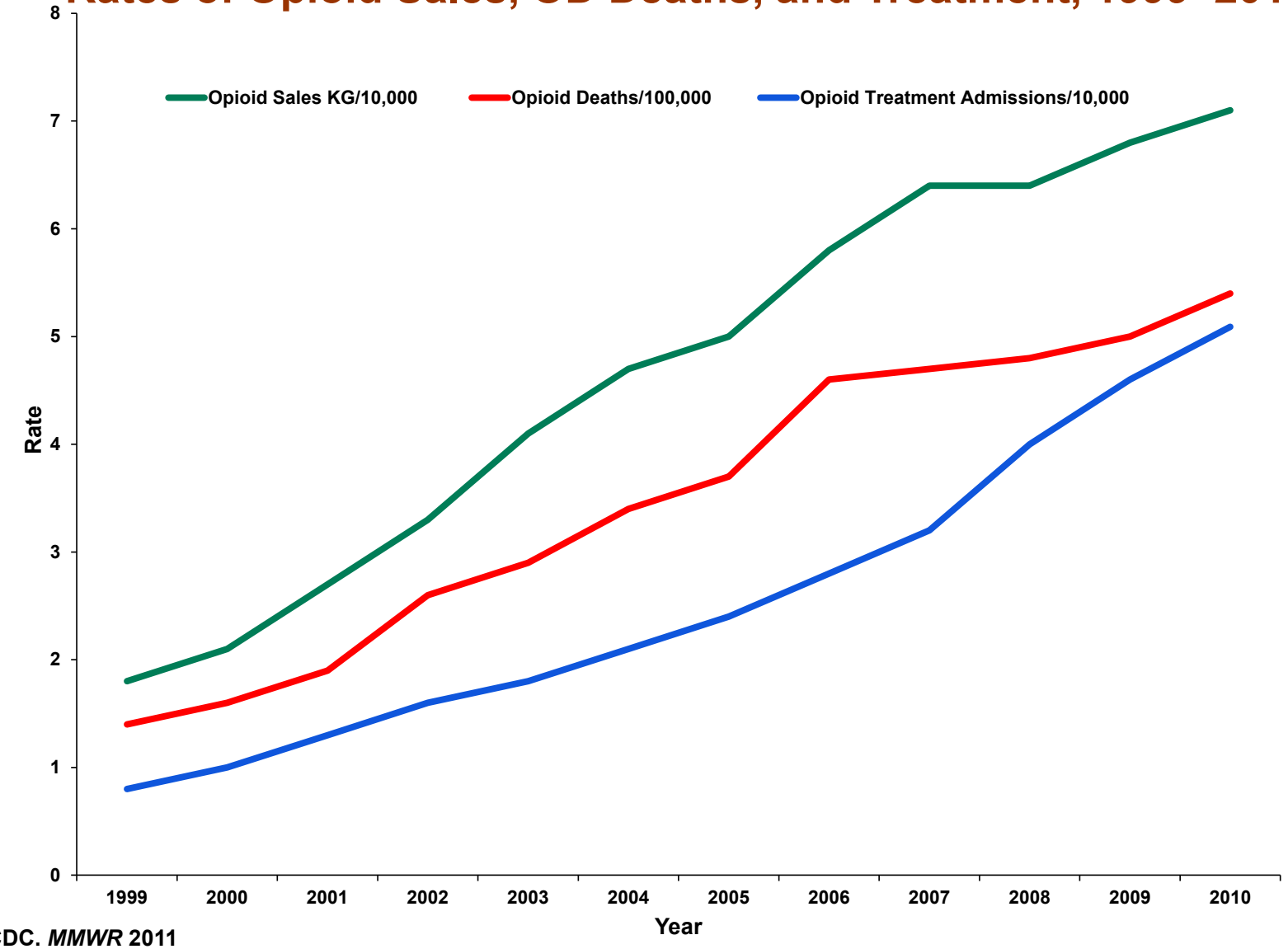


Treatment Admissions for Primary Prescription Drug Abuse



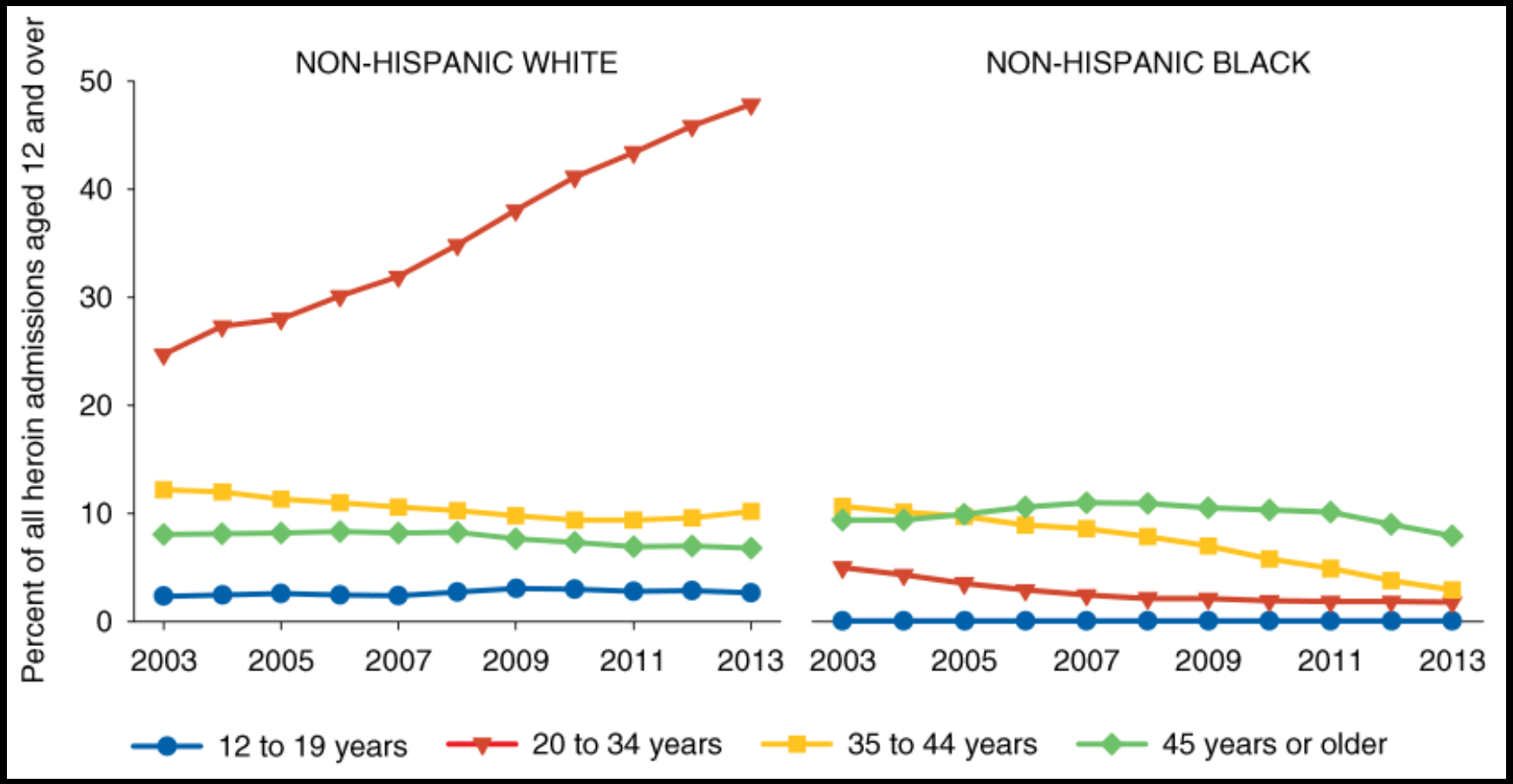
SAMHSA Treatment Episode Data Set, 2009

Rates of Opioid Sales, OD Deaths, and Treatment, 1999–2010



CDC. *MMWR* 2011

Heroin treatment admissions : 2003-2013



Expert-delivered educational lectures repeated the message that ...

- Opioid therapy for chronic pain is safe and effective
- The use of OPRs for chronic pain is supported by strong evidence
- Addiction is a rare event in chronic opioid therapy
- Extended-release opioids are better than short acting opioids for chronic pain
- There is no ceiling dose to opioid therapy
- The benefits of high dose (> 120 mg/day MED) opioid therapy outweigh the risks

N Engl J Med. 1980 Jan 10;302(2):123.

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.

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Surveillance Program
Waltham, MA 02154 Boston University Medical Center

1. Jick H, Miettinen OS, Shapiro S, Lewis GP, Siskind Y, Slone D. Comprehensive drug surveillance. JAMA. 1970; 213:1455-60.
2. Miller RR, Jick H. Clinical effects of meperidine in hospitalized medical patients. J Clin Pharmacol. 1978; 18:180-8.

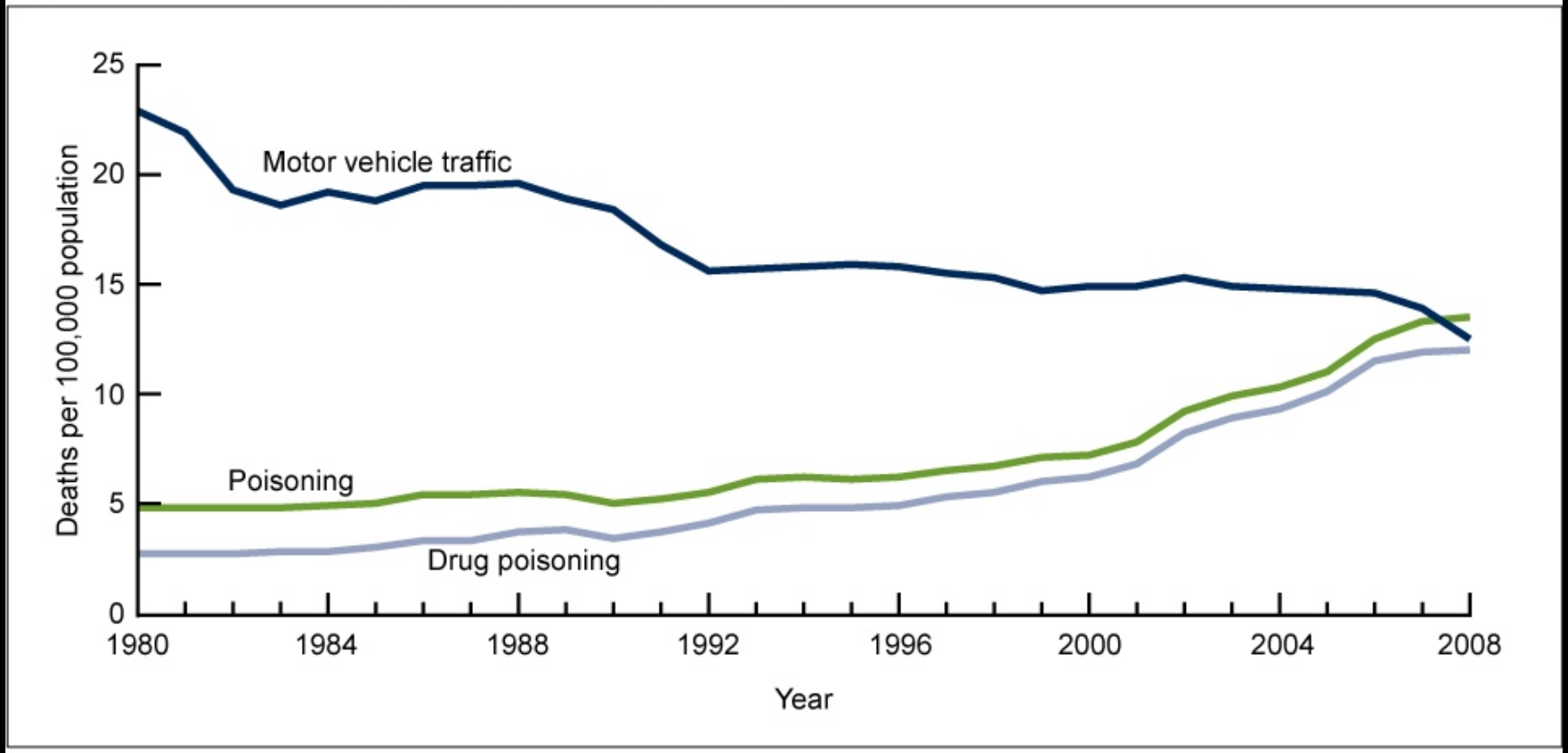
First Wave: Methadone & OPRs

- Primary care physicians took to heart the advice given to treat pain aggressively
- Belief that stronger and longer-acting opioids were preferred for chronic pain
- Longer-acting – not as euphorigenic
- Methadone does not create opioid-induced hyperalgesia or tolerance to the same degree as other opioids
- Inexpensive

Methadone problems

- Dosage for Opioid Use Disorder and dose for pain management differ (once daily vs three times daily)
- Methadone exhibits complex pharmacokinetics that varies widely from patient to patient
- Methadone interacts unfavorably with a number of commonly prescribed medications
- Methadone prolongs the QT interval of the cardiac cycle

Figure 1. Motor vehicle traffic, poisoning, and drug poisoning death rates: United States, 1980–2008



NOTE: In 1999, the *International Classification of Diseases, Tenth Revision (ICD–10)* replaced the previous revision of the ICD (ICD–9). This resulted in approximately 5% fewer deaths being classified as motor-vehicle traffic–related deaths and 2% more deaths being classified as poisoning-related deaths. Therefore, death rates for 1998 and earlier are not directly comparable with those computed after 1998. Access data table for Figure 1 at http://www.cdc.gov/nchs/data/databriefs/db81_tables.pdf#1.

SOURCE: CDC/NCHS, National Vital Statistics System.

Second Wave: OPRs > heroin

- Increased prescribing exposed large numbers of vulnerable patients to increasingly powerful opioid medications
- Non-medical use increased which correlates with later opioid use disorder
- Tighter restrictions on OxyContin and a change in its' formulation to be "less abusable" affected supply and cost
- Heroin was increasingly potent, cheap and sold in a far more "customer friendly" manner

Black Tar Heroin (55 – 93% pure)

- Wright-Beckett process (1874) – does not require complex lab equipment
- Morphine is not extracted from concentrated liquid opium
- Uses glacial acetic acid rather than acetic anhydride
- Black and tarry due to incomplete acetylation products (3-MAM. 6-MAM)
- Can be eaten, smoked or dissolves in water (requiring heat) for injection
- MBTH: venous sclerosis > subcutaneous injection

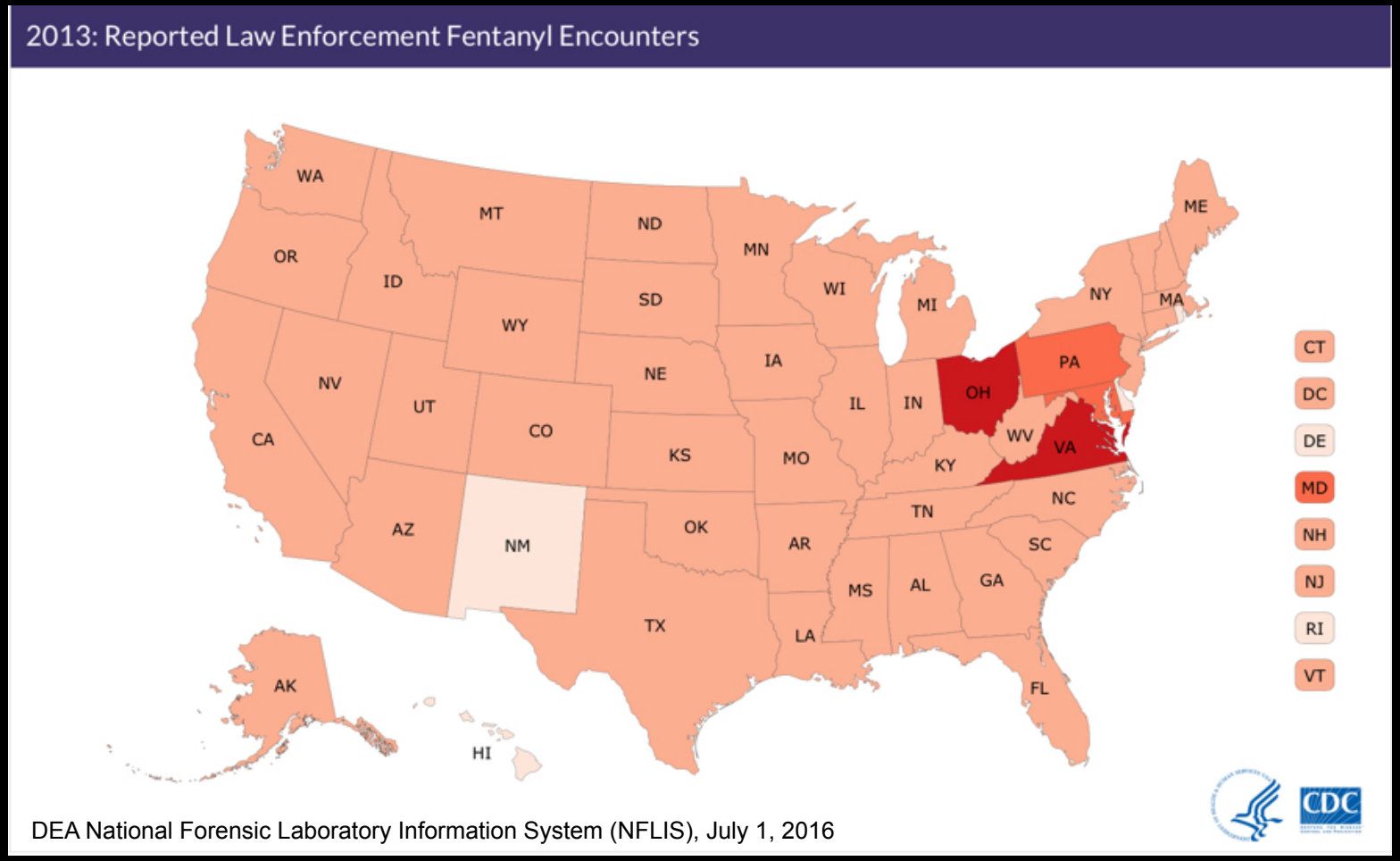
The Nayarit "Pizza Delivery" Sales Model

- Constant supply of poor, young men from sugar-cane farming rancheros of Nayarit
- Sales "cells" in mid-sized cities, no gangs, no guns
- Black tar heroin (80% pure)
- Convenience: 30 minute delivery
- Balloons of 1/10 gram (never in quantity)
- Aggressive market penetration (recruiting at methadone clinics)

Third Wave: Non-Pharmaceutical Fentanyl

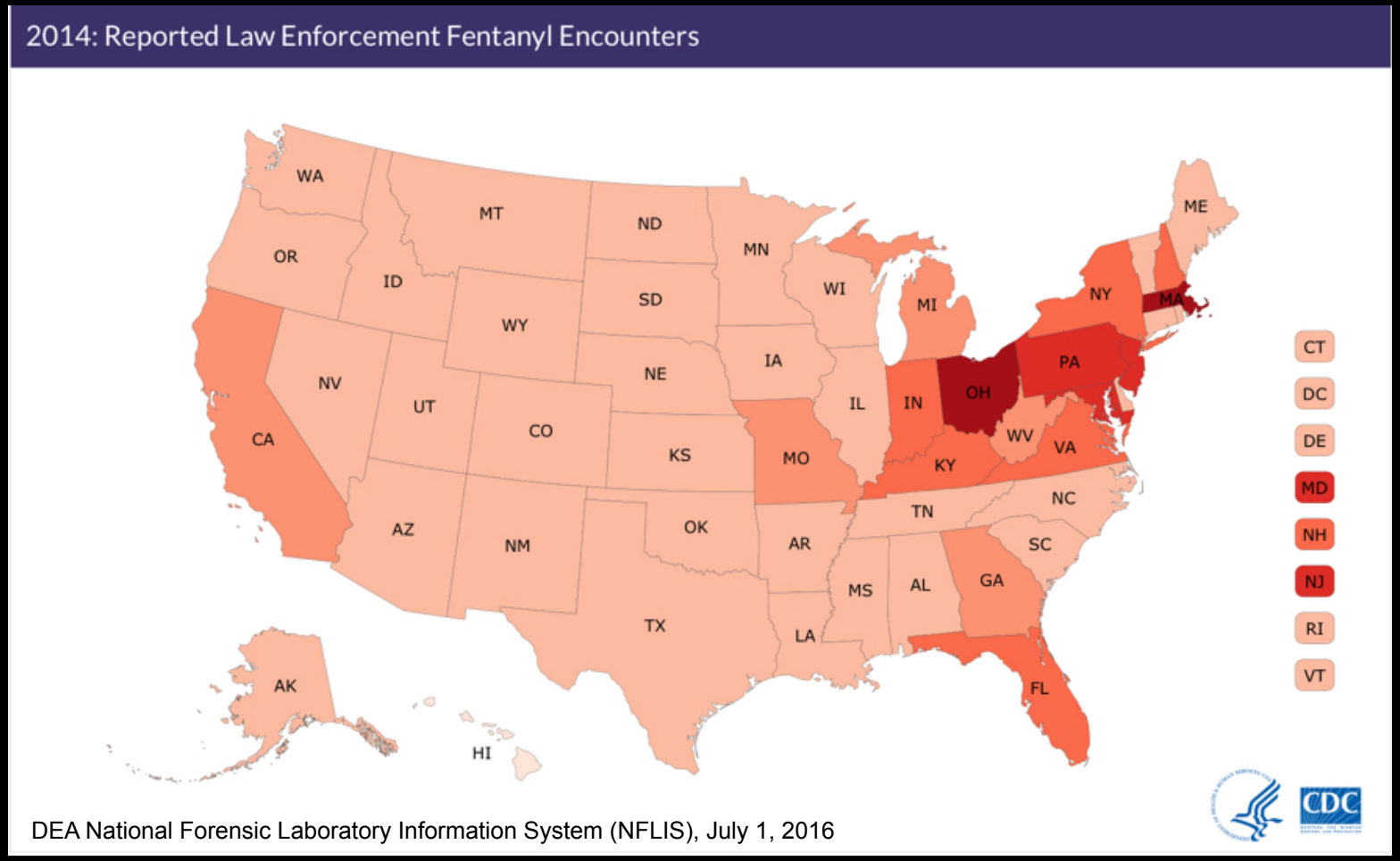
- Produced by illicit but high-tech pharmacies in other countries
- Legal restrictions did not yet exist
- Extremely potent per weight/volume, therefore easier to traffic
- Increasingly added to samples of heroin, counterfeit OPR tablets, or sold by itself
- Far, far greater lethality

Reported Law Enforcement Fentanyl Encounters: 2013



Report categories: none, 0 – 50, 50 – 99, 100 – 249, 250 – 499, ≥ 500

Reported Law Enforcement Fentanyl Encounters: 2014



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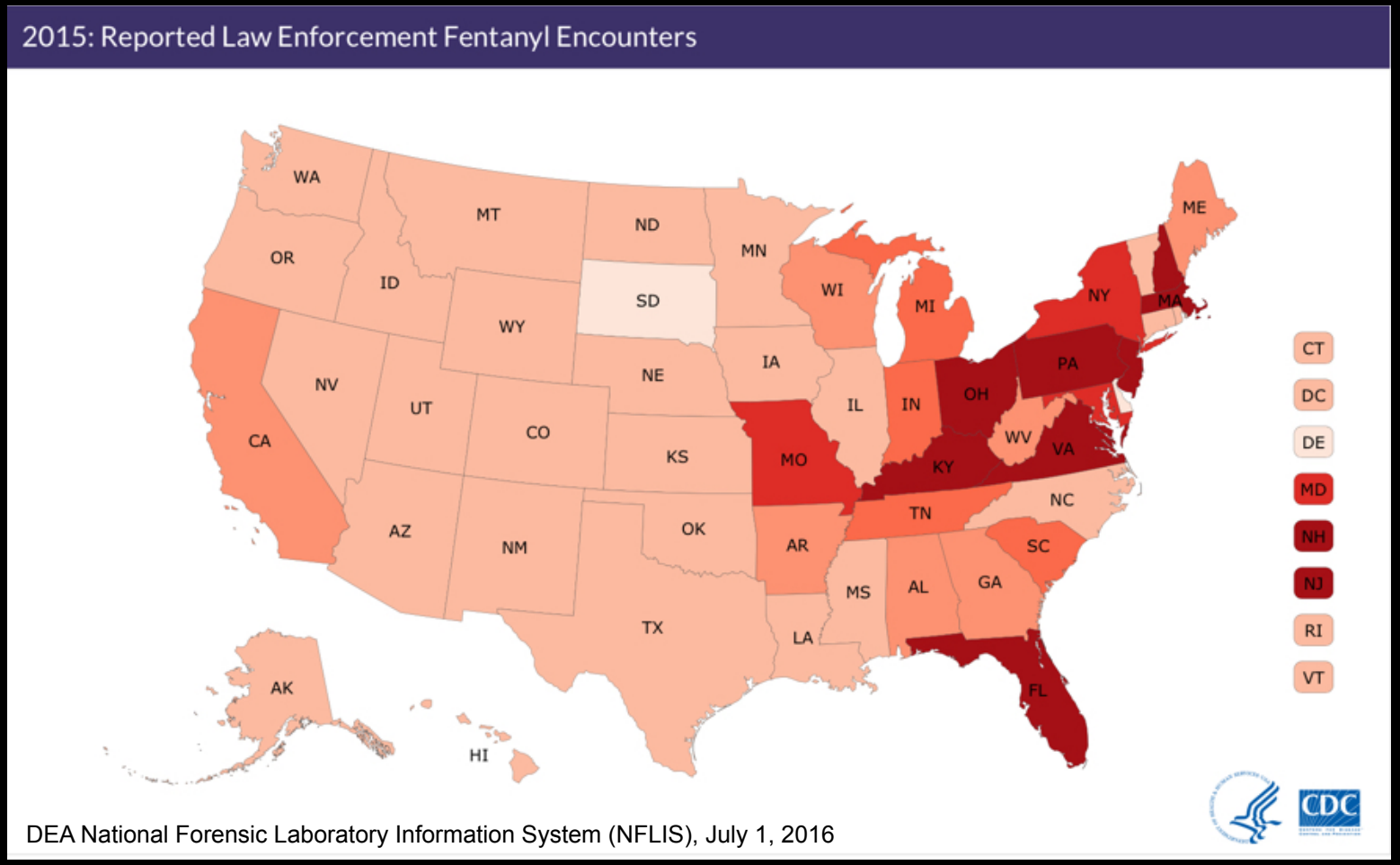
Reported Law Enforcement Fentanyl Encounters: 2015



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“Deaths of Despair”

- Trump over-performed the most in counties with the highest mortality rates from:

  Drug overdose (400K) — 1 million/last decade

  Alcoholic cirrhosis (250K)

  Suicide (400K) mortality rates

- Mortality rates highest in white, poor, young and middle-aged men without a college education
- These counties had two things in common:
  1. High economic distress (usually due to loss of manufacturing jobs)
  2. Large working class
- Opioid overdose deaths are part of a larger problem

Monnat, S.Deaths of despair and support for Trump in the 2016 Presidential election. Penn State Dept Agriculture (research brief). 2016.

2005 Utah Rx Medication Deaths Workgroup

- The amount of Rx opioid drugs distributed to Utah increased substantially
- Rx preference for newer pain-relieving drugs
- Ex. Methadone: 269 grams per 100,000 population in 1997 to 1,703 grams per 100,000 in 2002 (a six-fold increase)
- Methadone prescriptions not related to the treatment of addiction

2005 Utah Rx Medication Deaths Workgroup

- Methadone accounted for a disproportionate number of deaths, many for pain management
- Source of the drug:

valid prescription:	42%
evidence of diversion:	18%
unknown:	39%

- In the 44 deaths where a prescription was available to determine onset of treatment, death occurred within 1 week of that prescription in 70% of cases

Oct 2008 – Oct 2009 interviews

1. History of financial problems
    - 63% unemployed in last two months of life
    - 59% financial difficulties in last two months
    - 27% uninsured (statewide rate: 14%)

Oct 2008 – Oct 2009 interviews

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    - 63% unemployed in last two months of life
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    - 27% uninsured (statewide rate: 14%)
2. History of Substance Use Disorder
    - 40% with a SUD in last two months of life
    - 12% reported to use Rx pain meds for ROTP (NSDUH: 5.2%)
    - 49% had received previous Tx for SUD

Oct 2008 – Oct 2009 interviews

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    - 12% reported to use Rx pain meds for ROTP (NSDUH: 5.2%)
    - 49% had received previous Tx for SUD
3. History of Mental Illness
    - 44% reported to have been Dx’ d with a mental illness
    - 24% hospitalized in a psychiatric facility

Oct 2008 – Oct 2009 interviews

49% of decedents received previous Tx for SUD

23% attended residential Tx

22% attended AA/NA

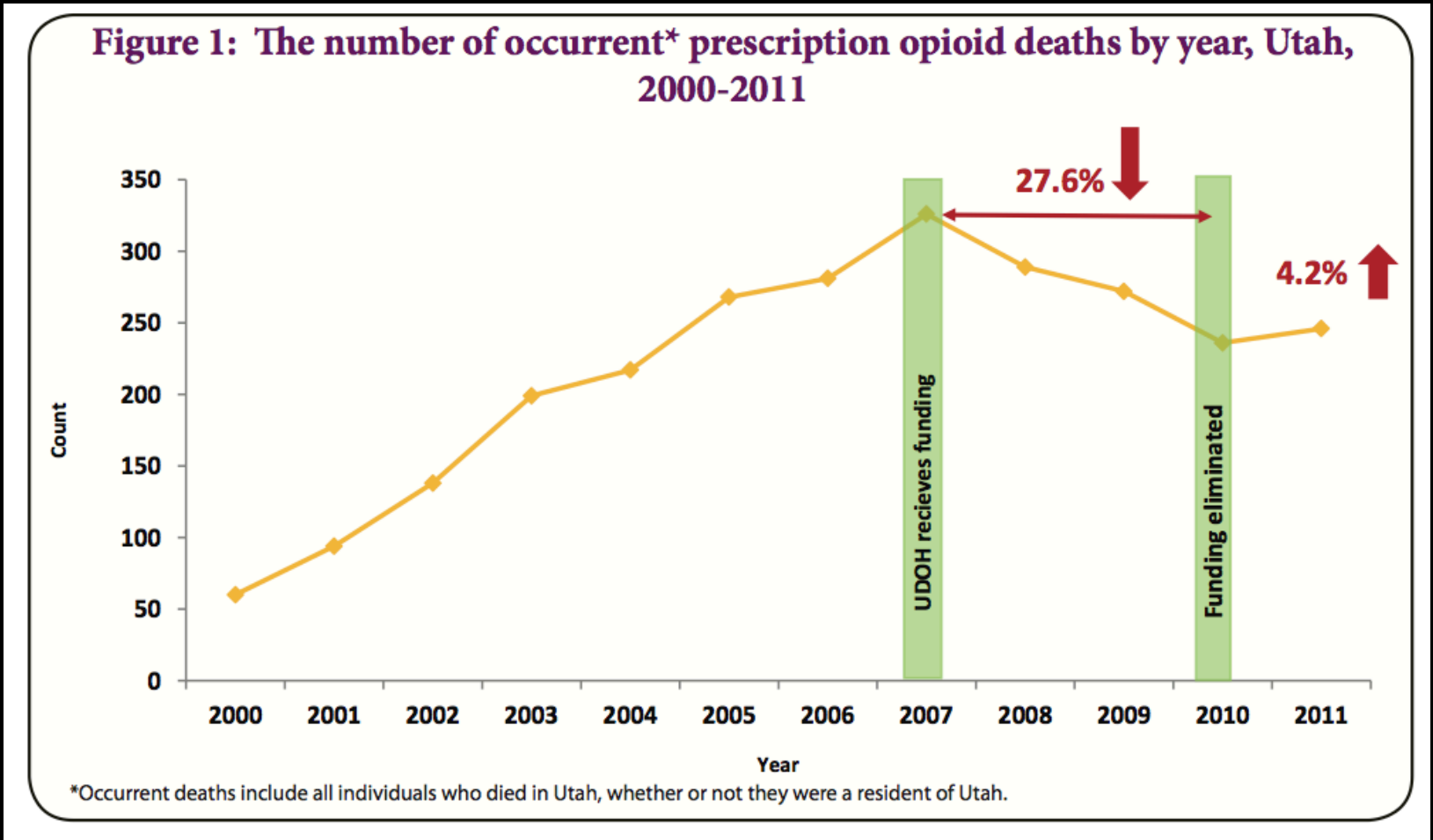
22% treated in ER

20% hospitalized

19% attended an outpatient program

7% received MAT

Utah: improvement follows funding

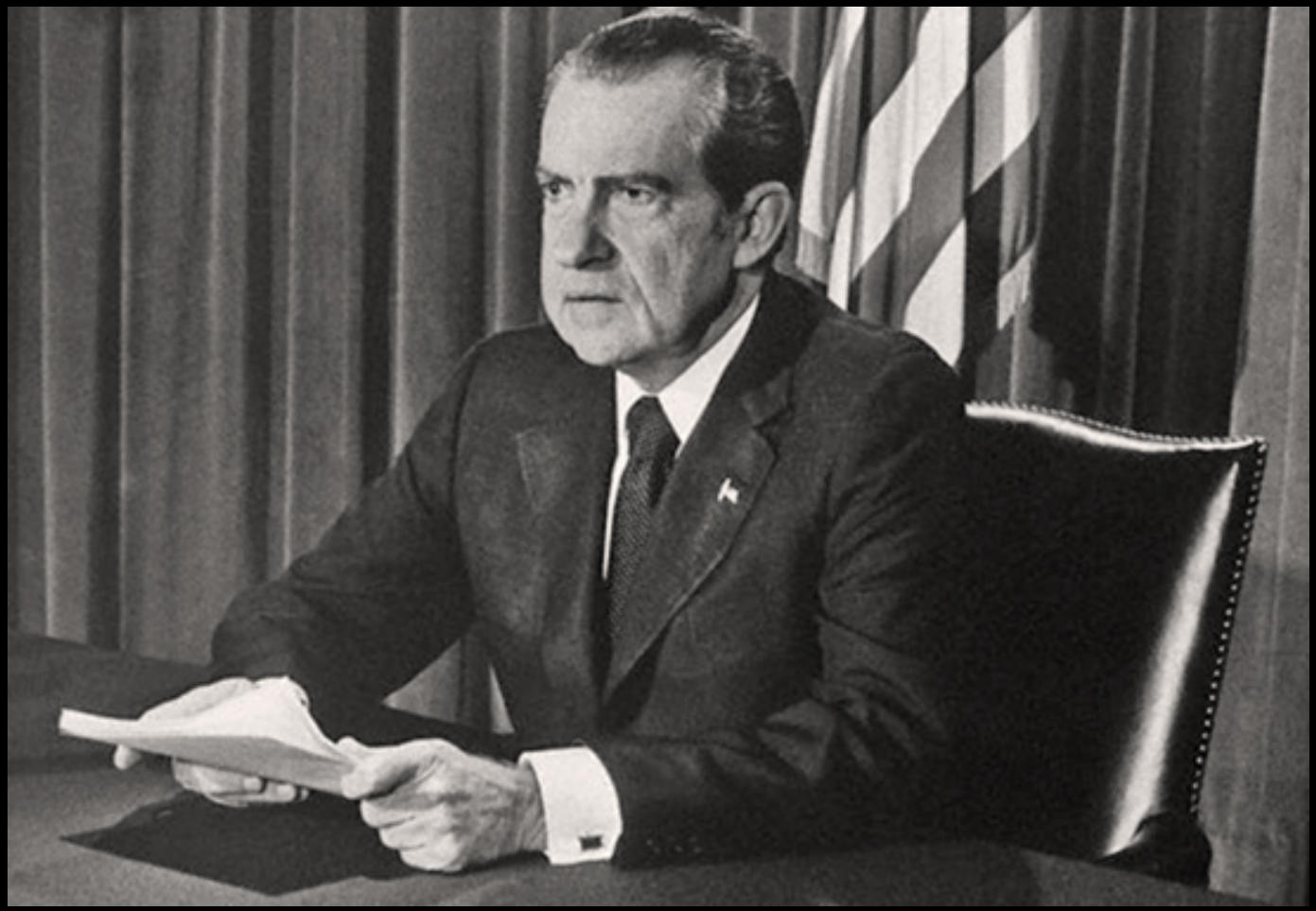


Context of the Drug War: 1970s

- Intense political conflict / social change
- Transformation of race relations (leading to a backlash)
- Rise in crime
- Crime and race often conflated

National Research Council. The growth of incarceration in the United States: exploring causes and consequences. National Academies Press, 2012.

Executive Order 11599 - June 18, 1971



1970s: “A National Emergency”

- Surge in heroin deaths, especially in young people
- Troops returning from war developing drug problems
- Veteran’s Administration hospital using restrictive treatment policies and not serving service-members
- Judicial discretion constrained by mandatory minimum sentences
- Need for more lenient, humane approach to drug users
- Particular medication well supported by research but underused

"Special Message to Congress on Drug Abuse Prevention and Control"

- Response to heroin epidemic, especially in Vietnam servicemen
- Established the Special Action Office of Drug Abuse Prevention
- "To wage an effective war against heroin," "full scale attack," "we will prevail … and conquer"
- "A new approach to rehabilitation," "more lenient and flexible sanctions," "compassion, not simply condemnation"
- $105 million for treatment and rehabilitation
- Directed the VA to treat servicemen with addiction
- Increased funding for methadone treatment & study
- Directed federal research efforts to develop synthetic opioid substitutes

Nelson Rockefeller

- Governor of New York (1959 – 1973)
- Republican presidential candidate in 1972
- Perceived as liberal by many conservatives
- Increase in narcotics use and crime in NYC
- Took "tough on crime" stance

Rockefeller Laws (1973)

- Rockefeller originally supported voluntary treatment over incarceration in 1963 (most addicts chose jail)
- Political pressure to "get tough" – Rockefeller signed law that dramatically increased penalties for possession and sale of Schedule I drugs
- Possessing (4oz) or selling (2oz) of heroin, cocaine, or cannabis brought a mandatory minimum sentence of 15 years and a possible maximum sentence of 25 years to life
- Inordinately applied to black/Latino defendants
- Granddaughter Meile Rockefeller arrested in 2002 for protesting the "Rockefeller Laws"

Broken Windows Theory (Wilson)

- Linked petty "quality of life" crimes to serious crimes
- Social disorder is a driver of criminality
- Leaving the little laws unenforced (broken windows) leads to larger laws broken (property crimes)
- Forerunner of "zero tolerance"

1980's "Tough-on-crime" Legislation

- Policy choices made to greatly increase the use of imprisonment as a response to crime

"The reason why we went to mandatory minimums is because of these soft-on-crime judges that we have in this society – judges who just will not get tough on crime, get tough especially on pushers of drugs that are killing our youth. And so that's why the mandatory minimums, so that we set some reasonable standards within which judges have to rule, rather than allowing them to just put people out on probation who otherwise are killing our kids."

- Senator Orrin Hatch (R-Utah)

1980's Drug War Legislation

1. Sentencing Reform Act (1984)

   abolished federal parole

   inmates must do 85% of their sentence

   passed by large majorities in both Houses

2. Anti-Drug Abuse Act (1986)
3. Anti-Drug Abuse Act (1988)

1980's Drug War Legislation

1. Sentencing Reform Act (1984)
2. Anti-Drug Abuse Act (1986)

   changed supervised release in federal system from rehabilitative to punitive

   established mandatory minimum sentences

   mandatory 5 years for 5 grams crack cocaine (later reduced by the 2010 Fair Sentencing Act)

3. Anti-Drug Abuse Act (1988)

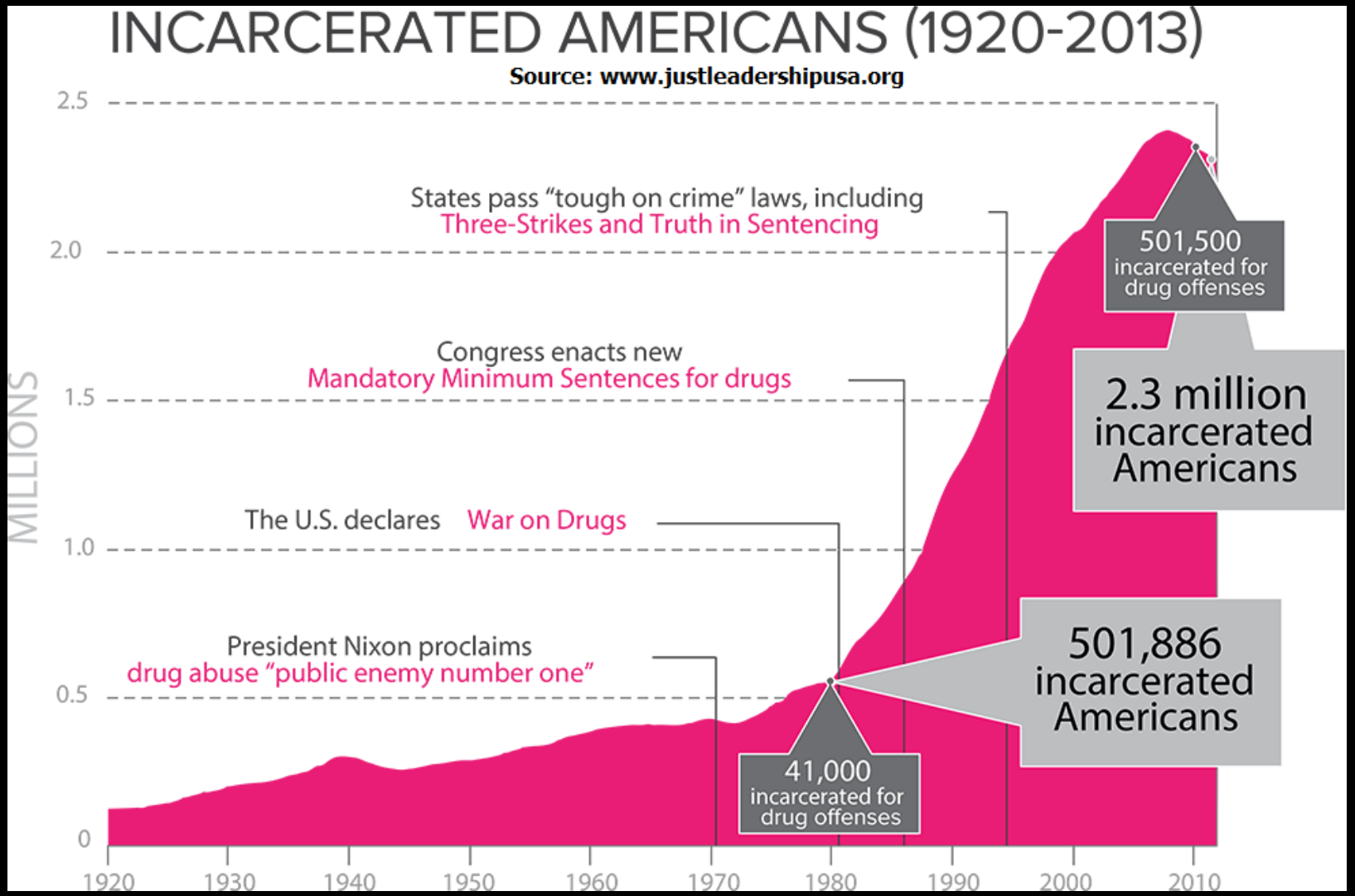
1980's Drug War Legislation

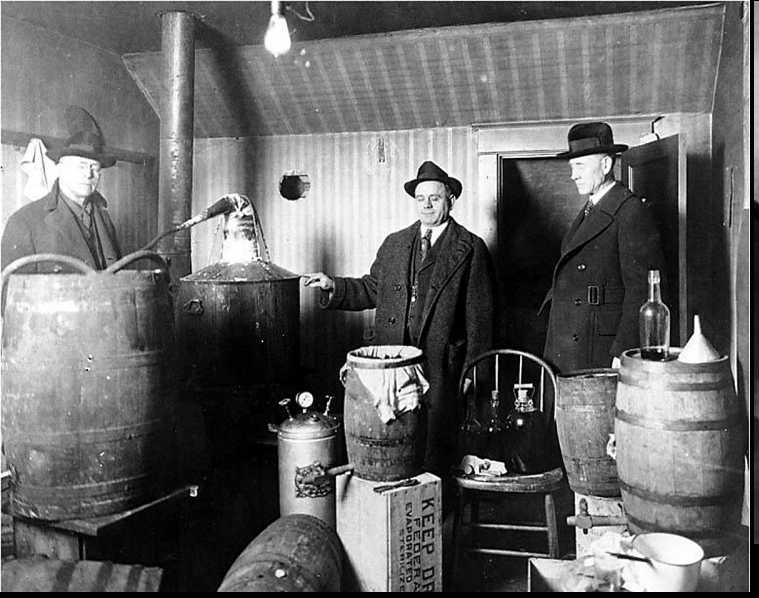
1. Sentencing Reform Act (1984)
2. Anti-Drug Abuse Act (1986)
3. Anti-Drug Abuse Act (1988)

    created policy of a Drug-Free America

    established the Office of National Drug Control Policy

Surge in Incarcerated Population

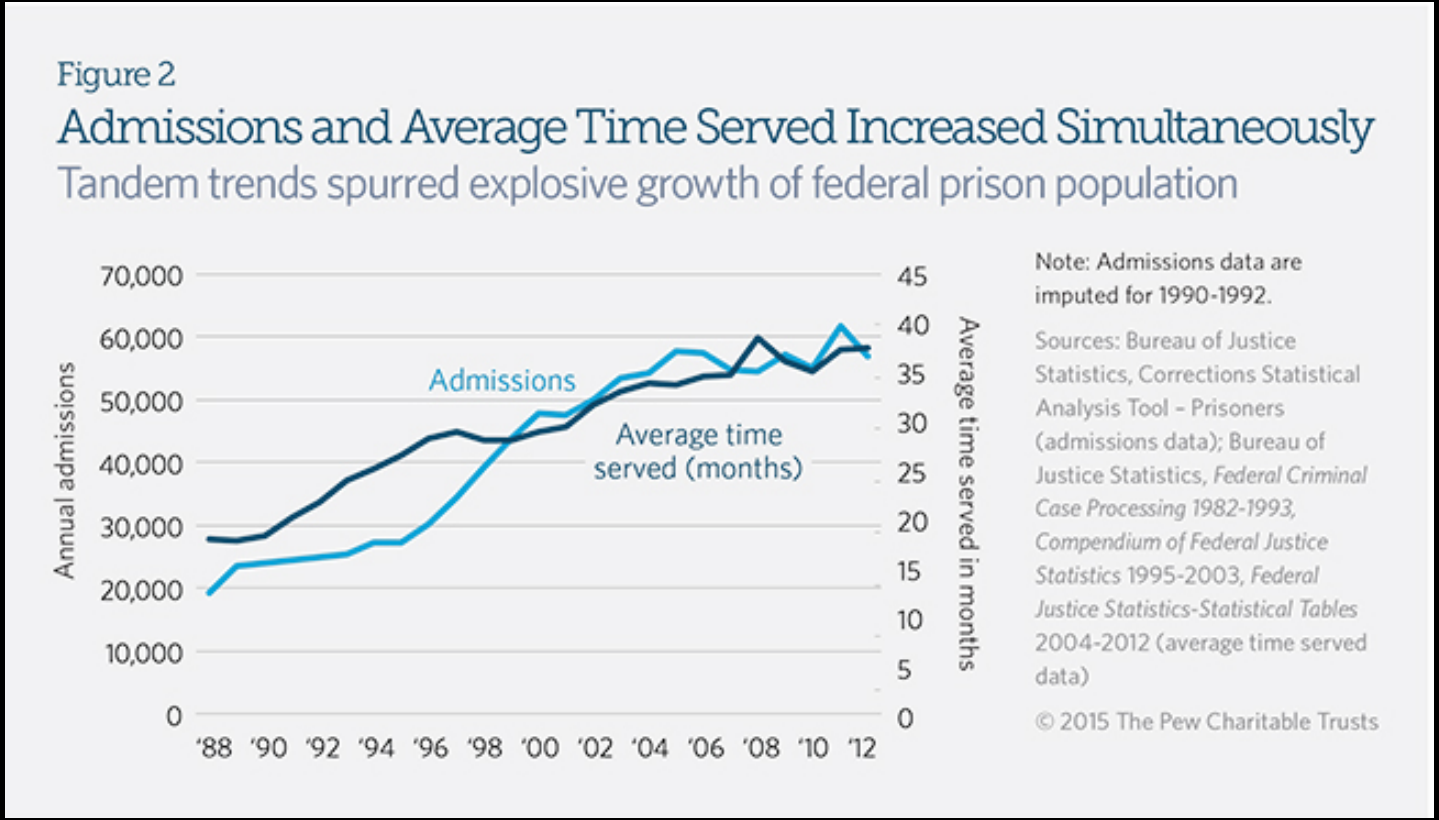




Enforcement of the Volstead Act

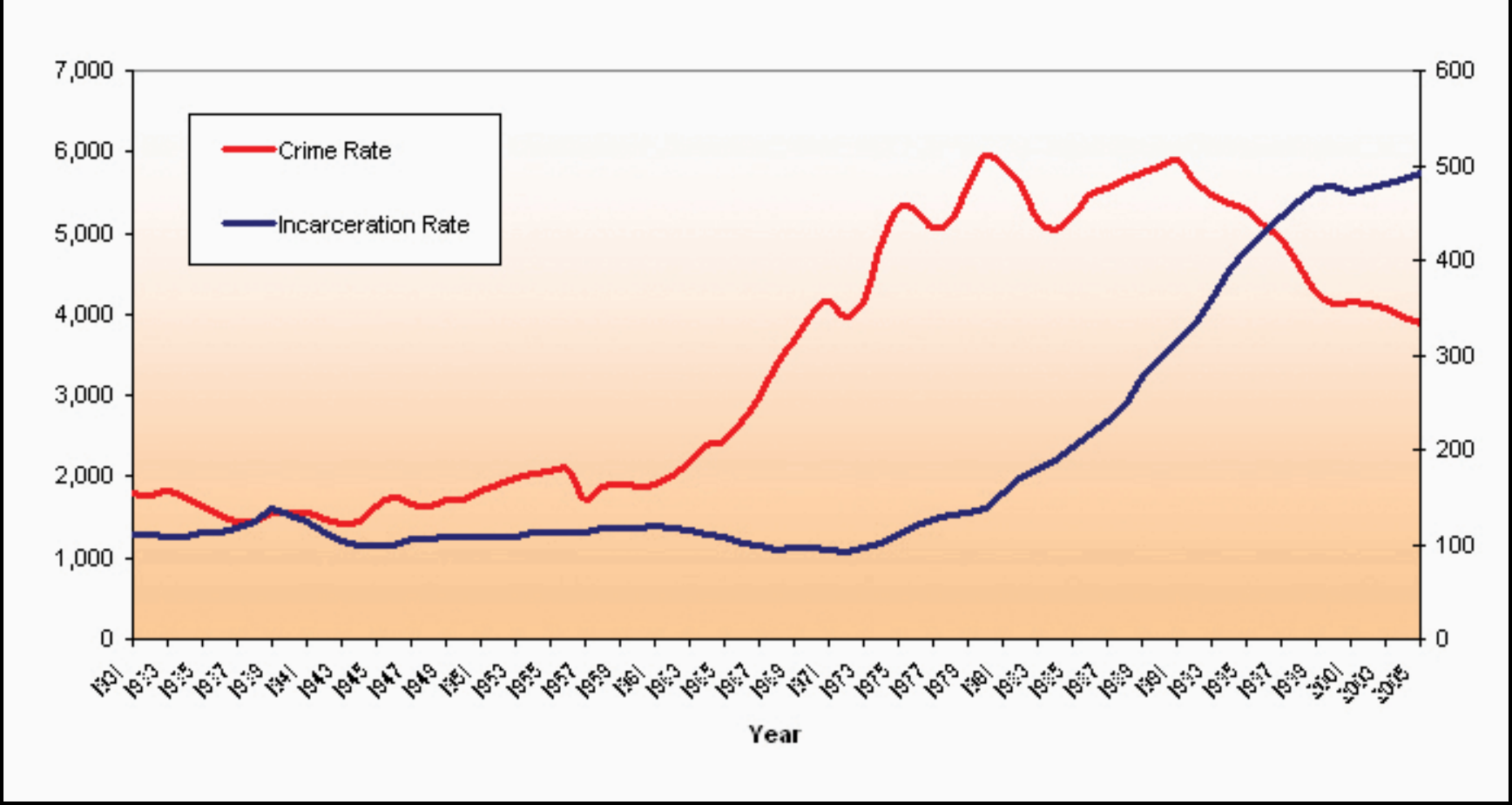
during prohibition (1929 – 1933)

Longer sentences ···



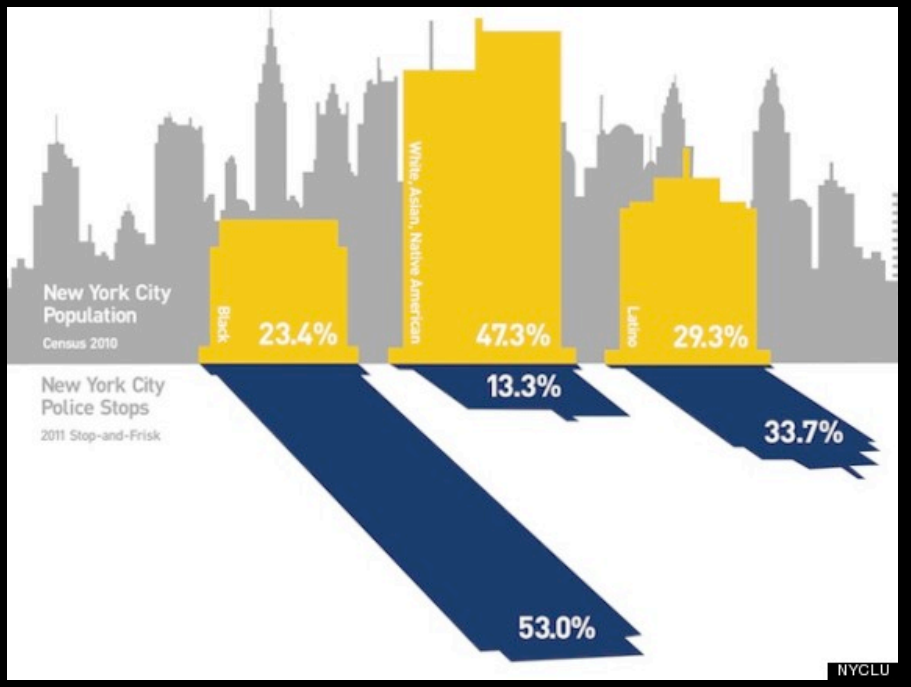
- "Three-strikes" Laws, more felony charges, removal of educational programs
- Mandatory minimum sentences gave more discretion to prosecutors > judges
- Use of plea bargains over trials and informants
- Elimination of parole in the Federal Prison system

Incarceration Rate increased while Crime Rate decreased



National Research Council. The growth of incarceration in the United States: exploring causes and consequences. National Academies Press, 2012.

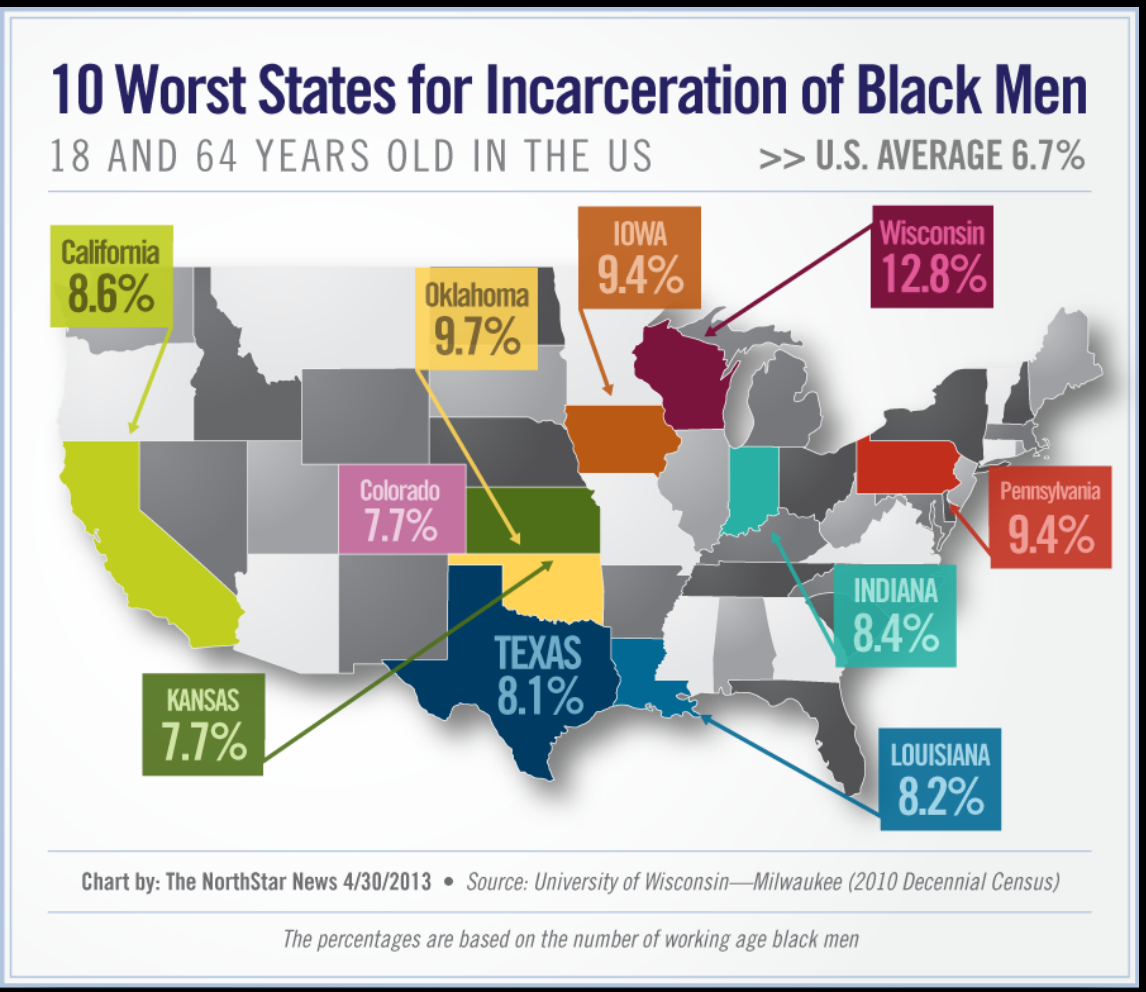
NYPD: “Stop and Frisk” Policing



Racial Sentencing Disparity

- Intensified enforcement of drug laws subjected blacks to mandatory minimum sentences over whites despite lower levels of drug use and trafficking

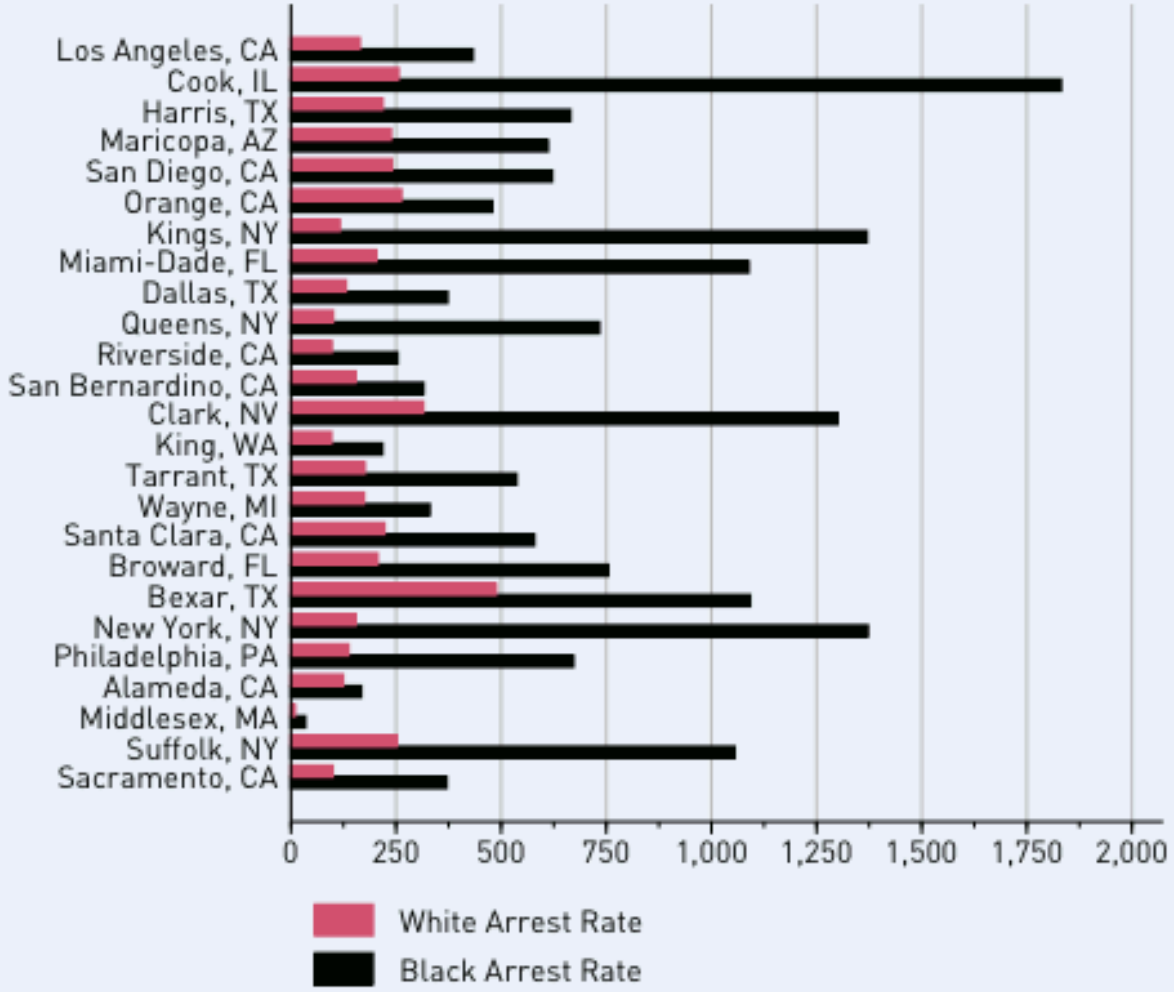
Racial Disparities



Pervasiveness of imprisonment among poorly-educated men is unprecedented and has only emerged in the last two decades

FIGURE 16

Racial Disparities in Marijuana Possession Arrests in the 25 Most Populous Counties in U.S. (2010)



Source: FBI/Uniform Crime Reporting Program Data and U.S. Census Data

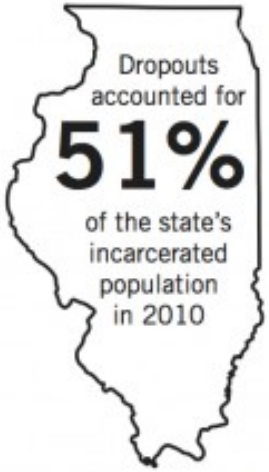
Chicago School-to-Prison Pipeline

Incarceration and High School Dropout Rates[1]

Students who are suspended are **3x more likely to drop out of high school** by 10th grade[2]; native-born male dropouts between 18 and 34 are **5x more likely to be incarcerated** than peers with diplomas.

Black men, education, & incarceration rates
ages18-34 in IL

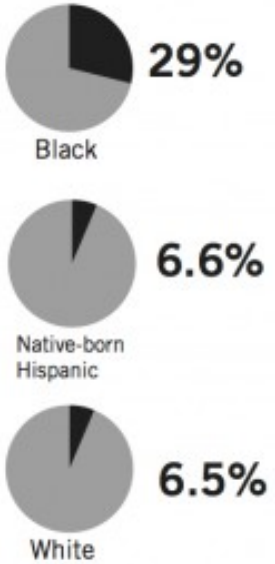
Among IL young adults between 18 and 34:



In 2010, 10% of native-born dropouts were in prison.

Incarceration rates & gender
among IL dropouts 18-34

Incarceration rates & race
among Illinois' male HS dropouts ages 18-34



Comic, Seth Tobocman, sethtobocman.com

1: Unless otherwise specificed, all statistics from Sum, Andrew et. al. (November 2011). "High School Dropouts in Chicago and Illinois: The Growing Labor Market, Income, Civic, Social and Fiscal Costs of Dropping Out of High School. Center for Labor Market Studies, Northeastern University.

2: Goertz, M.E., Pollack, J.M. & Rock, D.A. (1996). Who drops out of high school and why?: Findings from a national study. Teachers College Record, 87, 357-73, available at www.tcrecord.org/Content.asp?ContentId=688.

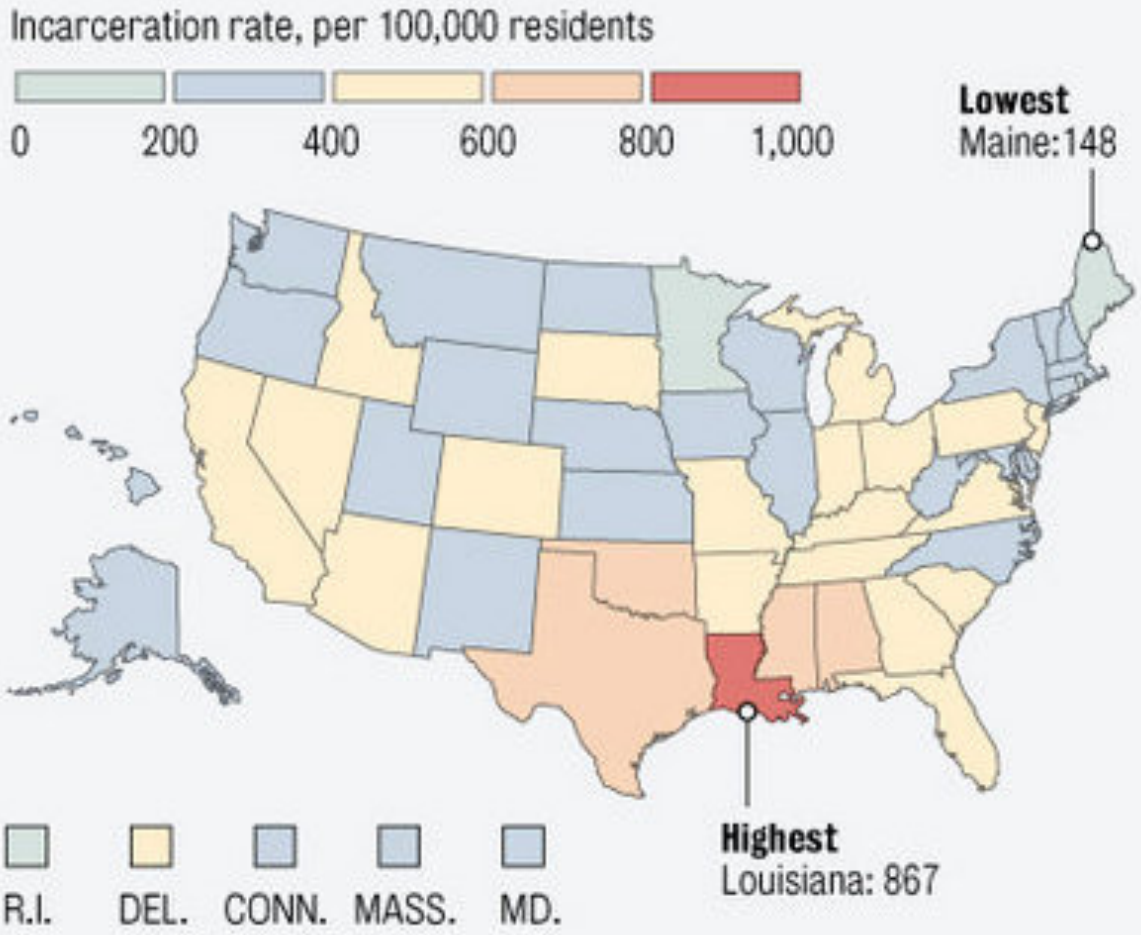
Project NIA, September 2013

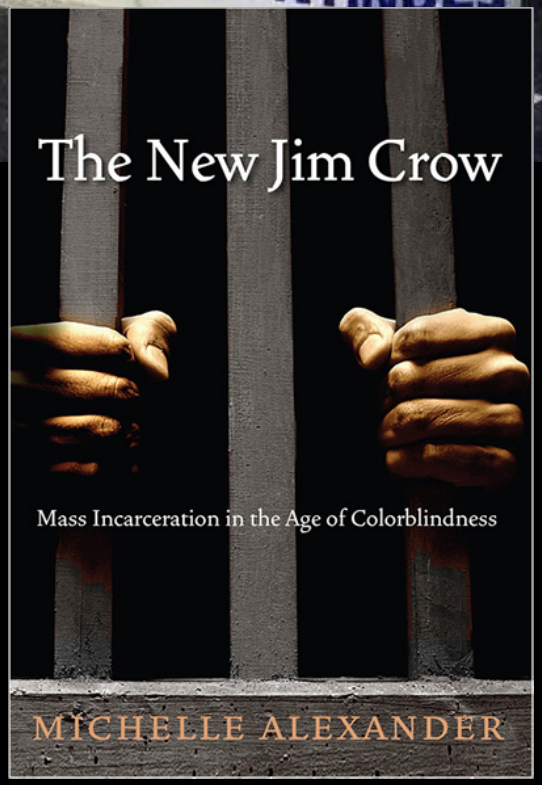
Louisiana

WORLD INCARCERATION RATES
include inmates awaiting trial
Rank
Incarceration Rate
Louisiana 1,619
1 United States 730
4 Georgia 531
5 Russian Federation 519
16 El Salvador 391
27 Iran 333
34 South Africa 310
49 Brazil 261
64 Mexico 201
88 Saudi Arabia 160
92 United Kingdom 155
114 Australia 129
123 China 121
130 Canada 117
174 Sweden 70
191 Japan 55

STATE INCARCERATION RATES

count only people who are serving time





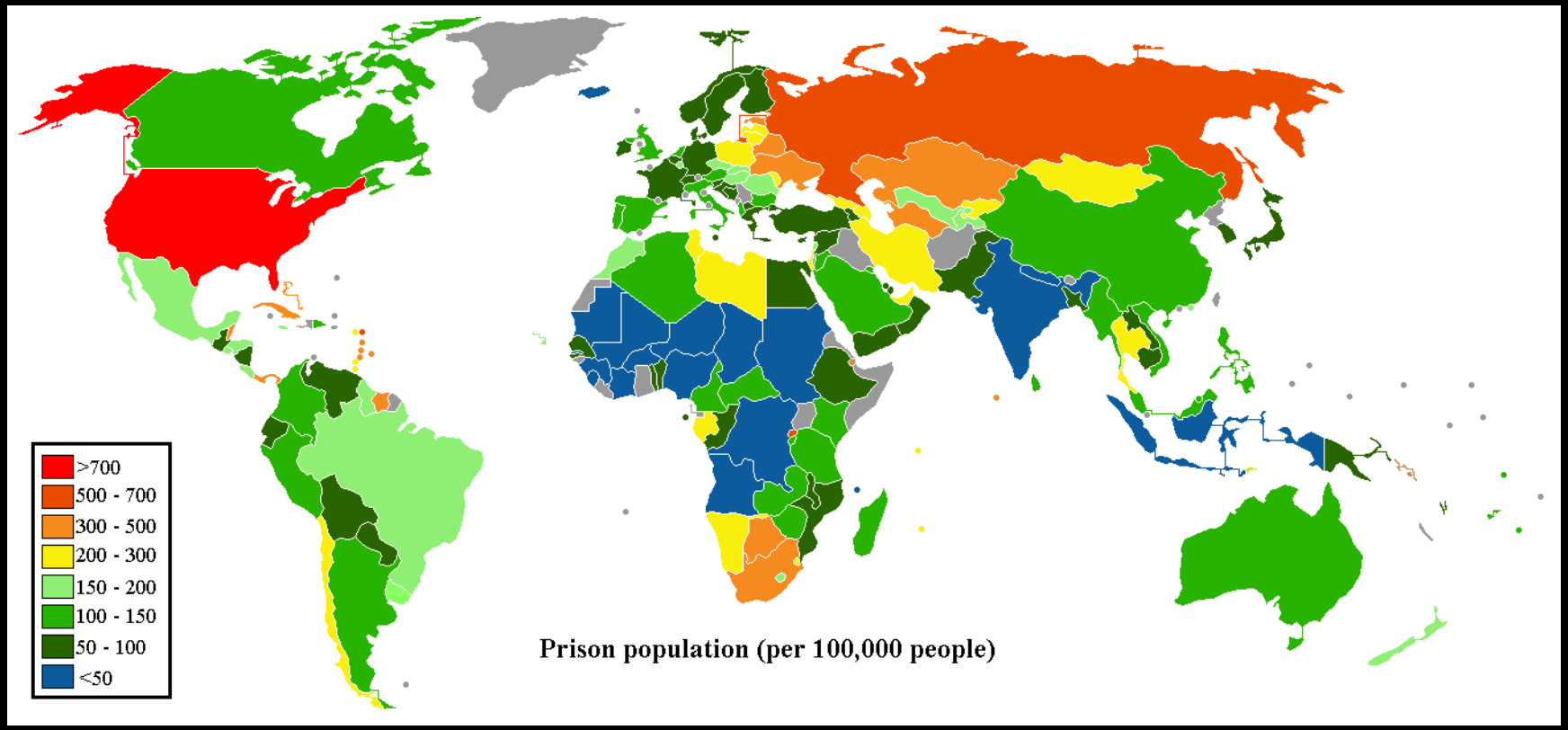
DON'T KEEP CALM

MORE BLACK MEN ARE IN PRISON TODAY, THAN THERE WERE ENSLAVED IN 1850.

WHILE BLACK WOMEN ARE THE **FASTEST** GROWING SECTOR OF THE PRISON POPULATION.

CITED: MICHELLE ALEXANDER, THE NEW JIM CROW: MASS INCARCERATION IN THE AGE OF COLORBLINDNESS

The U.S. contains 2% of the world's population but holds 25% of the worlds prisoners



National Research Council

Rate of rise of incarcerated Americans is:

- **Historically unprecedented**
- **Internationally unique**
- **Not related to rising crime rates**
- **Has had no clear impact on crime rates or recidivism**

National Research Council. The growth of incarceration in the United States: exploring causes and consequences. National Academies Press, 2012.

NRC: Causes of increased incarceration rates

1. Prison time required for lesser offenses
2. Increase in time served
3. Drug crimes more severely policed and punished

National Research Council. The growth of incarceration in the United States: exploring causes and consequences. National Academies Press, 2012.

Proximate drivers of increased incarceration

1. Mandatory minimum sentences

   designed to remove role of judge in sentencing

2. "Three strikes" laws

   mandatory 25 years-to-life sentences for "career criminals"

3. "Truth in sentencing" laws

   elimination of parole/probation in federal system

Markers of Social Disadvantage

Prison admission and return are now common in neighborhoods with:

- Crime
- Poverty
- Family instability
- Poor health
- Residential segregation

In communities of concentrated disadvantage, the United States embarked on a massive and unique intensification of criminal punishment

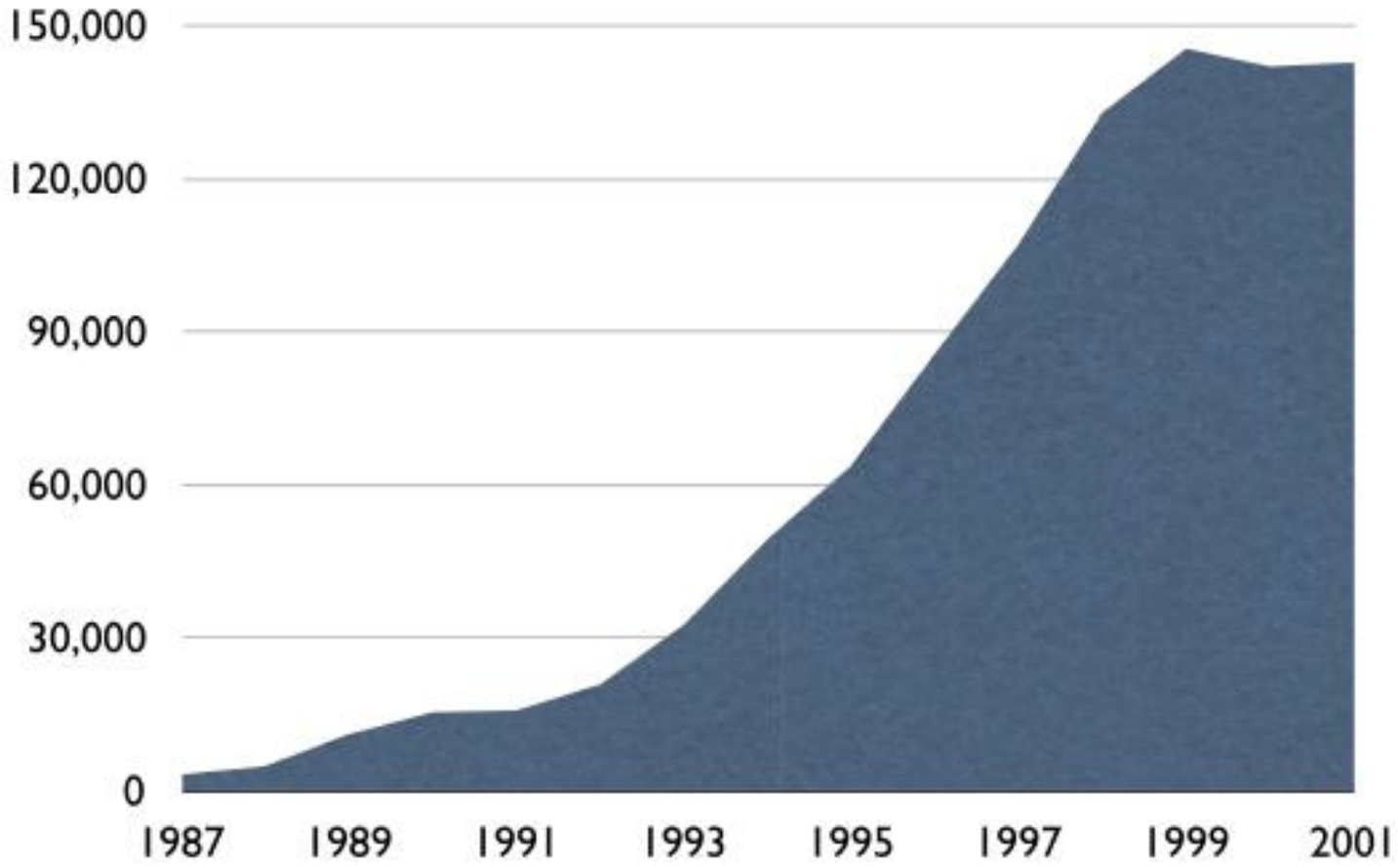
Felony Disenfranchisement

- Inability to vote (permanent in some states)
- Disqualification from jury duty
- Inability to own a firearm (and wear a protective vest)
- Student loan disqualification
- Housing restrictions

Prison Privatization

- Contractual agreements between state and local governments and third party correctional facilities
- Speculative private prison construction
- Half of Louisiana's 40,000 inmates are held in private correctional facilities
- Illinois & New York banned private prisons
- Oregon & North Dakota banned import/export of prisoners

Prisoners in adult private prisons, 1987-2001

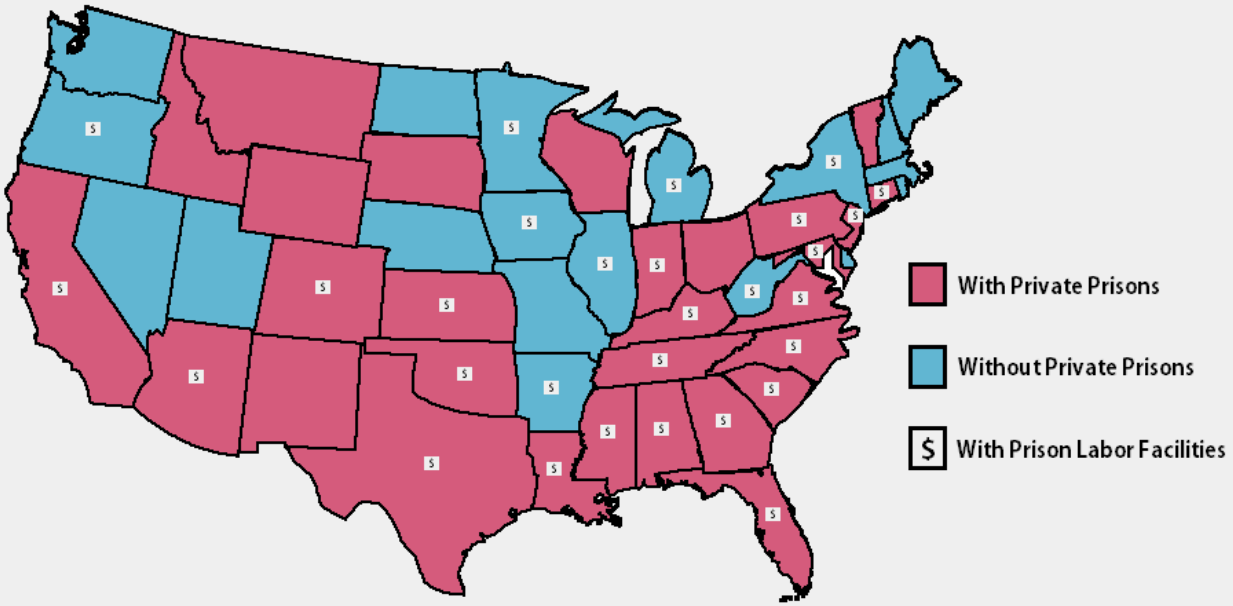


Data from Private Adult Correctional Facility Census, 1995 and 2001 Editions

The Prison Index

THE COLOR OF CORPORATE CORRECTIONS

WHICH STATES CONTRACT WITH FOR-PROFIT, PRIVATE PRISON COMPANIES?



62. Total Percentage of States Contracting with For-Profit, Private Prison Companies

91. Percentage of Former CONFEDERATE States Contracting with For-Profit, Private Prison Companies

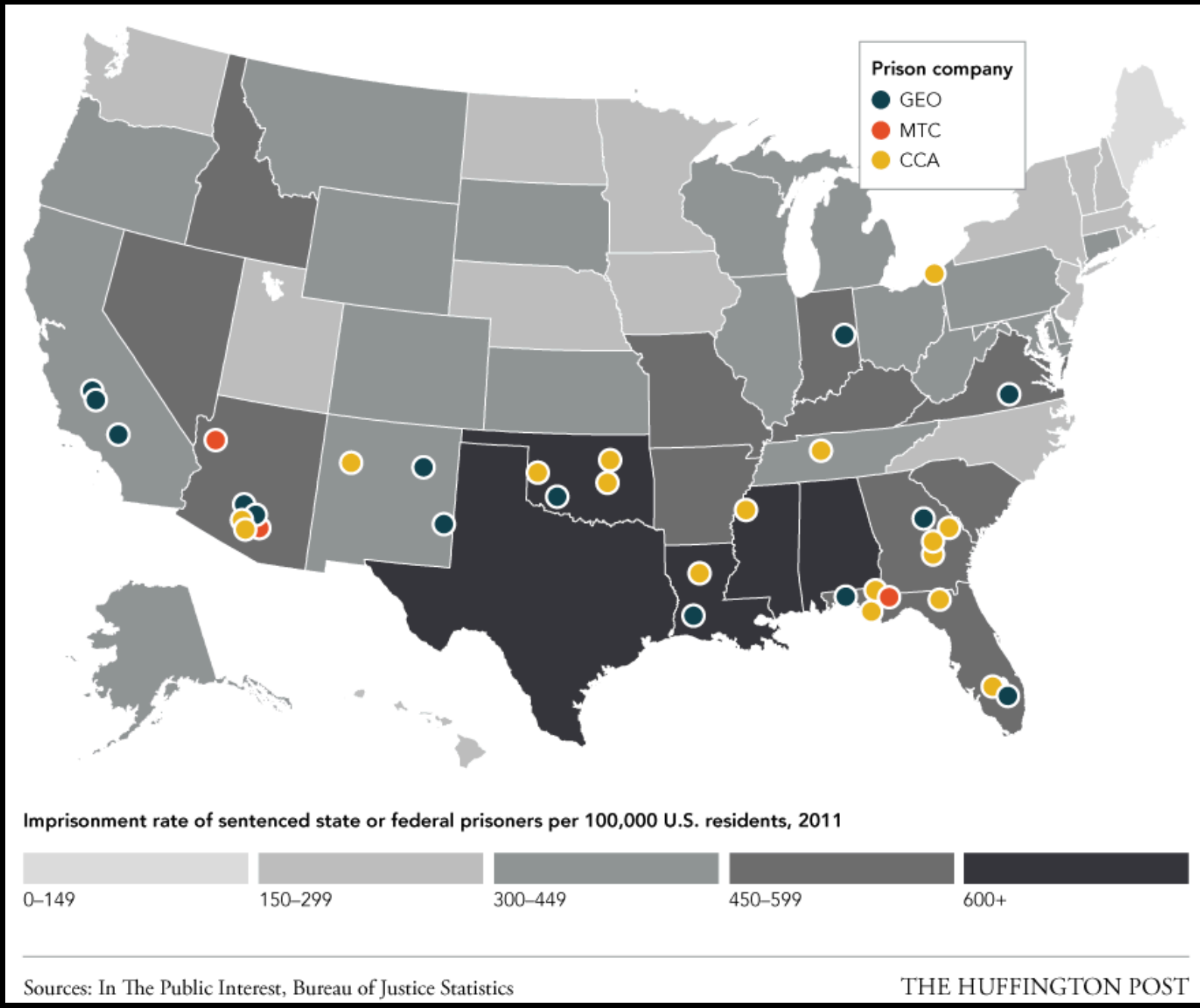
58. Total Percentage of States Housing a Prison Labor (UNICOR) Facility

100. Percentage of Former CONFEDERATE States Housing a Prison Labor (UNICOR) Facility

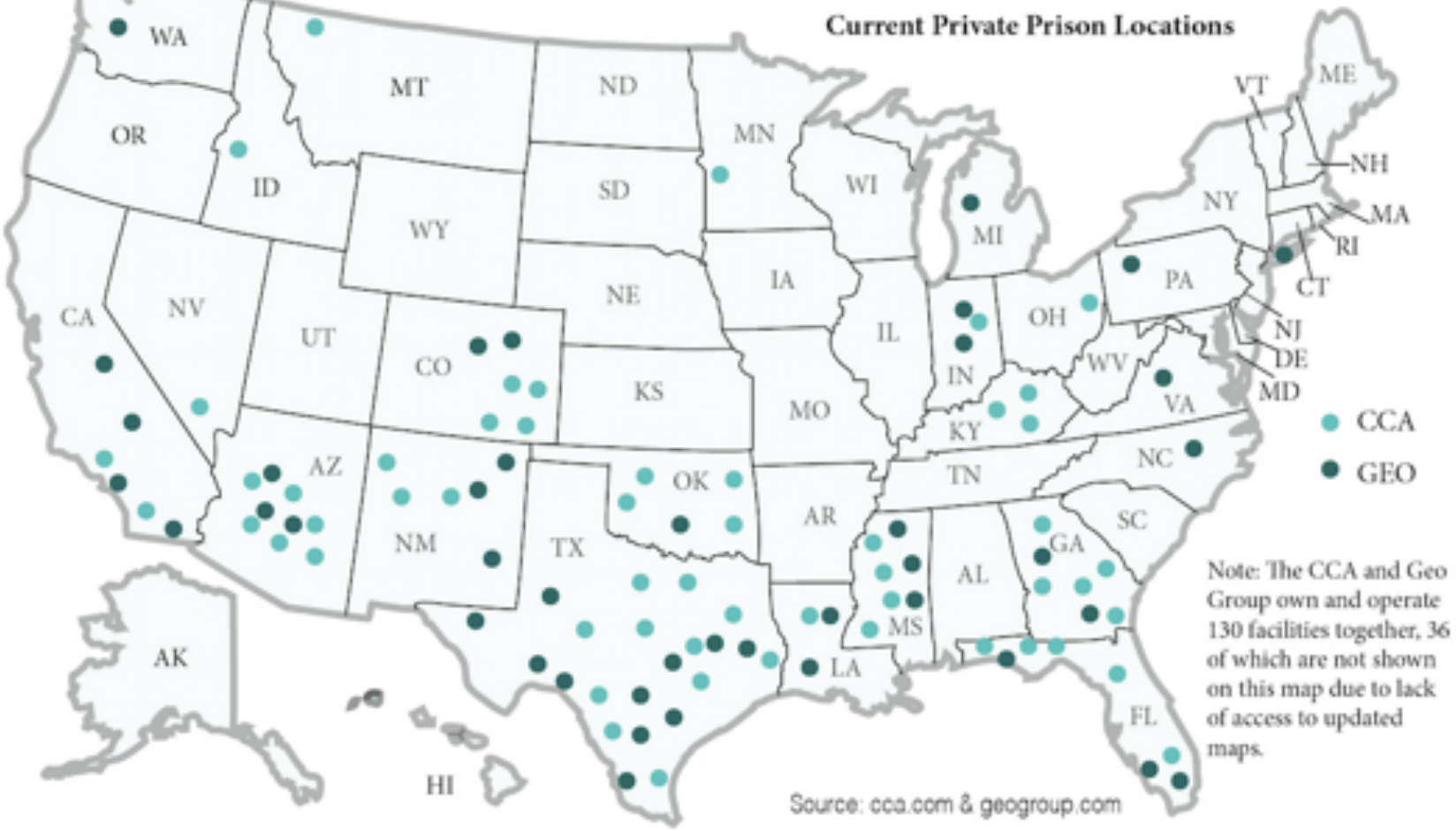
*** Though not pictured, all percentages include Hawai'i and Alaska

Research & Graphic by Christopher Petrella, 2013

Sources: Bureau of Justice Statistics, Prisoners in 2011 | Unicor Factory Locations, September 2012


Prison company
GEO
MTC
CCA
Imprisonment rate of sentenced state or federal prisoners per 100,000 U.S. residents, 2011
0–149
150–299
300–449
450–599
600+
Sources: In The Public Interest, Bureau of Justice Statistics
THE HUFFINGTON POST

Source: The New Yorker



Worsening of Incarceration Experience

- Removal of rehabilitative and educational programs
- Fewer medical and mental health services
- Overcrowding

Overcrowding does not lead to increases in violence, but does increase risk of suicide

Lethal violence levels have decreased

Health consequences of incarceration

- **Substance Use Disorders**
  - inadequate community treatment of SUDs
  - deinstitutionalization of mentally ill
  - syndemic of addiction and mental illness
  - criminalization of problem due to illegality of drugs and behaviors attracting police attention
  - mercy bookings: incarceration in jail when no other mental health resources are available

Health consequences of incarceration

- **Infectious Diseases**
  - Tuberculosis
  - STDs (28% of women in jails, 10% of men)
  - HIV/AIDS: declining but likely underrepresented, high risk behaviors, 17% of all Americans with HIV pass through a correctional facility annually
  - Hepatitis B & C

Health consequences of incarceration

- Hypertension
  - 11% of young persons in jail/prison have HTN
- Asthma
- Diabetes
- Dental Problems
- Injuries

Health consequences of incarceration

- **Disabilities**

  - minor disabilities in society become serious impediments in prison

  - ADLs pose particular challenges (bathing, dressing, getting on/off upper bunks, dropping to floor when ordered, hearing orders against background noise)

Health care in Correctional Facilities

- Prison Litigation Reform Act (1976) limits a prisoner's ability to sue until all appeals have been exhausted

Mental Health Consequences of Incarceration

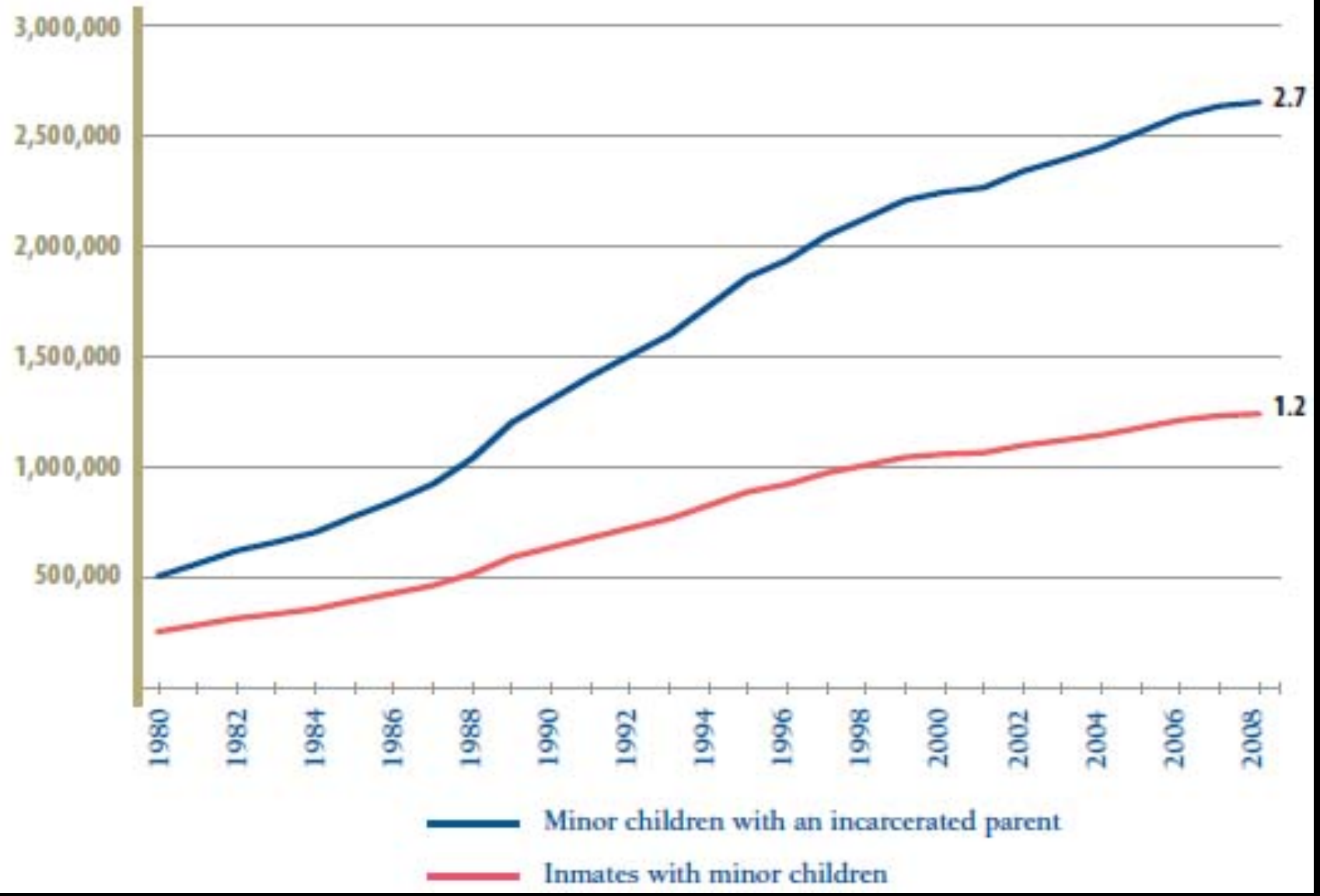
- 45 – 56% of people in prison have a mental health problem
- 64% of people in jails
- 10 – 25% of prisoners have a serious mental health problem
- 15% of men in jails
- 31% of women in jails
- (5% of the US population has a serious mental health problem)

Incarceration: Family Effects

- Housing insecurity
- Behavior problems in children
- Unemployment
- Increased Stress
- Adverse Childhood Experiences
- Tobacco Use
- Intimate Partner Violence

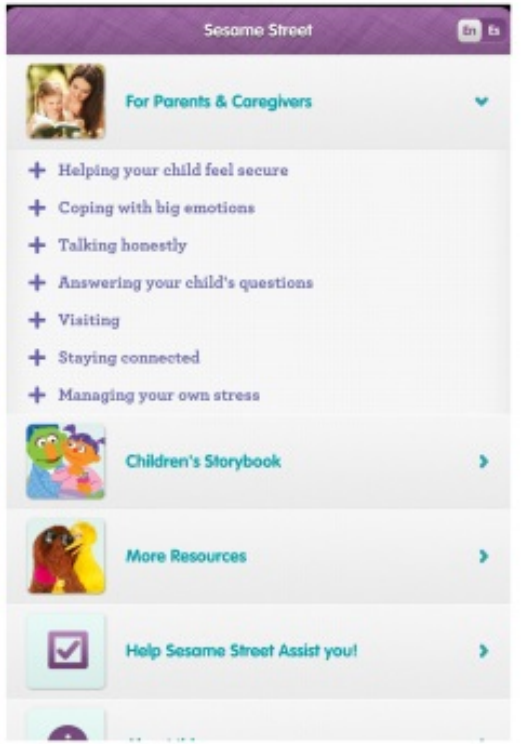
RISING NUMBERS OF CHILDREN WITH INCARCERATED PARENTS

Minor children outnumber incarcerated parents by more than 2 to 1



SESAME STREET

LITTLE children BIG challenges:incarceration



AZ
2,900 Miles
HI
1,700
prisoners

HAWAII
DEPARTMENT
OF
PUBLIC SAFETY
CCA

Epigenetics

- Modifications (DNA methylation, Histone acetylation) that effect gene expression
- Tells the cell what genes to express
- Heritable (but reversible) changes in gene expression due to environmental factors
- Allows passage of information from generation to generation that is not encoded in DNA
- Inheritance without DNA sequence change

Incarcerated Juveniles

- Higher vulnerability
- Higher disease burden
- 66% of incarcerated adolescents have a medical problem
- 20% are parents or expecting to be parents
- Fewer than half of juvenile detention facilities comply with national standards

Juveniles in Adult Facilities

- 13% of victims of inmate-on-inmate sexual abuse are under 18 years old
- Juveniles housed in adult correctional facilities are five times more likely to be sexually assaulted than those in youth facilites
- Twice as likely to be beaten by staff
- 7.7 times higher suicide rate
- 75% of all deaths of youth housed in adult correctional facilities are due to suicide

ARE OUR CHILDREN BEING PUSHED INTO PRISON?

THE PIPELINE TO PRISON: THE U.S. HAS THE HIGHEST INCARCERATION RATE IN THE WORLD, AND ITS PRISONS AND JAILS ARE OVERWHELMINGLY FILLED WITH AFRICAN AMERICANS AND LATINOS. THE PATHS TO PRISON FOR YOUNG AFRICAN-AMERICAN AND LATINO MEN ARE MANY, BUT THE STARTING POINTS ARE OFTEN THE SCHOOL AND FOSTER CARE SYSTEMS.

FROM SCHOOL TO PRISON

STUDENTS OF COLOR FACE HARSHER DISCIPLINE AND ARE MORE LIKELY TO BE PUSHED OUT OF SCHOOL THAN WHITES.

40% OF STUDENTS **EXPELLED** FROM U.S. SCHOOLS EACH YEAR ARE BLACK.

70% OF STUDENTS INVOLVED IN "IN-SCHOOL" **ARRESTS** OR REFERRED TO LAW ENFORCEMENT ARE BLACK OR LATINO.

3.5 X BLACK STUDENTS ARE THREE AND A HALF TIMES MORE LIKELY TO BE **SUSPENDED** THAN WHITES.

2 X BLACK AND LATINO STUDENTS ARE TWICE AS LIKELY TO **NOT GRADUATE** HIGH SCHOOL AS WHITES.

68% OF ALL MALES IN STATE AND FEDERAL **PRISON** DO NOT HAVE A HIGH SCHOOL **DIPLOMA.**

FROM FOSTER CARE TO PRISON

YOUTH OF COLOR ARE MORE LIKELY THAN WHITES TO BE PLACED IN THE FOSTER CARE SYSTEM, A BREEDING GROUND FOR THE CRIMINAL JUSTICE SYSTEM.

50% OF CHILDREN IN THE **FOSTER CARE SYSTEM** ARE BLACK OR LATINO.

30% OF FOSTER CARE YOUTH ENTERING THE **JUVENILE JUSTICE SYSTEM** ARE PLACEMENT-RELATED BEHAVIORAL CASES (e.g., RUNNING AWAY FROM A GROUP HOME).

25% OF YOUNG PEOPLE LEAVING FOSTER CARE WILL BE **INCARCERATED** WITHIN A FEW YEARS AFTER TURNING 18.

50% OF YOUNG PEOPLE LEAVING FOSTER CARE WILL BE **UNEMPLOYED** WITHIN A FEW YEARS AFTER TURNING 18.

70% OF INMATES IN CALIFORNIA **STATE PRISON** ARE FORMER **FOSTER CARE** YOUTH.

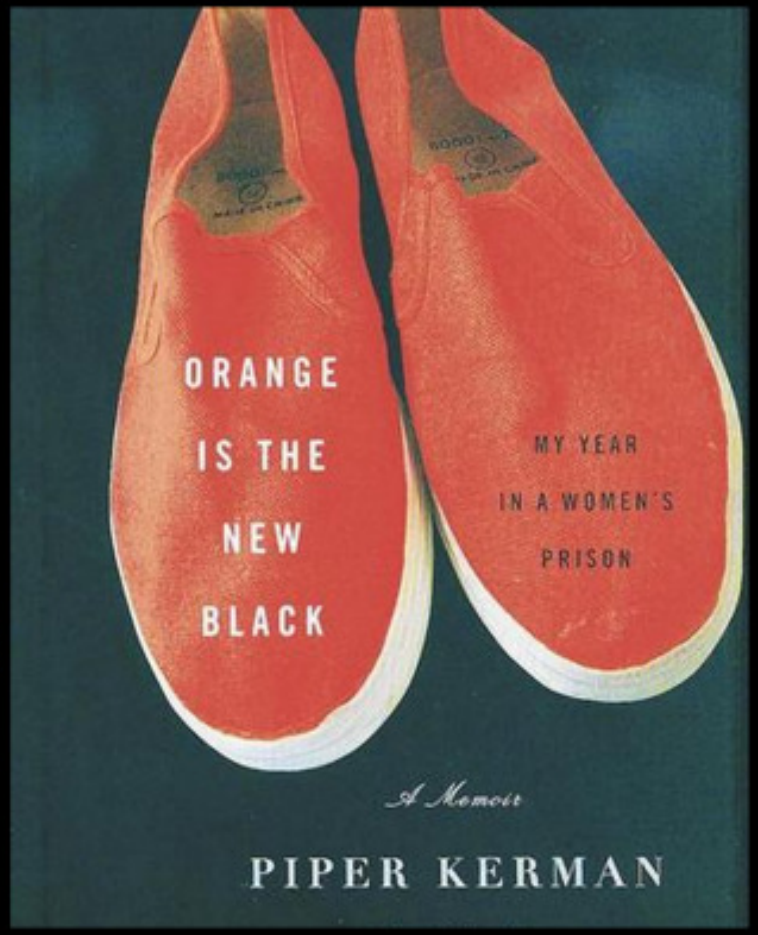
THE COLOR OF MASS INCARCERATION

© Community Coalition

Aging Incarcerated

- In the last 20 years, the US population aged 55 years and older increased by 50%
- In the last 20 years, the US incarcerated population aged 55 years and older increased by 550%
- Prisons are increasingly becoming a delivery site for nursing home-level care

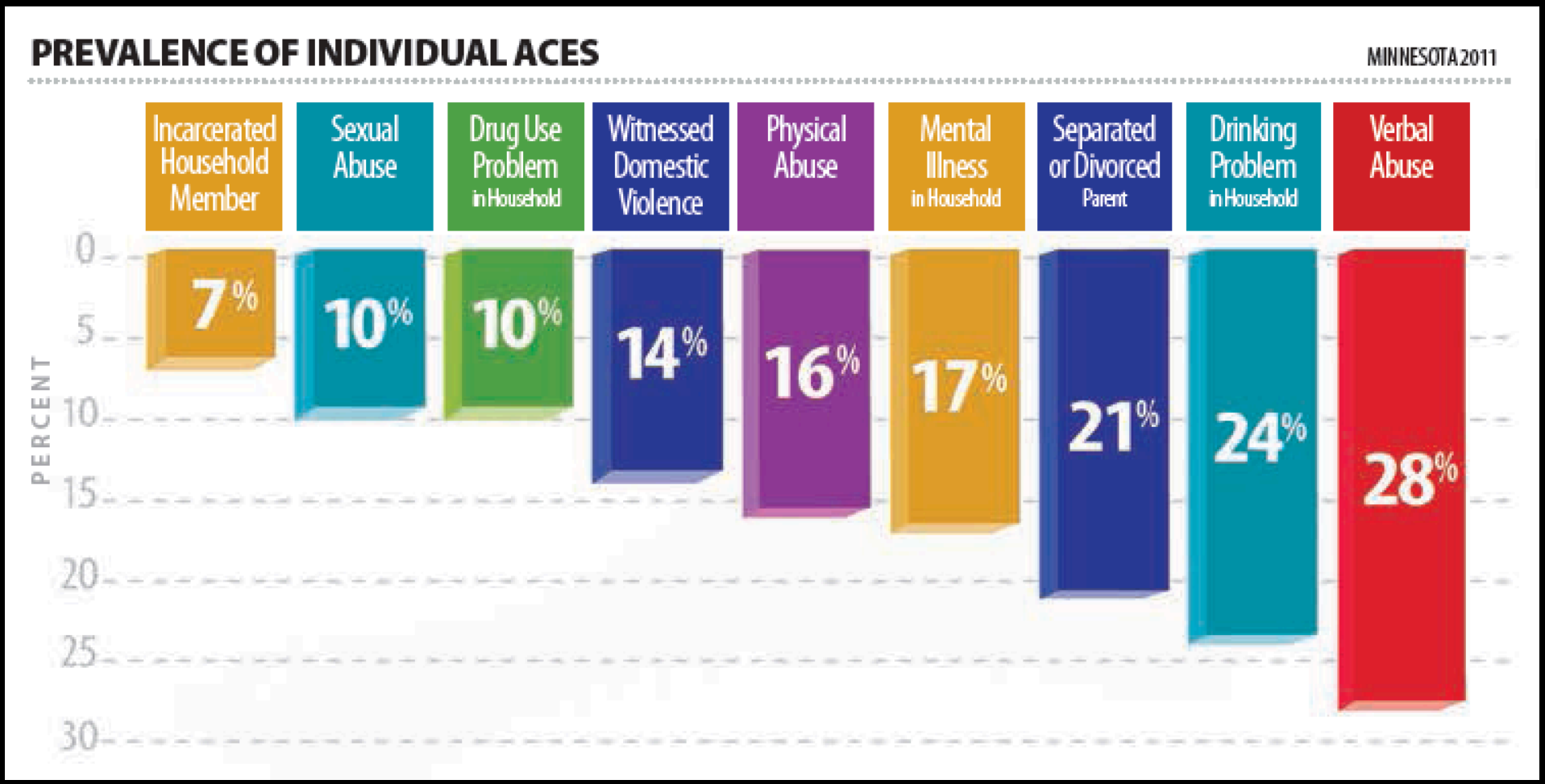
Incarcerated Women



Incarcerated Women

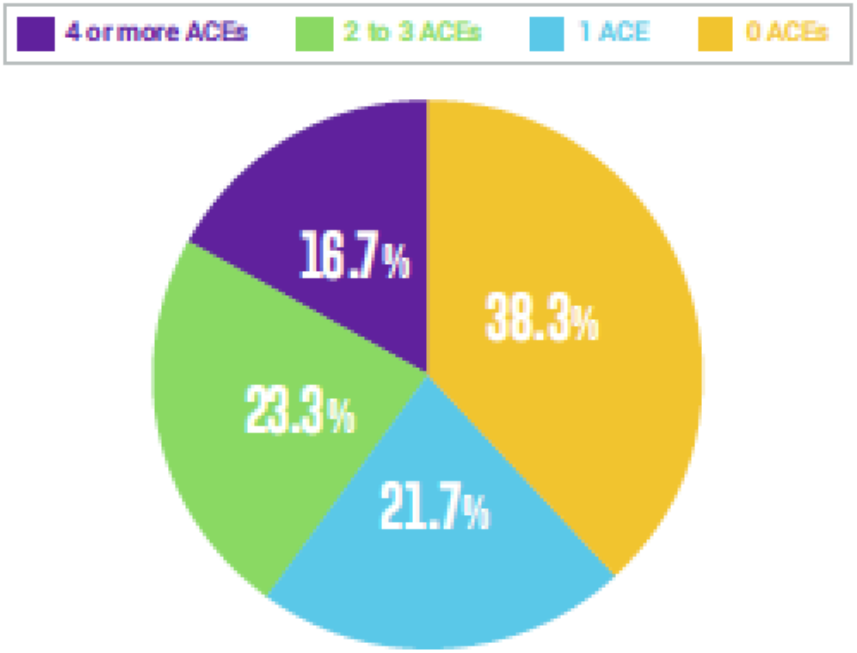
- 10% of correctional facility population
- Substantially higher rates of mental illness (more childhood sexual abuse, PTSD)
- Higher rates of Substance Use Disorder, STDs, abnormal Pap test results
- 5-6% of women entering jails/prisons are pregnant
- Improved birth outcomes: babies weigh more the longer a woman is incarcerated (access to prenatal care, decreased substance use, stable housing, regular meals)

Most women who enter incarceration pregnant conceived within 3 months of leaving a prior incarceration (underscores need for family planning)


PREVALENCE OF INDIVIDUAL ACES
MINNESOTA 2011
Incarcerated Household Member
Sexual Abuse
Drug Use Problem in Household
Witnessed Domestic Violence
Physical Abuse
Mental Illness in Household
Separated or Divorced Parent
Drinking Problem in Household
Verbal Abuse
PERCENT
0
5
10
15
20
25
30
7%
10%
10%
14%
16%
17%
21%
24%
28%

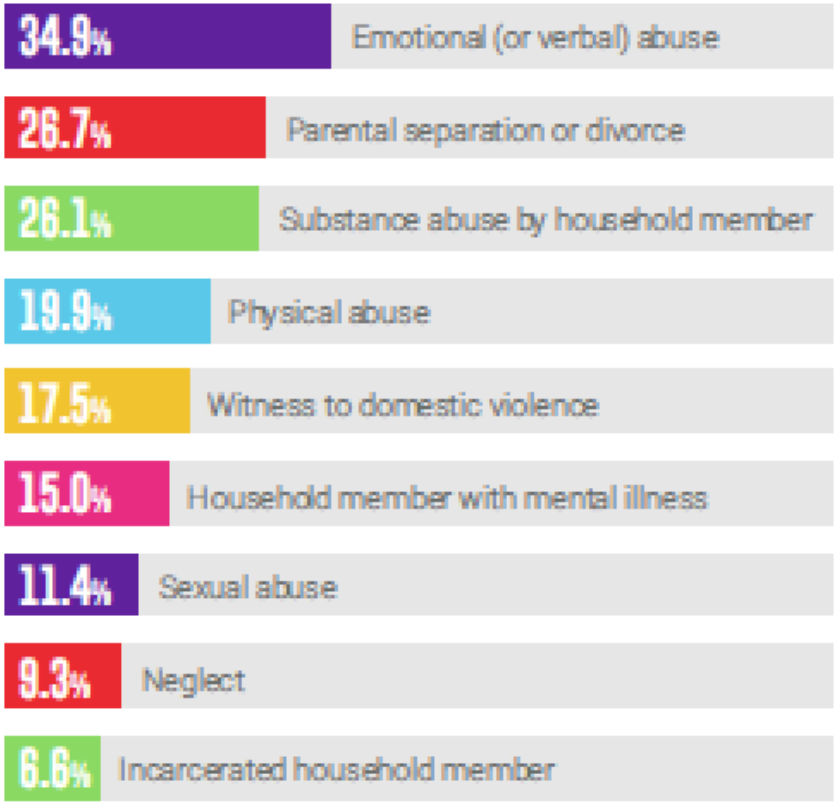
KEY FINDINGS

In California, **61.7%** of adults have experienced at least one ACE and **one in six**, or 16.7%, have experienced four or more ACEs. The most common ACE among California adults is emotional (or verbal) abuse.



Prevalence of number of ACEs among California adults

Most common ACEs among California Adults



Most common ACEs among California adults

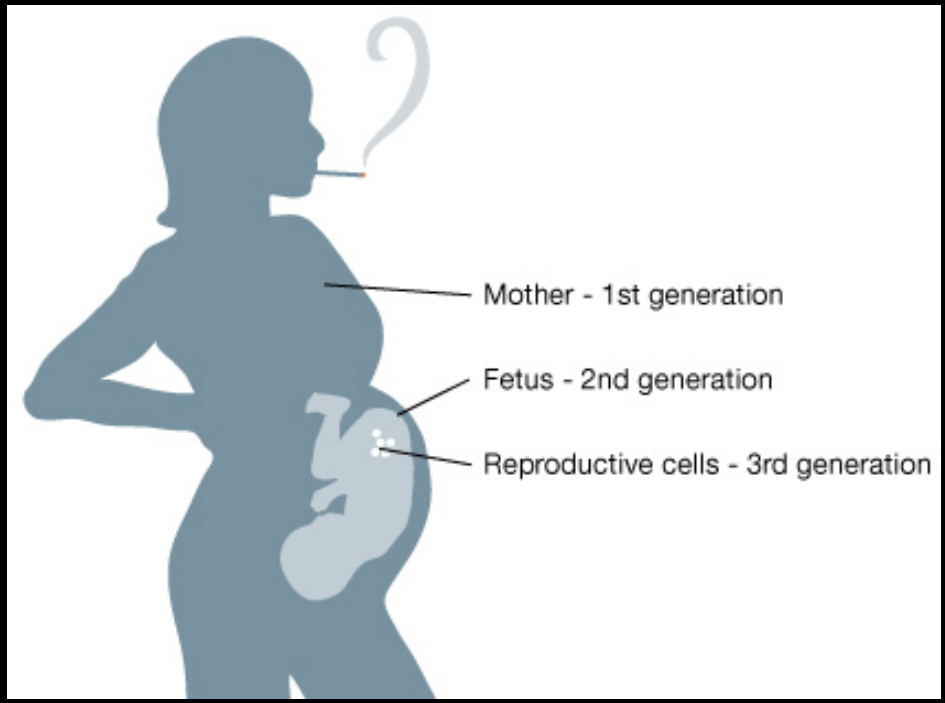
Childhood Trauma & Chronic Repeated Stress affect all 5 stages of SUD illness course

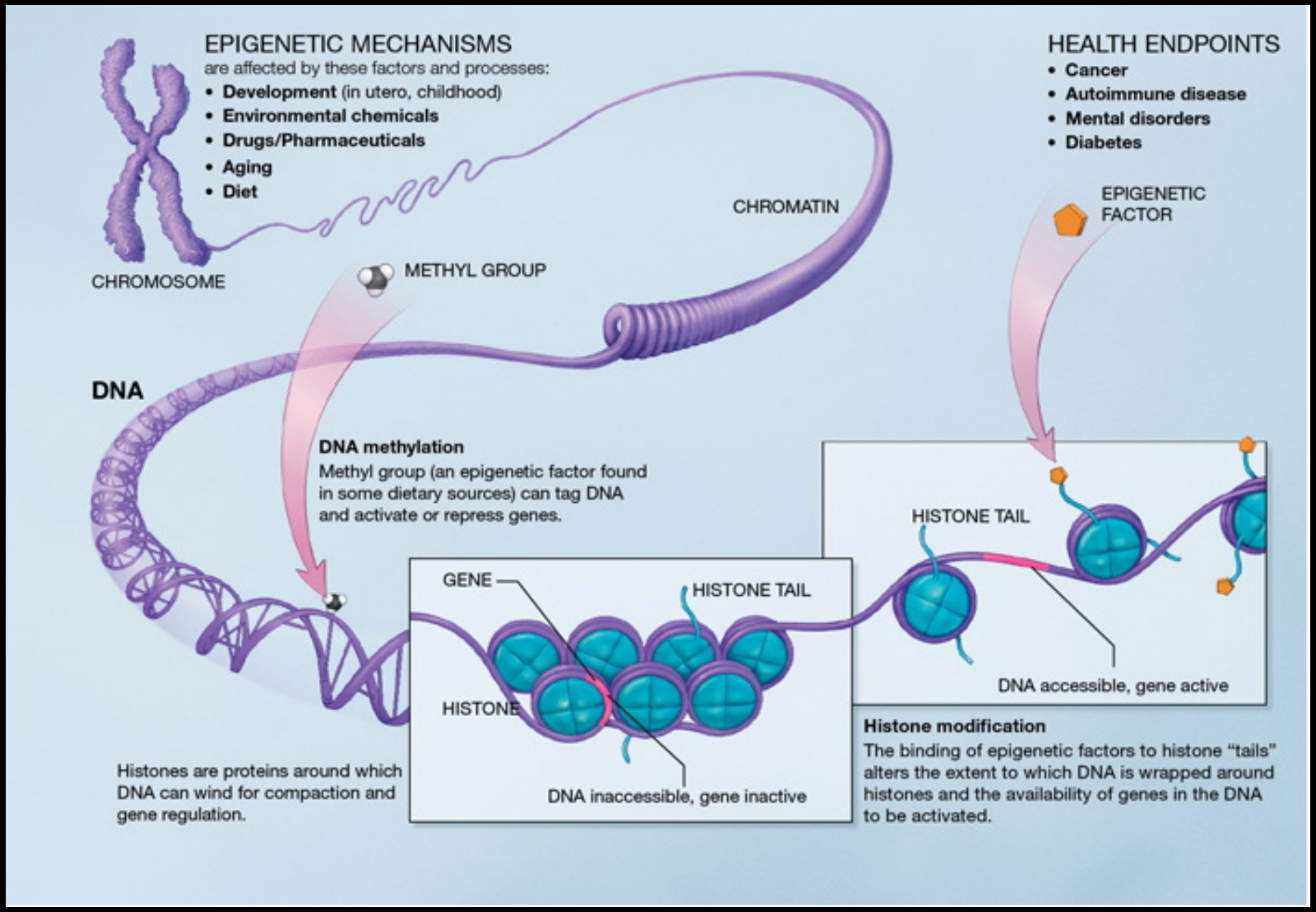
1. **INITIATION:** first time substance use & initial experimentation
2. **REGULAR USE:** shift from experimental to regular use
3. **ABUSE/DEPENDENCE:** escalation from regular substance use to abuse/dependence
4. **MOTIVATION TO QUIT:** behavioral & emotional control
5. **RELAPSE:** craving, negative affect

Lijffijt M. Stress modulates illness-course of substance use disorders: a translational review. Front Psychiatry (July 2014), 5(83): 1-20.

Epigenetics

- Overkalix study: Starvation during adolescence increased the prevalence of diabetes in *grandchildren*
- Holocaust survivors with PTSD: their children also had PTSD without having been exposed to trauma
- A mechanism exists to transmit environmental exposure information from one generation to the next to the next




EPIGENETIC MECHANISMS
are affected by these factors and processes:
• Development (in utero, childhood)
• Environmental chemicals
• Drugs/Pharmaceuticals
• Aging
• Diet
HEALTH ENDPOINTS
• Cancer
• Autoimmune disease
• Mental disorders
• Diabetes
CHROMOSOME
CHROMATIN
METHYL GROUP
EPIGENETIC FACTOR
DNA
DNA methylation
Methyl group (an epigenetic factor found in some dietary sources) can tag DNA and activate or repress genes.
GENE
HISTONE TAIL
HISTONE
DNA inaccessible, gene inactive
HISTONE TAIL
DNA accessible, gene active
Histones are proteins around which DNA can wind for compaction and gene regulation.
Histone modification
The binding of epigenetic factors to histone "tails" alters the extent to which DNA is wrapped around histones and the availability of genes in the DNA to be activated.

LOS ANGELES COUNTY SHERIFF'S DEPARTMENT
TWIN TOWERS CORRECTIONAL FACILITY
INMATE RECEPTION CENTER • MEDICAL SERVICES

Health care in Correctional Facilities

- *Estelle v Gamble* (1976) – Supreme Court found that "deliberate indifference" to medical needs of the incarcerated constituted a violation of 8th Amendment prohibition of cruel and unusual punishment
- *Brown v Plata* (2011) – Federal court found the State of California had a duty to provide health care and reduce overcrowding

Four principles that constrain the use of incarceration

1. Proportionality

   offenders should be sentenced in proportion to the seriousness of their crimes
2. Parsimony
3. Citizenship
4. Social Justice

National Research Council. The growth of incarceration in the United States: exploring causes and consequences. National Academies Press, 2012.

Four principles that constrain the use of incarceration

1. Proportionality
2. Parsimony

   confinement should be sufficient but not greater than necessary to achieve goals
3. Citizenship
4. Social Justice

Four principles that constrain the use of incarceration

1. Proportionality
2. Parsimony
3. Citizenship

   incarceration should not be so severe/lasting as to violate one's fundamental status as a member of society
4. Social Justice

Four principles that constrain the use of incarceration

1. Proportionality
2. Parsimony
3. Citizenship
4. Social Justice

   prisons should be instruments of justice, and should promote (not undermine) fair distribution of rights, resources, and opportunities

NRC Recommendations

- Incarceration has been overused and current policy is not effective and likely harmful to crime reduction efforts
- Consider a range of programs including:

  Community-based alternatives to incarceration

  Prisoner re-entry support

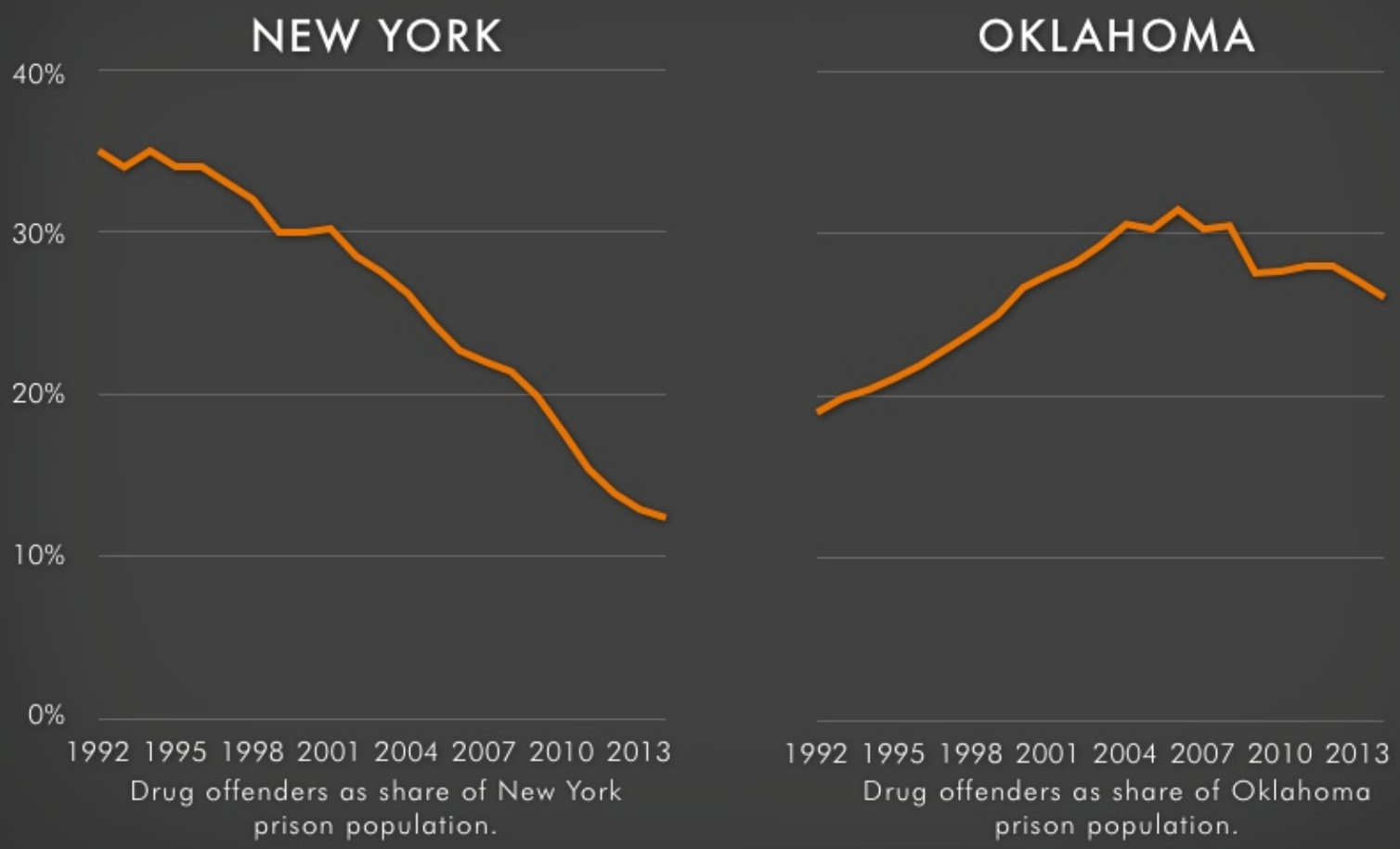
  Diversion from prosecution

New Changes

- Parity
- PPACA
- New treatments
- Legalization of marijuana for personal use
- ONDCP Policy Change: the “Third Way”
- Department of Justice
- Rise of the “New Recovery Movement”

What next?

Some states have largely ended the War on Drugs. Other states, not so much.

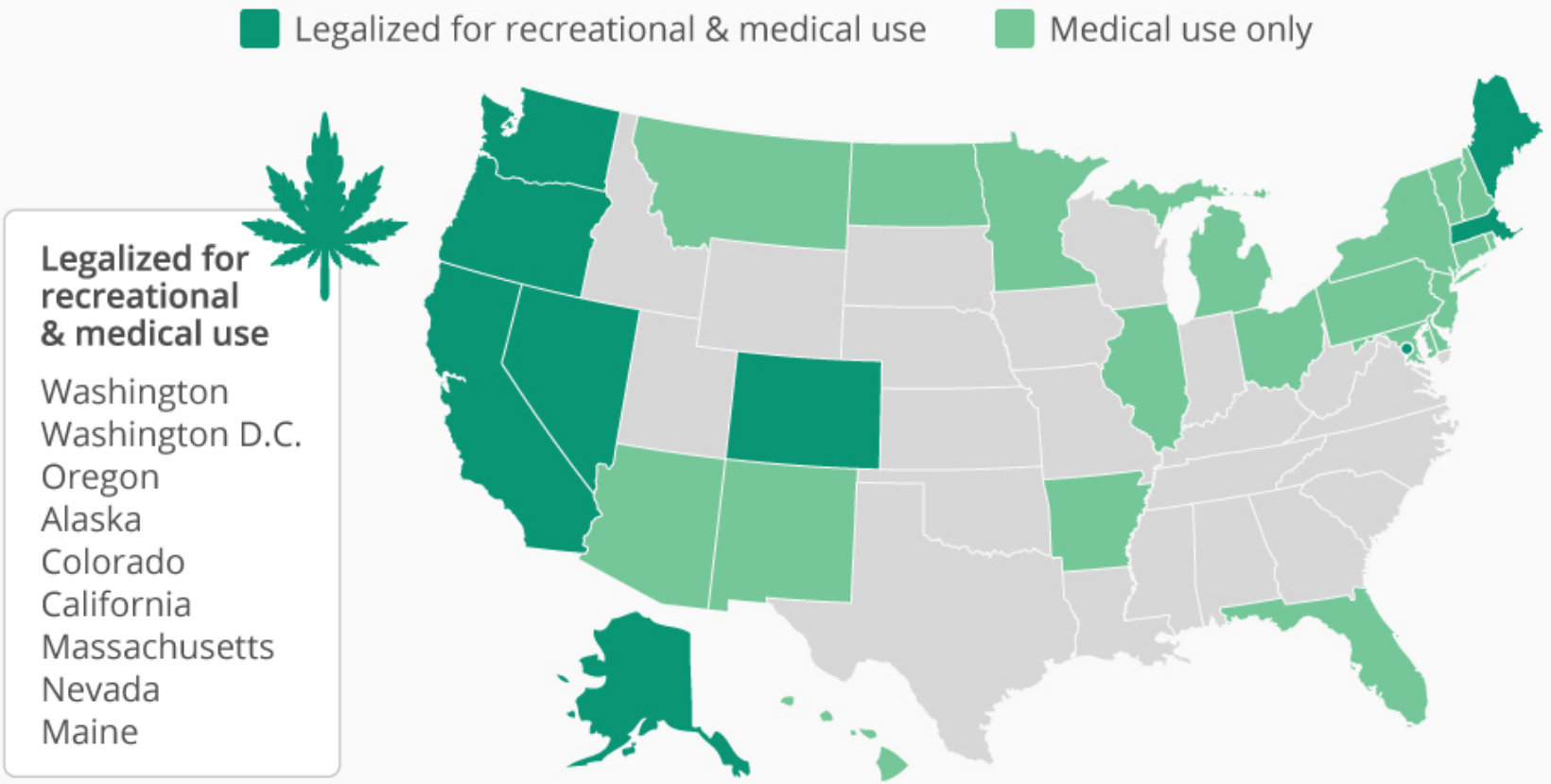


PRISON POLICY INITIATIVE

Compiled by the Prison Policy Initiative from state prison records for the years 1992 to 2014.

The States Where It's Legal To Smoke Marijuana

Laws on recreational and medical marijuana use in the US*



* As of Nov 10, 2016 - laws in some states have not yet taken effect.
Some states not highlighted allow limited medical marijuana access

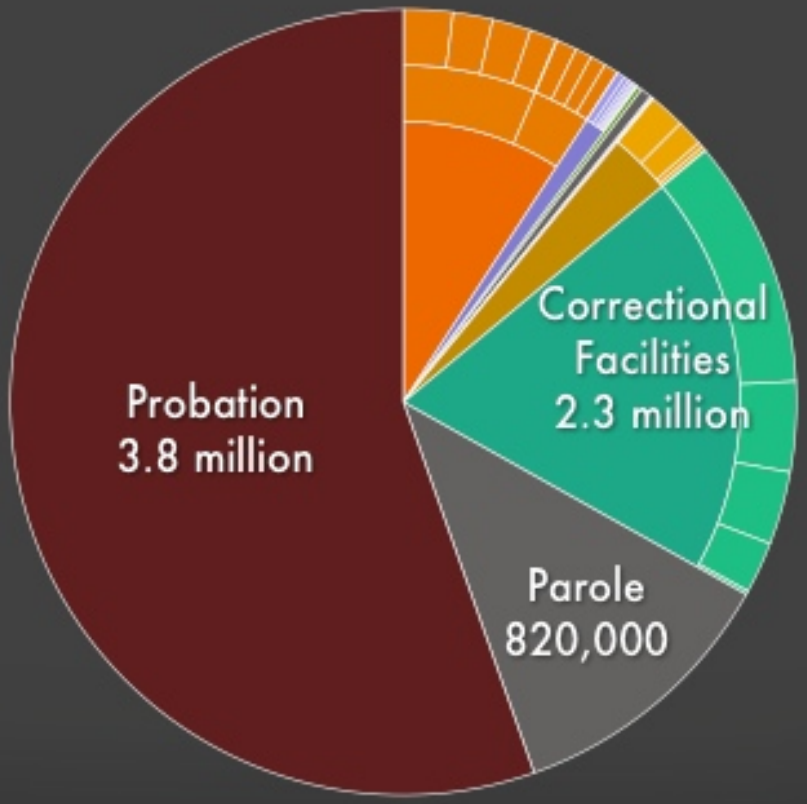
@StatistaCharts

Source: NY Times

statista

Confinement is just one slice of the correctional control pie

The U.S. justice system controls more than 7 million people, more than half of whom are on probation.

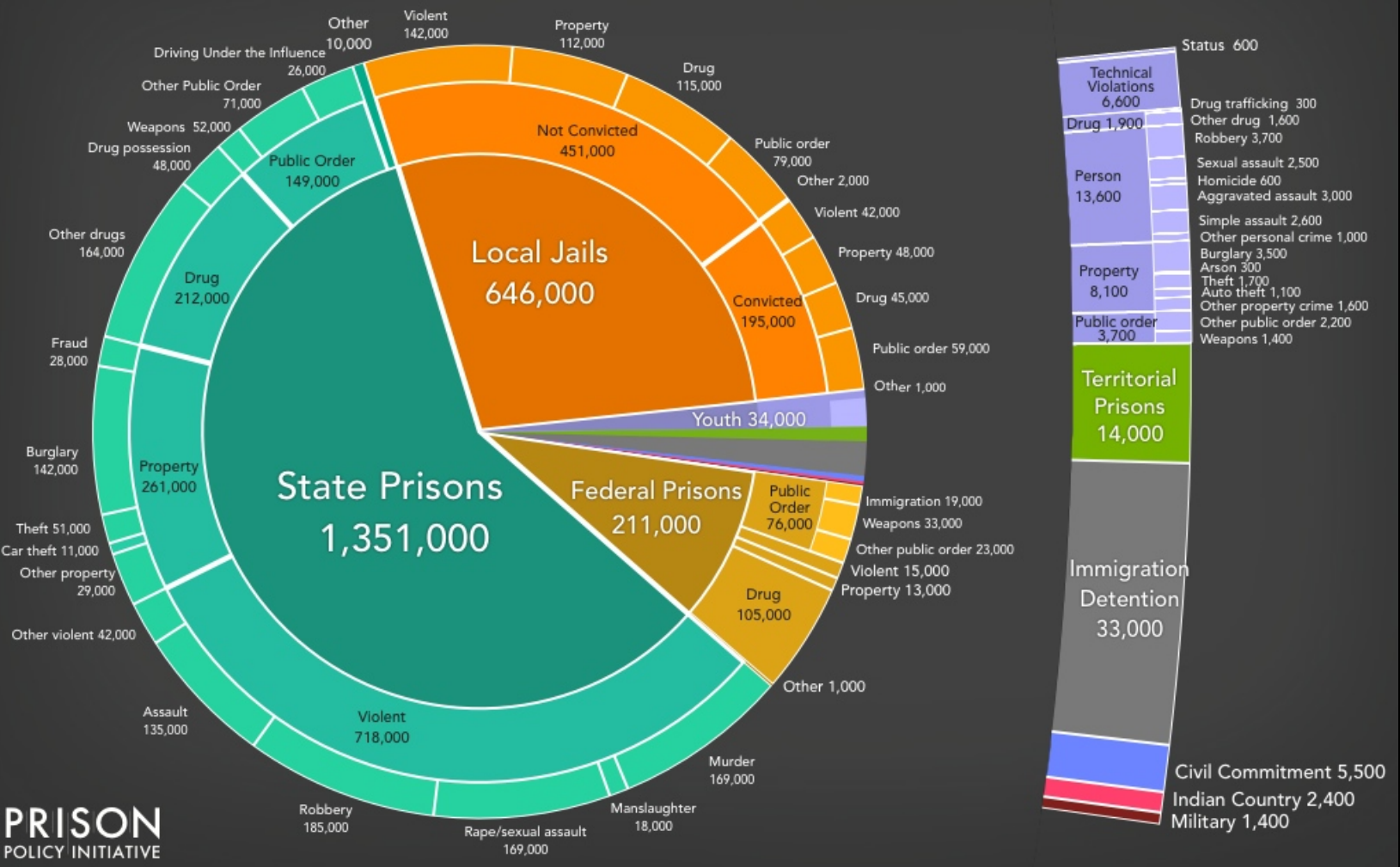


PRISON POLICY INITIATIVE

Sources and data notes: See http://www.prisonpolicy.org/reports/pie2016.html

How many people are locked up in the United States?

The United States locks up more people, per capita, than any other nation. But grappling with why requires us to first consider the many types of correctional facilities and the reasons that 2.3 million people are confined there.

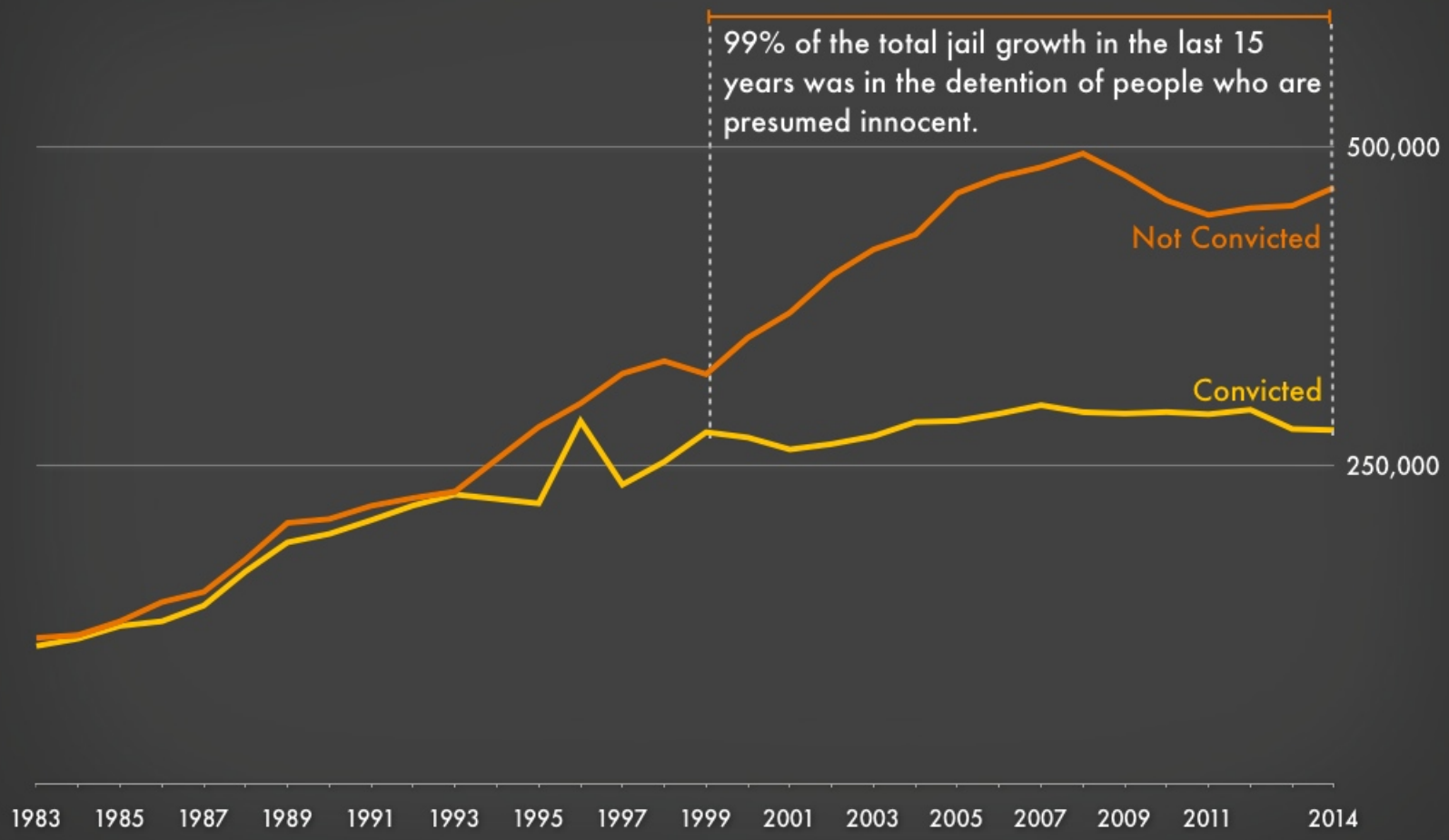


PRISON POLICY INITIATIVE

Sources and data notes: See http://www.prisonpolicy.org/reports/pie2016.html

Pretrial policies drive jail growth

Number of people in local jails by conviction status, 1983-2014



PRISON POLICY INITIATIVE

Compiled from the Bureau of Justice Statistics series *Prison and Jail Inmates at Midyear* and *Correctional Populations in the United States*. Missing data for 1994 extrapolated from 1993 and 1995 values.

Public Health Movements

- Endemic disease
- Social injustice, vulnerable populations
- Precipitating Events, Tragedies, Deaths
- Public sympathy
- Shifts in Public Opinion
- Meaningful Change

Historical Precedent: Workplace Safety

- Triangle Shirtwaist Factory Fire (1911)
- No protections for exploited garment workers
- Essentialist arguments made against workers
- Negligence on the part of factory owners
- 146 deaths (123 women)
- Public outrage, manslaughter charges (acquitted)
- Led to formation of International Ladies' Garment Workers' Union (ILGWU)
- Eventually led to OSHA

Historical Precedent: HIV/AIDS

- Criminalized behavior associated with transmission
- Essentialist arguments made: moral turpitude
- Stigma gave way to sympathy – everyone knew someone who had been affected by AIDS
- Mobilization of the community
- Protests, Civil Disobedience
- Action at the political and research level
- Shift in social acceptance of LGBTQ persons, protection for equal rights

Present Crisis: Rx drug poisonings

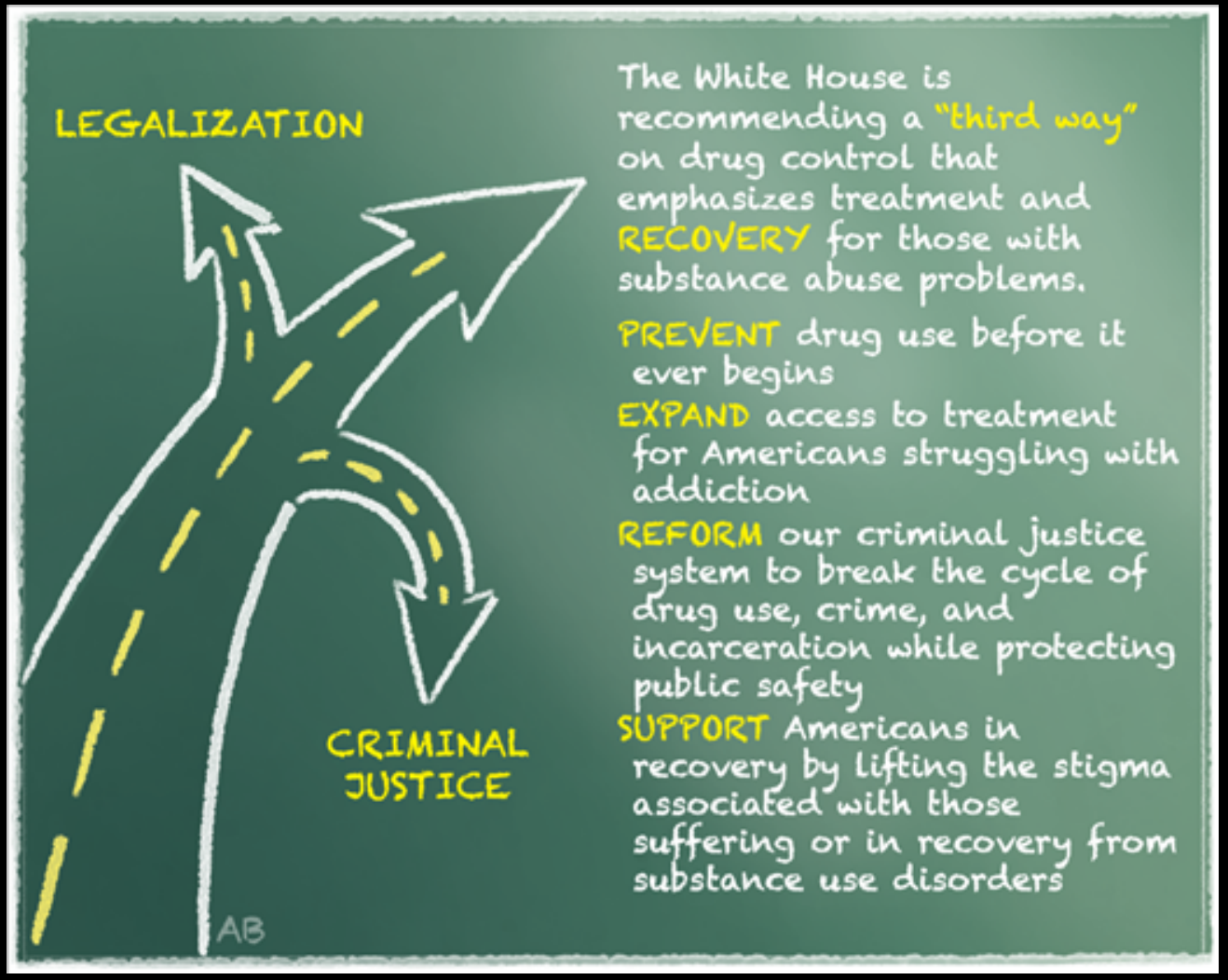
- A self-inflicted epidemic
- Well-intentioned push to better manage pain
- Faulty beliefs about addiction not based on evidence
- New formulations of powerful medications
- Essentialist arguments about the character of addicts
- Criminalization of addiction
- Epidemic of deaths due to prescription drug poisonings
- Activism of families and people in recovery

CDC: Steps States Can Take

1. Improve Prescription Drug Monitoring Programs (PDMPs)
2. Use PDMP, Medicaid and Workers' Compensation data to identify improper prescribing
3. Set up programs to identify and address improper patient use of Rx opioids
4. Consider "pill mill" & "doctor-shopping" laws to reduce abuse
5. Increase access to SUD treatment (especially for pregnant women)
6. Reduce barrier to SUD treatment

Mack KA. Prescription painkiller overdoses among women. CDC Division of Unintentional Injury Prevention, 2013.

White House's "Third Way" Policy



Recovery Management

Recovery management is a philosophy of organizing addiction treatment and recovery support services to enhance pre-recovery engagement, recovery initiation, long-term recovery maintenance, and the quality of personal/family life in long-term recovery.

Goal: improving quality of life and reducing healthcare costs for individuals with addiction by preventing or minimizing the effects of the disease through integrative care

Recovery Management Plan

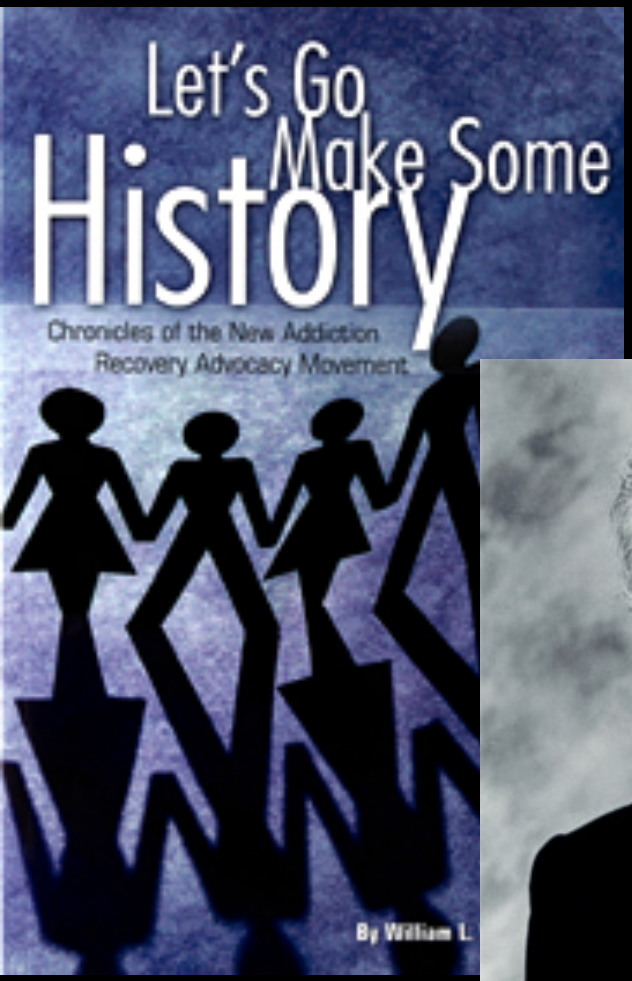
1. Treatment (Residential or IOP)
2. Therapist/Counselor/Coach/Advocate
3. Recovery Residence
4. Mutual Support Groups
5. Relapse Plan
6. Testing
7. Job/School/Future
8. Addiction Medicine Specialist
9. Medication
10. Hedonic Rehabilitation

Saitz: AHEAD Study - *JAMA 2013, 310(11)*

- **No significant difference in abstinence from opiods, stimulants or heavy drinking between the CCM group and control group.**

  "Although CCM is designed to address complex problems, it may simply not be enough to overcome the impaired motivation and myriad severe consequences experienced by patients with addictions. "

New Recovery Movement



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