


# **HEALTHY WORCESTER 2020**

**MAY 9, 2016**

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# **HEALTHY PEOPLE 2020 SOCIAL DETERMINANTS OF HEALTH**

**These five key areas include:**

- Economic Stability**
  - Education**
  - Social and Community Context**
  - Health and Health Care**
  - Neighborhood and Built Environment**
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# Economic Stability

- Poverty
- Employment
- Food Security
- Housing Stability



# EDUCATION

- High School Graduation
- Enrollment in Higher Education
- Language and Literacy
- Early Childhood Education and development



# SOCIAL AND COMMUNITY CONTEXT

- Social Cohesion
- Civic Participation
- Perceptions of Discrimination and Equity
- Incarceration /Institutionalization




# HEALTH AND HEALTH CARE

- Access to Health Care
- Access to Primary Care
- Health Literacy



## NEIGHBORHOOD AND BUILT ENVIRONMENT

- Access to quality health foods
  - Quality of Housing
  - Crime and Violence
  - Environmental Conditions
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# ESTIMATED DEATHS ATTRIBUTABLE TO SOCIAL FACTORS IN THE US - 2000

Low education:	245,000
Racial segregation:	176,000
Low social support:	162,000
Individual level poverty:	133,000
Income inequality:	119,000
Area level poverty:	39,000

In comparison:	
■ Acute MI:	192,898
■ Cerebrovascular disease:	167,661
■ Lung cancer:	155,521

Estimated Deaths Attributable to Social Factors in the US. Galea S et.al. AJPB:June 16,2011;eprint.





# **COMPARED TO A WHITE CHILD BORN IN THE OAKLAND HILLS, A BLACK CHILD BORN IN WEST OAKLAND IS:**

Likely to die almost 15 years earlier

5x more likely to be hospitalized with diabetes

2x as likely to die of heart disease

3x more likely to die of stroke

2x more likely to die of cancer

7x more likely to be born into poverty

4x less likely to read at grade level by grade 4

4 x as likely to live in a neighborhood with high density of fast food  
and liquor outlets

5.6x more likely to drop out of school

# HEALTH EQUITY

- **Everyone has the opportunity to attain their full health potential and no one should be limited from achieving this potential because of their social position or other socially determined circumstance**



# CITY OF WORCESTER

We are all working on changing these determinants

Access to food by ending food deserts, having fruits and vegetables more accessible at corner stores, markets at closer vicinities, community gardens, and food hub

Encouraging to buy locally, certificate programs at universities to provide better jobs. Increasing jobs through workforce for those of low socio economic, homeless, in recovery to name a few. Increasing the need for more affordable housing and helping those at risk of homelessness with rental vouchers.

Improving the lives of our kids by having afterschool and summer programs accessible to all regardless of finances. WRTA has given them bus passes

Mental health pilots, homelessness summit, increasing age to 21 for smoking, health classes in school and comprehensive sex education and the list goes on



Addressing social  
determinants of health is a  
primary approach to achieving  
health equity



# INTRODUCTION TO OPIATES

Reductions in supply of medications available for abuse must be matched by corresponding decreases in demand

A substance use disorder (SUD) is a disease of the brain and should be treated as such (NIDA 2015)

Medication-assisted treatment (MAT) has been shown to be safe and effective in treating SUDs (HHS, 2015)

MAT has been shown to be effective in treating opioid use disorders and reducing drug-related disease and criminal recidivism (HHS, 2010)

SUDs exact over \$700 billion annually in costs related to crime, lost work productivity, and health care (NIDA 2015)





## Nearly a half million

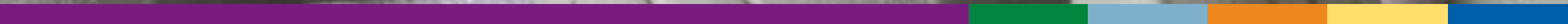
people have died from drug overdoses in the United States from 2000 to 2014.

**78**

Americans die every day from an opioid overdose—including prescription opioids and heroin.

**249 million**

prescriptions were written in 2013—enough for every adult American to have a bottle of pills.



# Heroin use is part of a larger substance abuse problem.

Nearly all people who used heroin also used at least 1 other drug.

Most used at least **3** other drugs.

**Heroin** is a highly addictive opioid drug with a high risk of overdose and **death** for users.

## People who are addicted to...



ALCOHOL

are

**2x**



MARIJUANA

are

**3x**



COCAINE

are

**15x**



Rx OPIOID PAINKILLERS

are

**40x**

## ...more likely to be addicted to heroin.

SOURCE: National Survey on Drug Use and Health (NSDUH), 2011-2013.


# THEN: ADDICTION IS A CRIME

For decades, we have responded to addiction with incarceration instead of treatment.

- ⦿ 1970: Nixon declares a “War on Drugs.”
  - Mandatory sentencing: Ex. Rockefeller Drug Laws create minimum mandatory sentences of 15 years to life for possession of 4 ounces of narcotics.
- ⦿ 1980s: Zero tolerance policies incarceration mostly of Blacks and Latinos.
- ⦿ “Just Say No” anti-drug campaign
  - Anti-addict sentiment: “drug users should be taken out and shot” (Los Angeles Police Chief Daryl Gates).
- ⦿ Prison population has quadrupled since 1980.
- ⦿ Over 50% of federal inmates are there for drug offenses.



# Now: Addiction is a Disease

- ⦿ Pre 1990 opioids to treat only acute pain and cancer.
  - ⦿ 1995 FDA approves extended release opioid: OxyContin.
  - ⦿ 2000 NIH presents disparities in health care and the treatment of pain that was not being treated adequately.
  - ⦿ JACHO Providing Safe, High Quality care. Pain is the fifth vital sign.
  - ⦿ Increase use of opiates by younger and affluent community. Parents able to lobby and demand treatment. Addiction is a disease and no longer a moral weakness.
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## Wong-Baker FACES® Pain Rating Scale



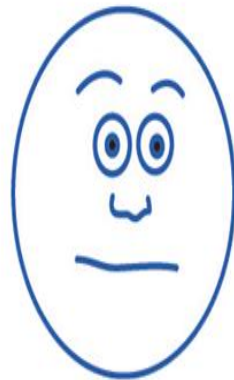
**0**

No  
Hurt



**2**

Hurts  
Little Bit



**4**

Hurts  
Little More



**6**

Hurts  
Even More



**8**

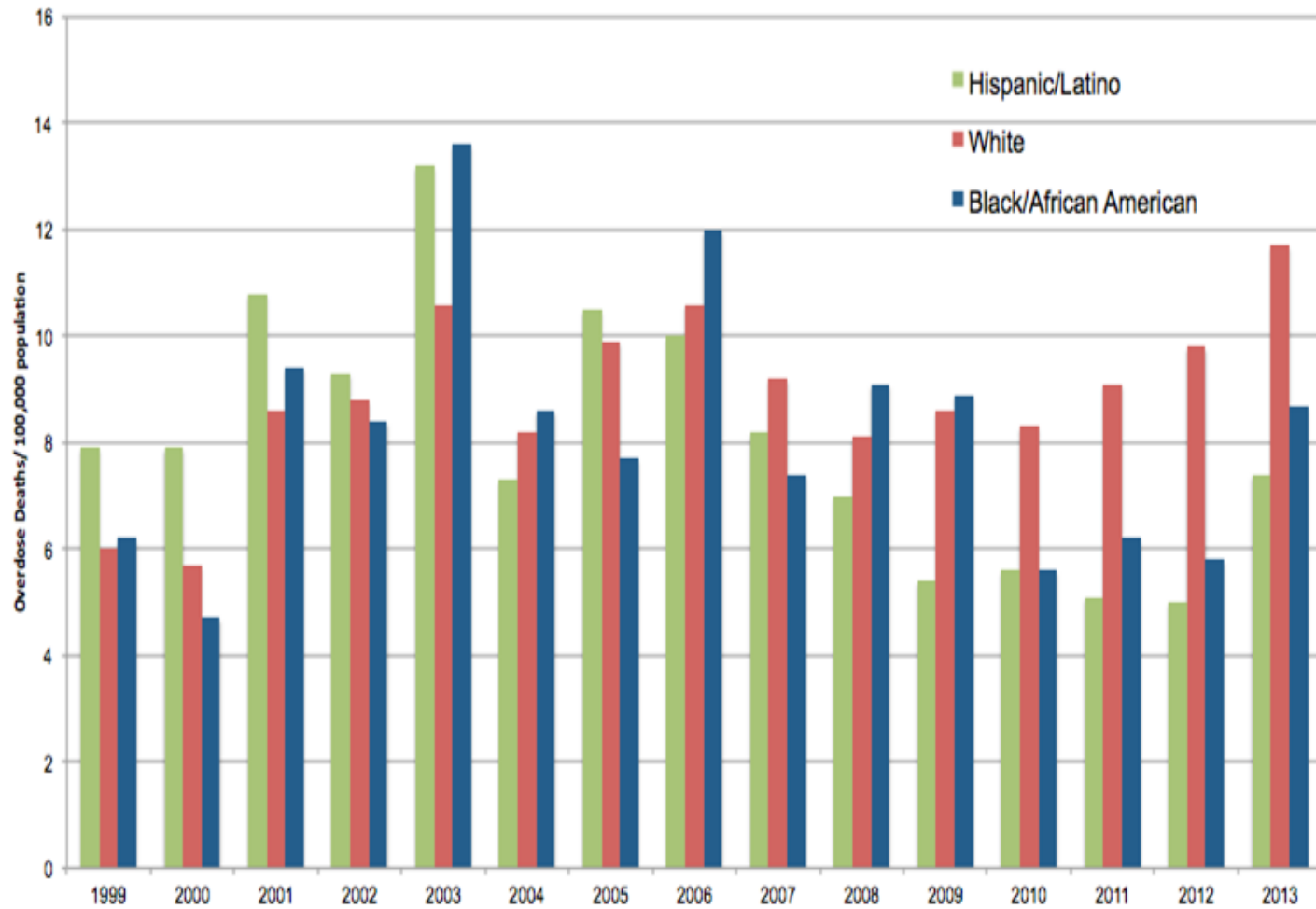
Hurts  
Whole Lot



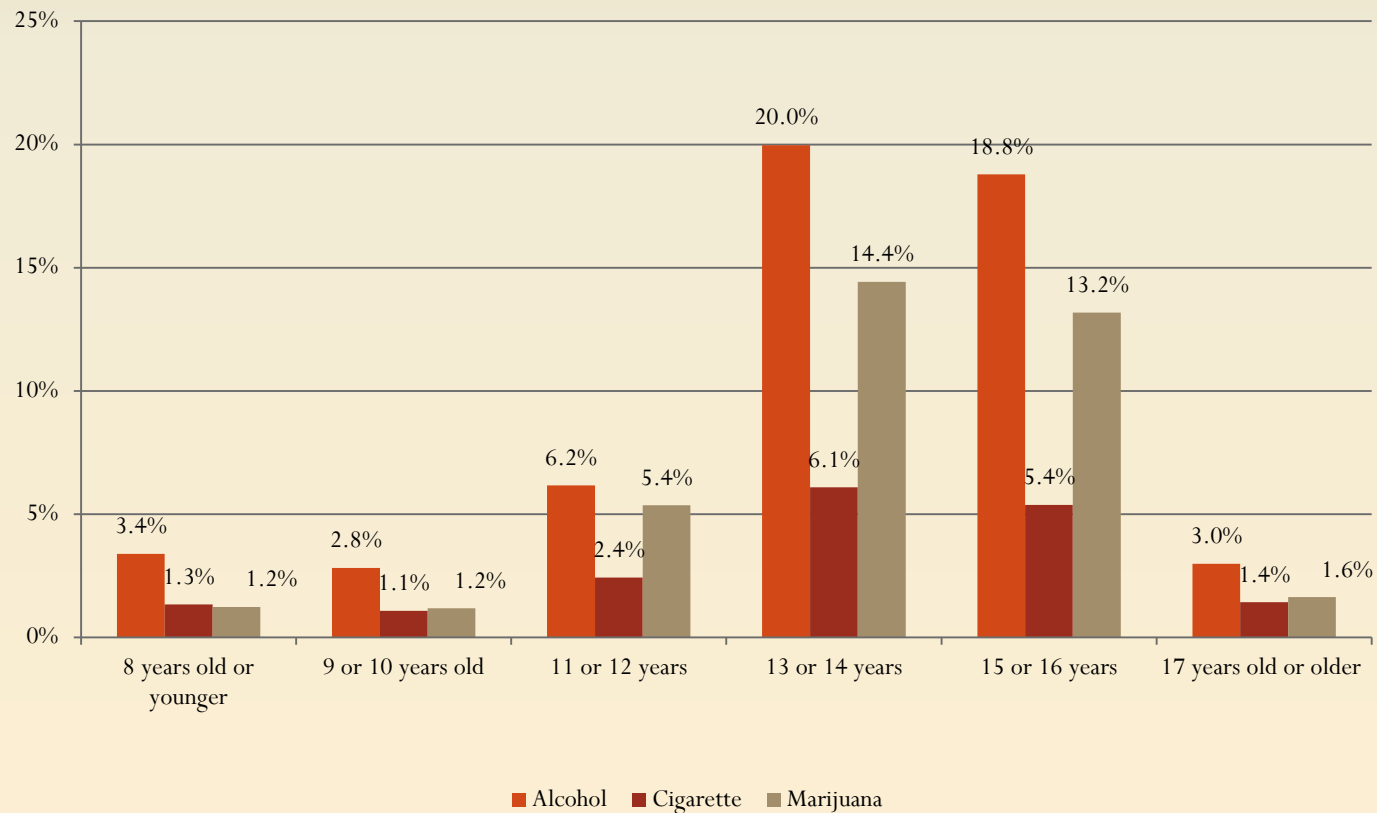
**10**

Hurts  
Worst

# MA OVERDOSE DEATHS BY RACE: 1999-2013

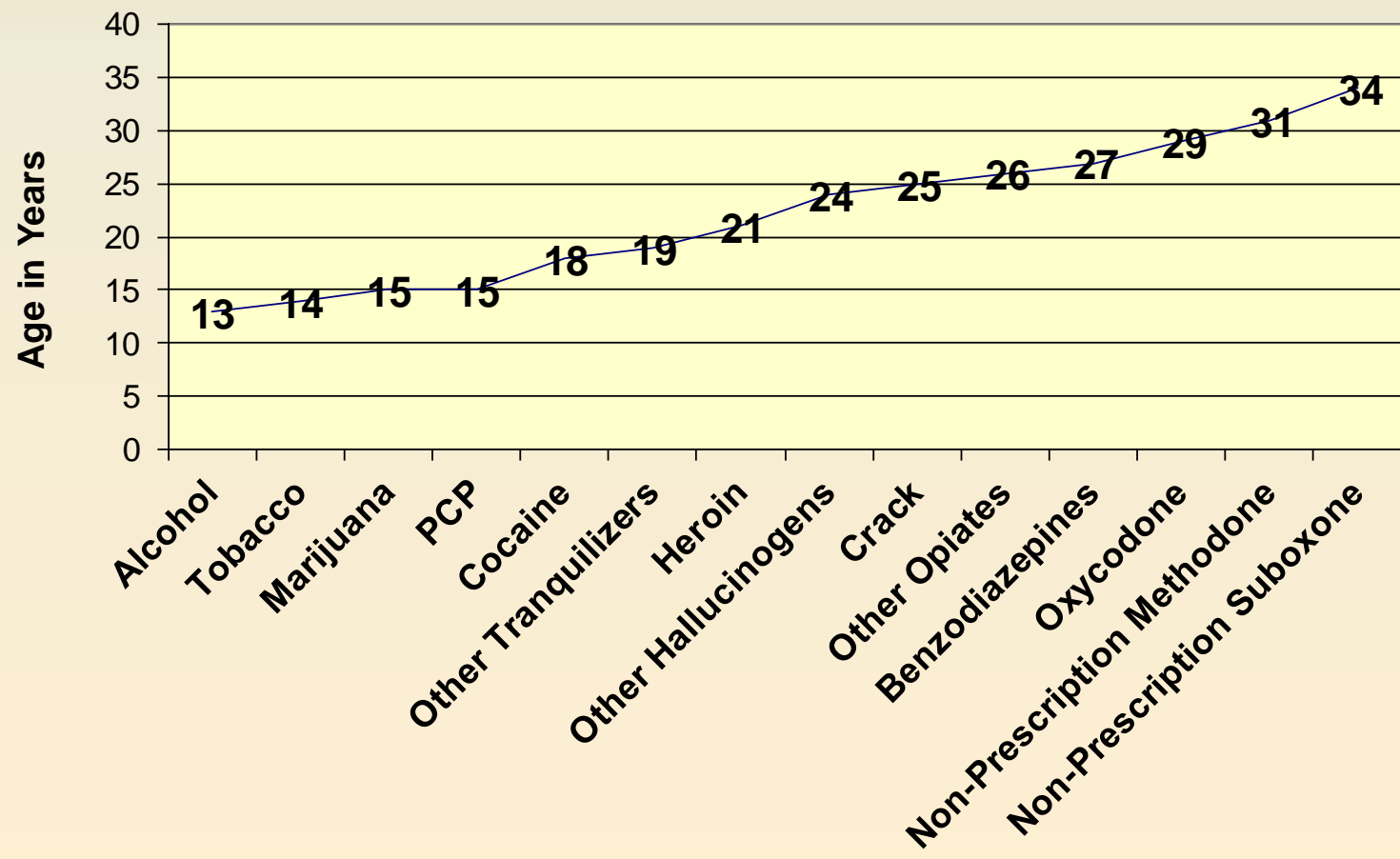


# Youth Health Survey Results



Source: Central MA Regional Public Health Alliance Youth Health Survey, 2013

# Translational Research: Average Age of First Use HRH



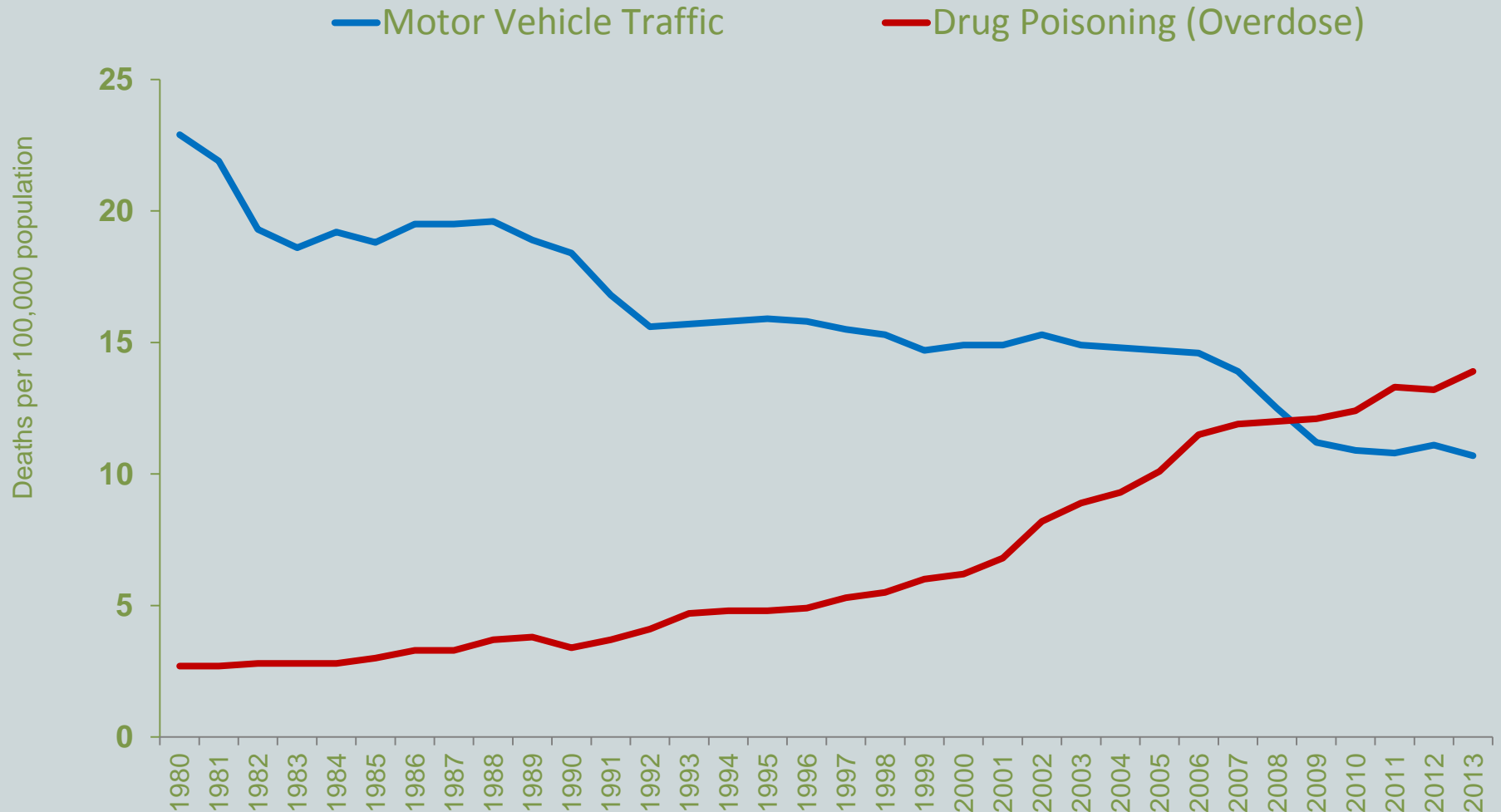
# OPIOID ABUSE RELATED HEALTH ISSUES

- Resurgence of infections like Hepatitis C and HIV among persons who inject drugs.. Now we implemented needle exchange
- Increased sexual risk behavior in youth who misuse and abuse RX drugs

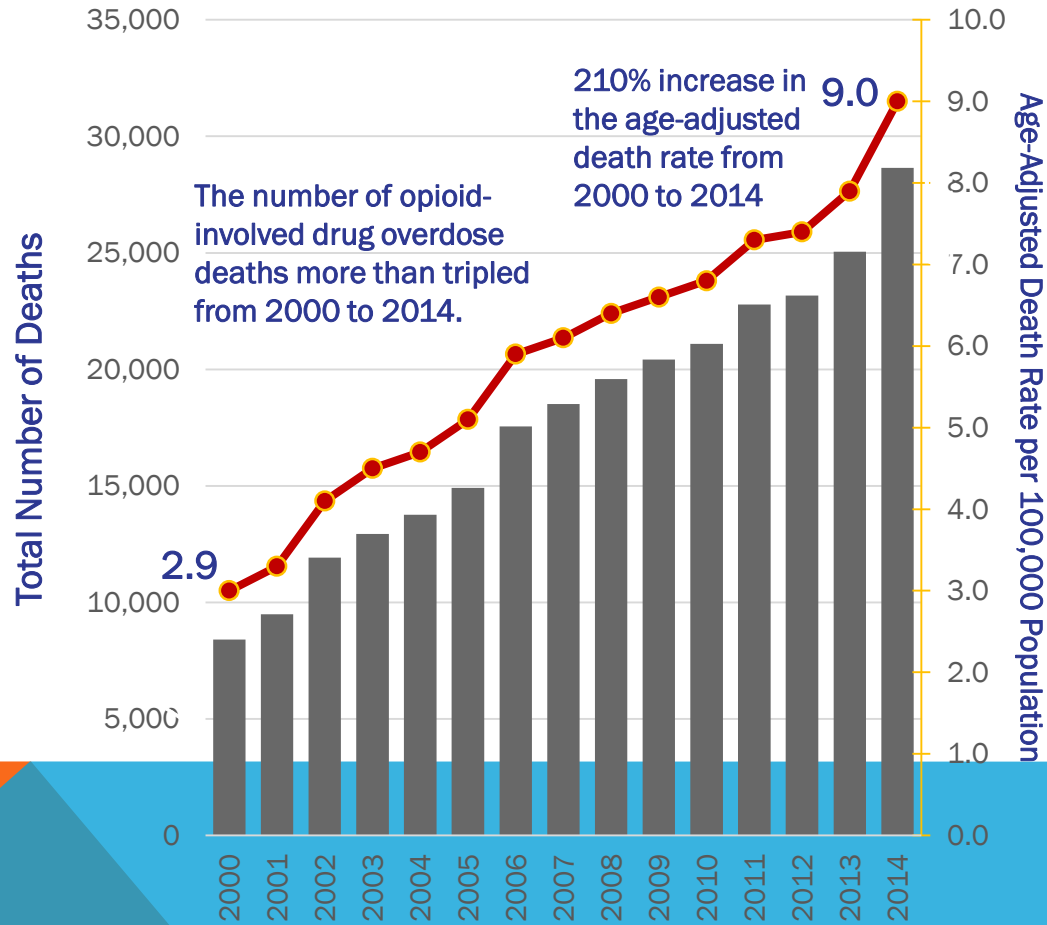


# PUBLIC HEALTH, LAW ENFORCEMENT & COMMUNITIES WORKING TOGETHER CUT CRASH DEATHS BY MORE THAN HALF...

## We can do the same for overdoses



# Increase in Opioid-Involved Drug Overdose Deaths, 2000-2014

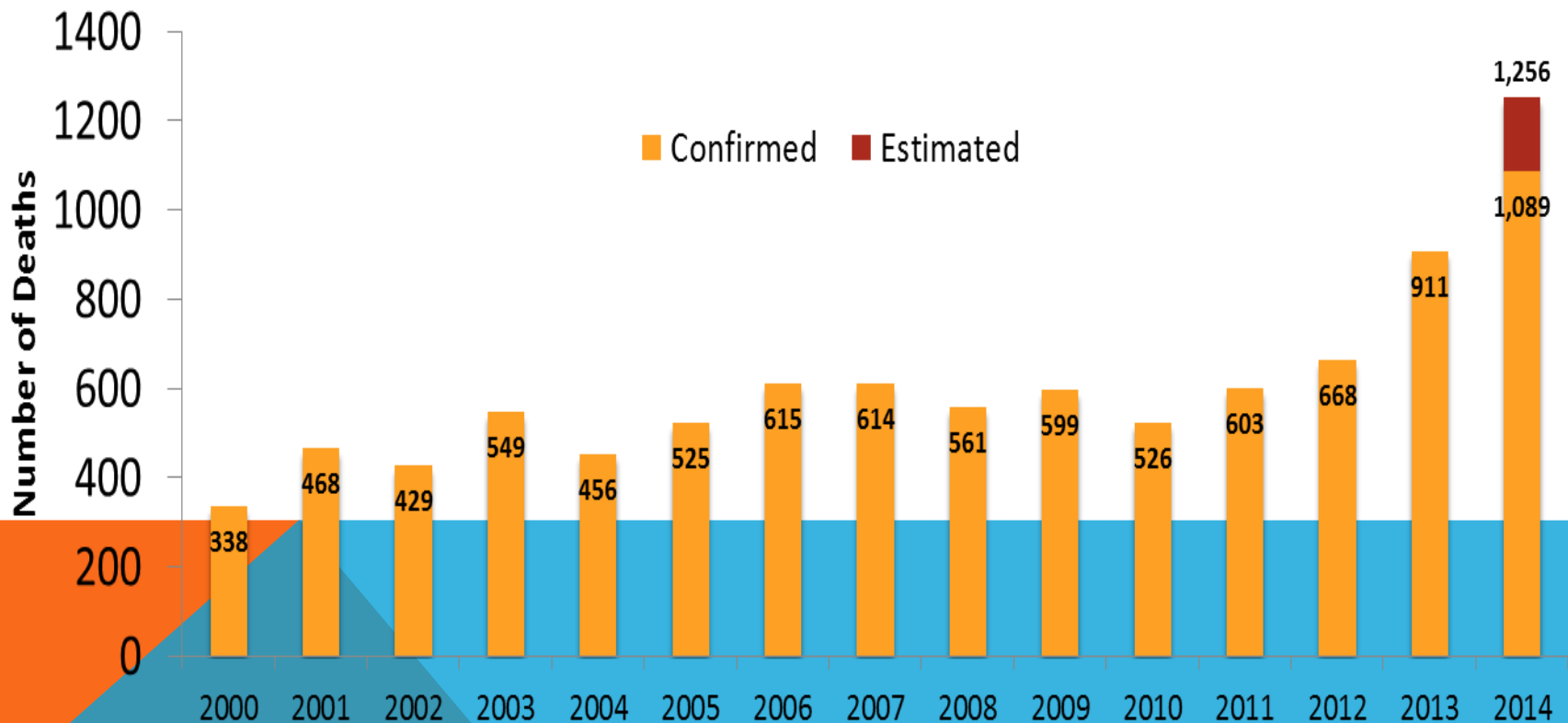


Source: Centers for Disease Control and Prevention, National Center for Health Statistics. *Multiple Cause of Death 1999-2014* on CDC WONDER Online Database, released 2015. Data for 2000 to 2014 were extracted by ONDCP on December 29, 2015.

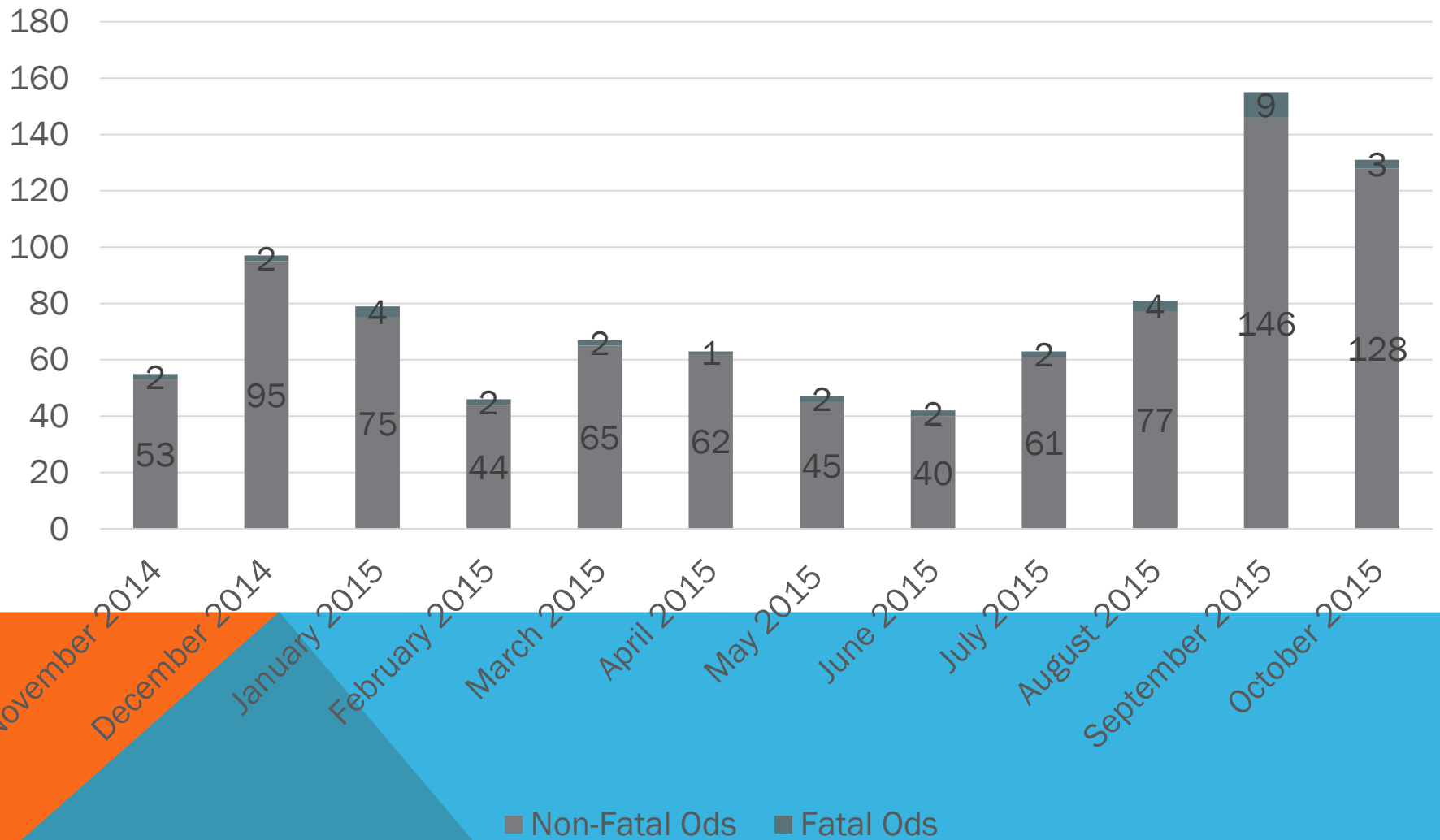


# THE SCOPE OF THE PROBLEM IN MASSACHUSETTS

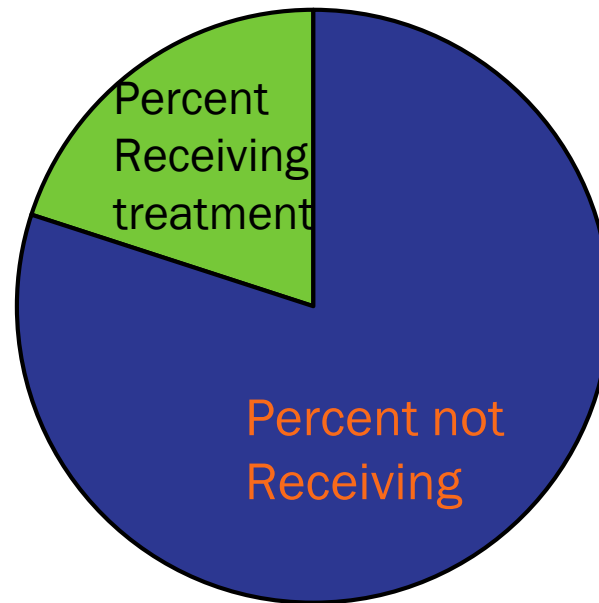
Opioid-Related Deaths, Unintentional/Undetermined in MA, 2000-2014



# Reported Heroin/Opiate Overdoses, Previous 12 Months Worcester, MA – 911 Calls



## Percent of People Who Meet the Criteria for an Illicit Drug Use Disorder



# NEED FOR GREATER DEMAND REDUCTION

**Rx opioid-overdose deaths increased 9% between 2013 & 2014 (CDC 2015)**

- Increase likely due to illicit synthetic fentanyl (RADARS, 2015)

**Major drivers of recent heroin use increases & related deaths**

- Increased accessibility
- Lower market price
- High purity



# STATE EFFORTS TO REDUCE SUPPLY YIELD PROGRESS

## Policy measures

- State-wide opioid prescribing guidelines
- Mandatory prescriber education
- Requiring pain clinics treating with controlled substances to register with state
- 49 states and D.C. have prescription drug monitoring programs (PDMPs)
- 29 states require prescriber or dispenser to check PDMP

Decrease in deaths and hospitalizations in locations that implemented policies to address rx opioid abuse



# HOW TO REDUCE DEMAND

## Prevention

- Public awareness
- Prescriber education (also reduces supply)
- Patient counseling
- Drug take back, kiosk and ultimately to have pharmacies take meds back

Therapeutic screenings and interventions for substance use (e.g., SBIRT)

Individualized treatment for SUDs



# MEDICATION-ASSISTED TREATMENT

An evidence-based method that combines counseling, behavioral therapies, and FDA-approved meds to treat SUDs

## Approved meds for opioid use disorders

- Methadone (opioid full agonist) – available at federally regulated opioid treatment programs (OTPs)
- Naltrexone (non-opioid antagonist) – available in physician offices
- Buprenorphine (opioid partial agonist) – available in physician offices and OTPs



# TREATMENT: RESEARCH

## Novel meds to treat SUDs are under development

- Six-month subdermal buprenorphine implant for maintenance treatment of opioid use disorders (action expected 5/27/16)
- Buprenorphine once-monthly or once-weekly injectable, each with multiple doses, to cover initiation through maintenance (phase III)
- Vaccine to prevent synthetic opioids from reaching brain (The Scripps Research Institute, 2016)
- Hydromorphone NME prodrug (IND filed)
  - Designed not to release until metabolized in GI tract
  - Clinical program to assess potential to limit *oral* abuse and overdose



# ACCESS TO TREATMENT: COVERAGE

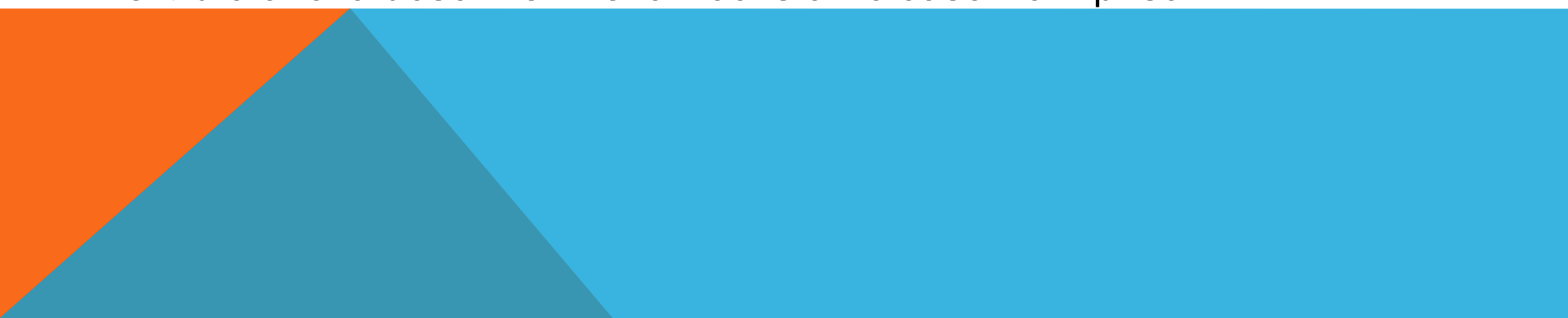
## Private payers

- Insurers using loopholes to deny coverage (e.g., step therapy – outpatient before inpatient, cancel coverage after pre-approval, require proof of payment in full, checks to patients)

## Medicaid: 2013 ASAM study found widespread problems with MAT access among Medicaid programs

- Limits on dosage; lifetime limits on MAT, complex prior auth, limits on refills

## Incarcerated individuals

- Private insurance, Medicare, and Medicaid not available to incarcerated individuals
  - Prisons denying MAT to inmates; in Feb. 2015, Obama Administration announced no fed. funding for drug courts denying access to meds
  - 5% die of overdose within two weeks of release from prison
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# CRIMINAL JUSTICE REFORM

Untreated substance use costs \$600 billion annually

- \$8.2 billion in criminal justice costs

Cost savings from substance use treatment

- \$1 invested = \$4 return in health care costs + \$7 in law enforcement & other criminal justice costs

In 2010, 2.7 mill. U.S. prison inmates (85%) abused controlled substances

Only 11% with SUDs receive treatment in prison

Estelle v. Gamble (Supreme Ct. case from 1976): inadequate medical care for inmates is unconstitutional



*THE END*



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