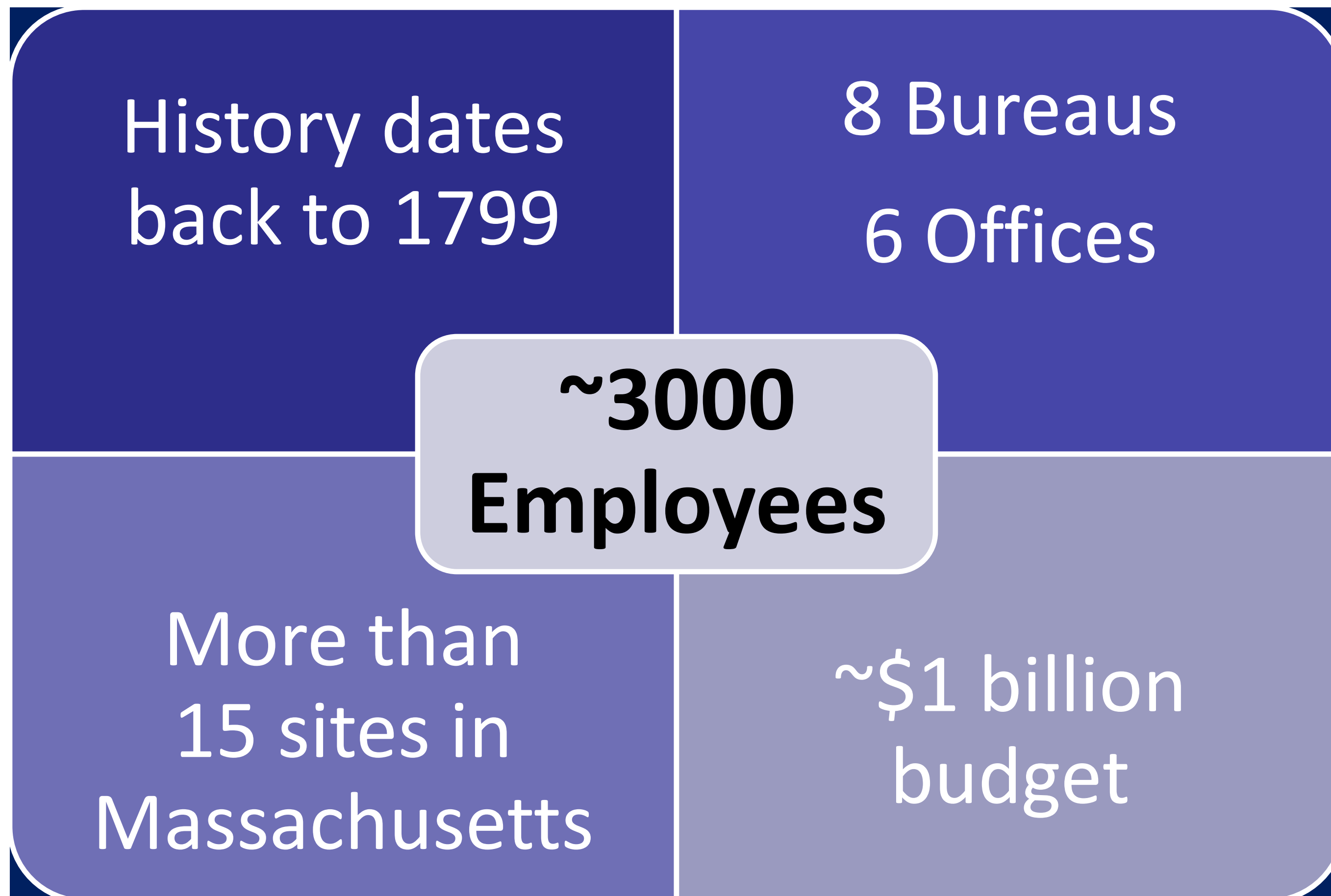
Commonwealth of Massachusetts

Monica Bharel MD, MPH
Commissioner of Public Health
January 12, 2017

Commonwealth of Massachusetts
Department of Public Health

Massachusetts DPH by the numbers



The Range of DPH

Prevention and Wellness – Health Access – Nutrition – Perinatal and Early Childhood – Adult Treatment – Data Analytics and Support – Housing and Homelessness – Violence and Injury Prevention – Office of Statistics and Evaluation – Childhood Lead Poisoning Prevention – Community Sanitation – Drug Control – Occupational Health Surveillance – PWTF – SANE Program – Interagency Initiatives – Planning and Development – Prevention – Problem Gaming – Quality Assurance and Licensing – Youth and Young Adults – Early Intervention – Children and Youth with Special Needs – Epidemiology Program – Immunization Program – Global Populations and Infectious Disease Prevention – STI Prevention – HIV/AIDS – Integrated Surveillance and Informatics Services – Clinical Microbiology Lab – Chemical Threat, Environment and Chemistry Lab – Childhood Lead Screening – Environmental Microbiology and Molecular Foodborne Lab – STD/HIV Laboratories – Biological Threat Response Lab – Central Services and Informatics – Quality Assurance – Safety and Training – Health Care Certification and Licensure – Health Professional Licensure – Office of Emergency Medical Services – DoN – Medical Use of Marijuana – Shattuck Hospital – Mass Hospital School – Tewksbury Hospital – Western MA Hospital – State Office of Pharmacy Services – Office of Local and Regional Health – Office of Health Equity – Accreditation and Performance Management – ODMOA – OPEM – HR and Diversity – Office of General Counsel – Office of CFO – Commissioner's Office

Massachusetts DPH will be a **national leader** in innovative, outcomes-focused public health based on a **data-driven** approach, with a focus on **quality public health and health care services** and an emphasis on the social determinants and **eradication of health disparities**.

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COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH

VISION
Optimal health and well-being for all people in Massachusetts, supported by a strong public health infrastructure and healthcare delivery.

MISSION
The mission of the Massachusetts Department of Public Health (DPH) is to prevent illness, injury, and premature death; to ensure access to high quality public health and health care services; and to promote wellness and health equity for *all* people in the Commonwealth.

DATA

We provide relevant, timely access to data for DPH, researchers, press and the general public in an effective manner in order to target disparities and impact outcomes.

DETERMINANTS

We focus on the social determinants of health - the conditions in which people are born, grow, live, work and age, which contribute to health inequities.

DISPARITIES

We consistently recognize and strive to eliminate health disparities amongst populations in Massachusetts, wherever they may exist.

EVERYDAY EXCELLENCE

PASSION AND INNOVATION

INCLUSIVENESS AND COLLABORATION

Social Determinants of Health

Social determinants of health refer to conditions of society that reflect root causes of community and individual health and well-being.

- There may be significant differences in the distribution of these social and environmental resources, with a significant association between these resources and health outcomes.
- These determinants drive health inequities

Advancing Community Public Health Systems in the 21st Century. National Association of County and City Health Officials, 2001.

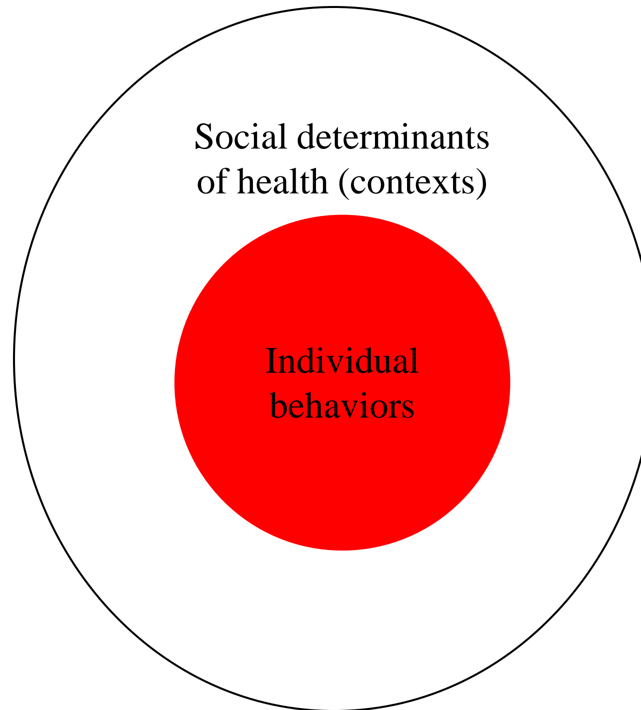
Determinants of Health

Individual resources

Education, occupation, income, wealth

Neighborhood resources

Housing, food choices, public safety, transportation, parks and recreation, political clout



Hazards and toxic exposures

Pesticides, lead, reservoirs of infection

Opportunity structures

Schools, jobs, justice

CDC: Social Determinants of Health and Social Determinants of Equity, the Impacts of Racism on the Health of our Nation

CDC's Health Impact Pyramid

AJPH April 2010

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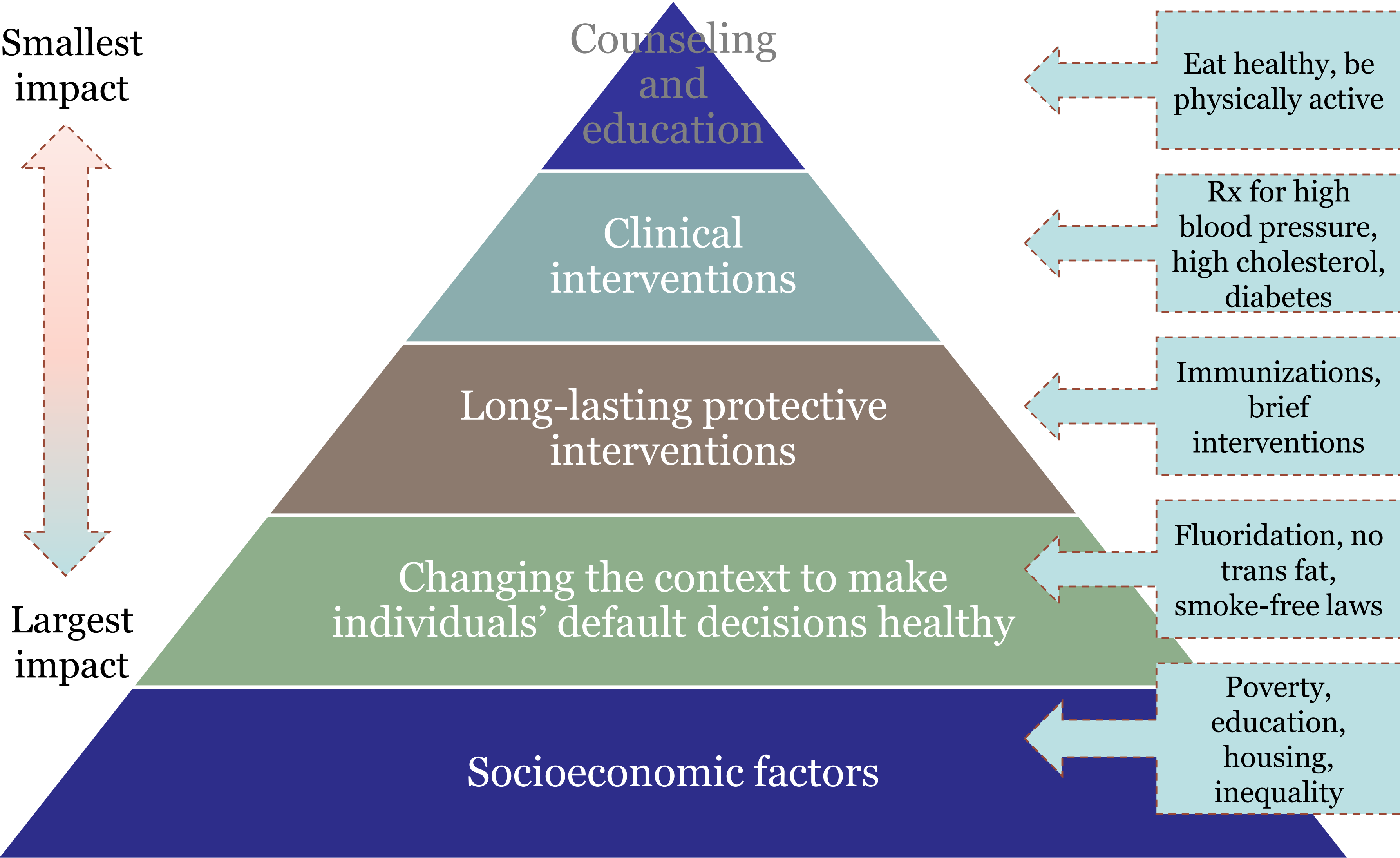
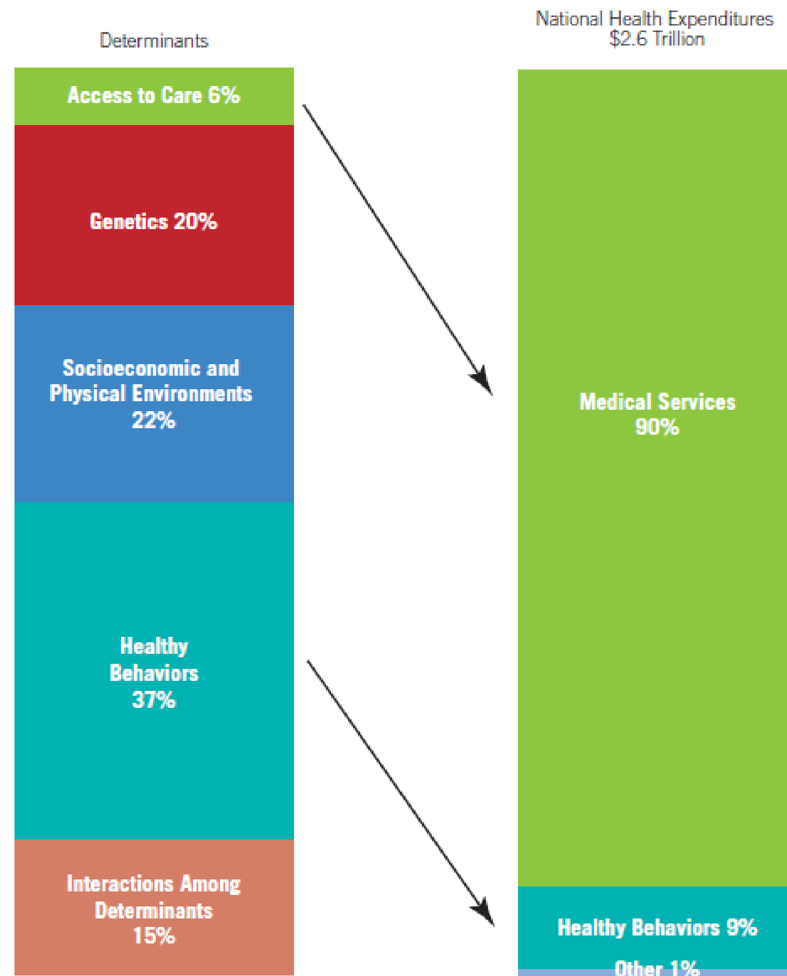
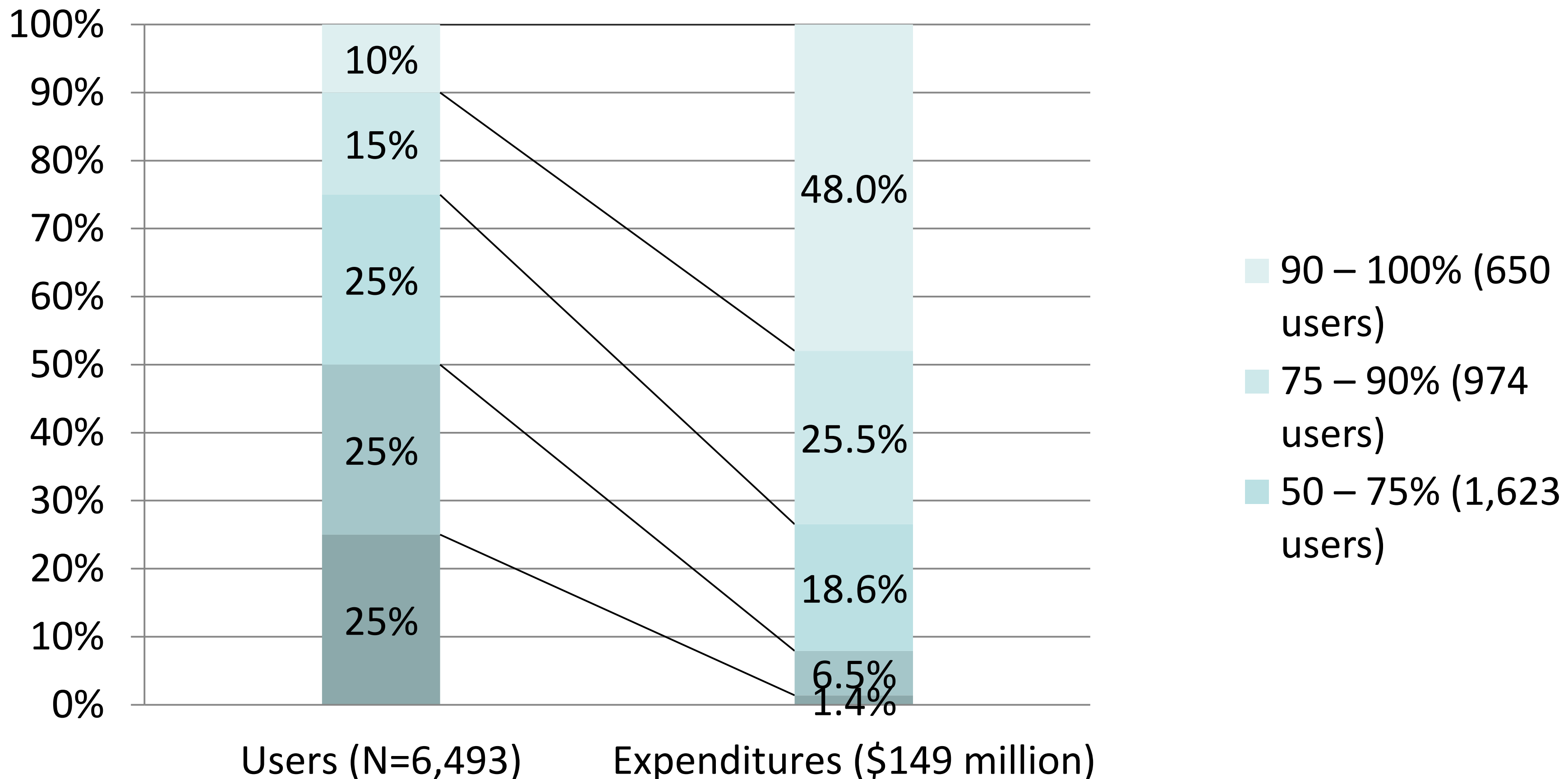


The Spending Mismatch: Health Determinants vs. Health Expenditures



Source: NEHI and University of California, San Francisco, 2013.

Total Annual Expenditures by Expenditure Group for BHCHP Users with Medicaid in 2010 A JPH 2012



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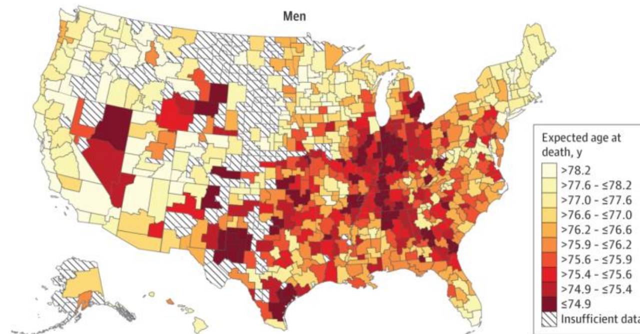
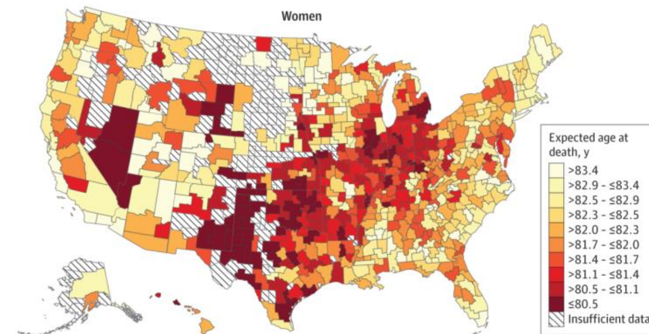
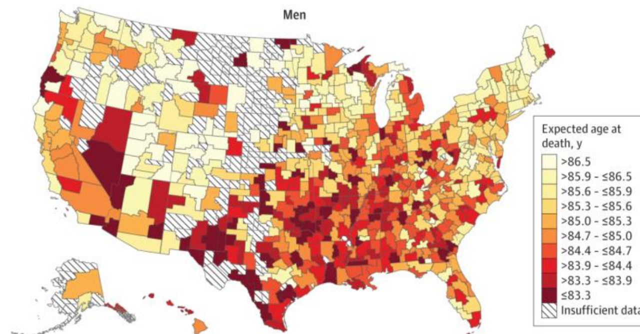
The gap in life expectancy between the richest 1% & poorest 1% of individuals: 14.6 years

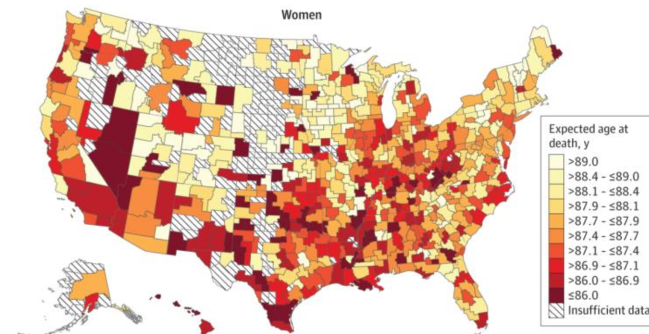
A Life expectancy for bottom income quartile





B Life expectancy for top income quartile





JAMA online April 10, 2016

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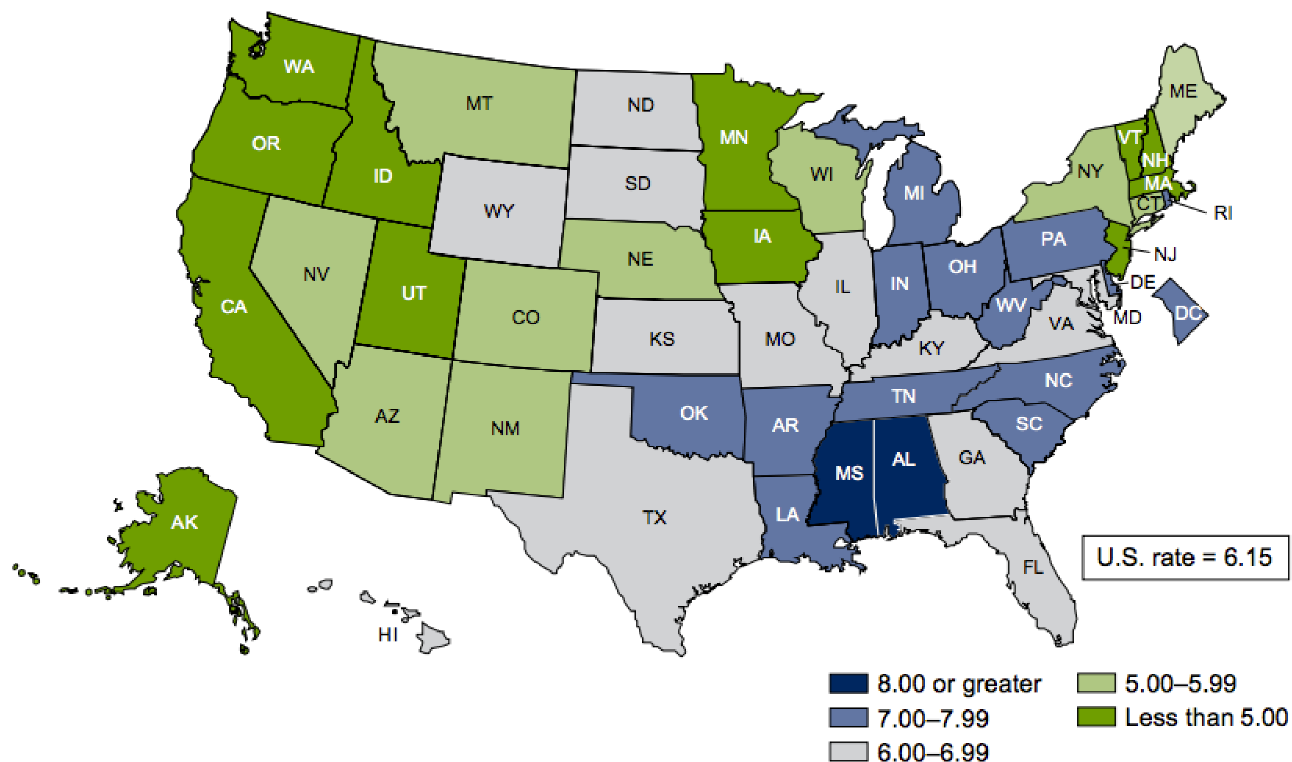
U.S. Infant Mortality Rate 2011



CDC Vital Statistics

Infant Mortality Rates in Massachusetts' Largest Cities 2012

Lawrence
Lowell
Lynn
Cambridge
Somerville
Newton
Framingham
Boston
Worcester
Quincy
Springfield
Brockton
Fall River
New Bedford

Infant Mortality, 2012 **

Per 1,000

- 2.05 - 3.13
- 3.14 - 4.21
- 4.22 - 5.30
- 5.31 - 6.38
- 6.39 - 7.47
- County Boundaries
- Community Boundaries

City	Mortality
Somerville	2.05
Cambridge	2.36
Quincy	3.19
Lowell	3.6
Springfield	3.78
New Bedford	3.79
Framingham	4.41
Boston	4.73
Newton	4.93
Brockton	5.17
Fall River	5.49
Lawrence	6.03
Lynn	7.32
Worcester	7.47
Massachusetts	4.26

Statewide rate = 4.26

**All Causes of Death - Infant Deaths (ICD 10)

N

Mortality data courtesy of MA DPH. Map created by BEH-GIS, MDPH

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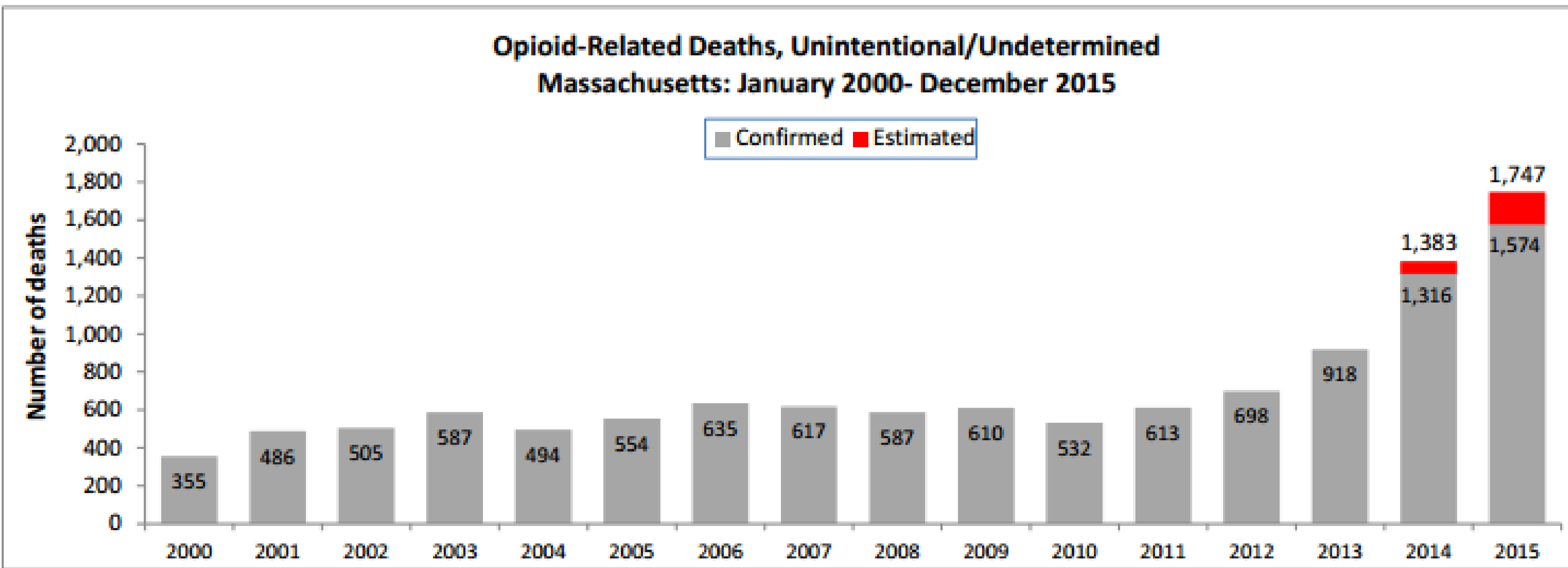
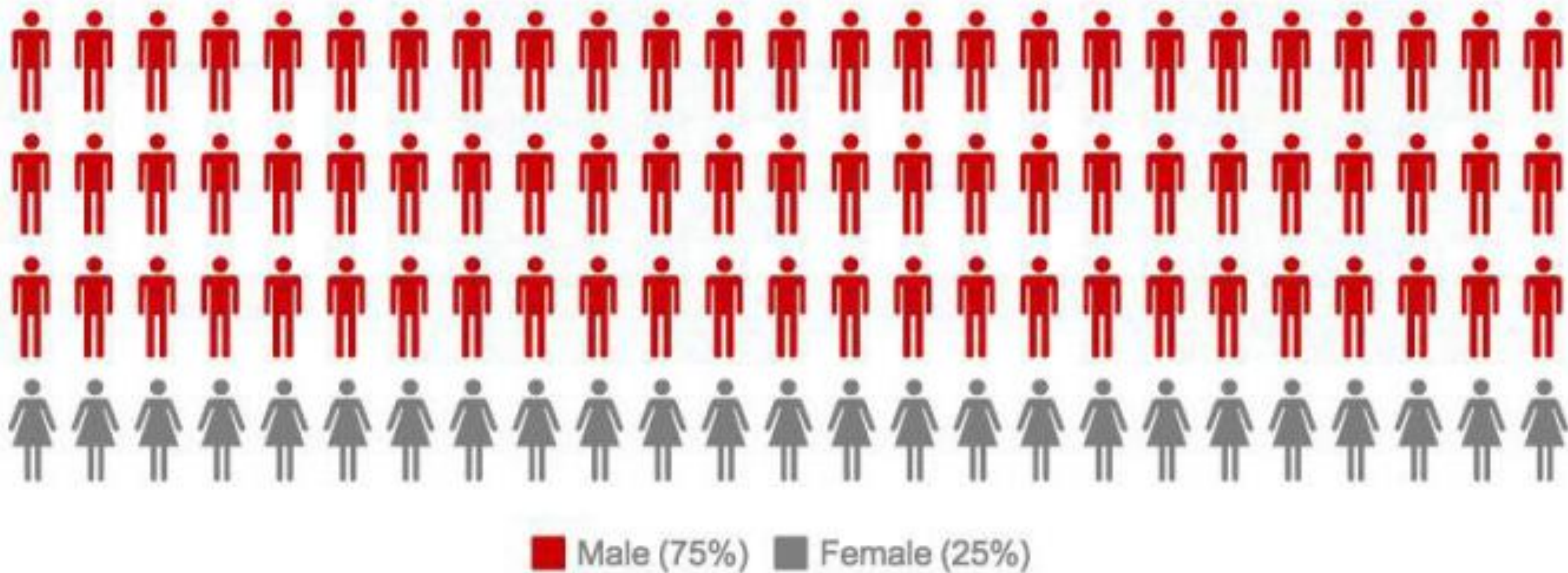
The opioid epidemic burden in Massachusetts



74% OF OPIOID DEATHS IN 2016 HAD THE PRESENCE OF FENTANYL

The opioid epidemic burden in Massachusetts

Unintentional Opioids Deaths by Gender



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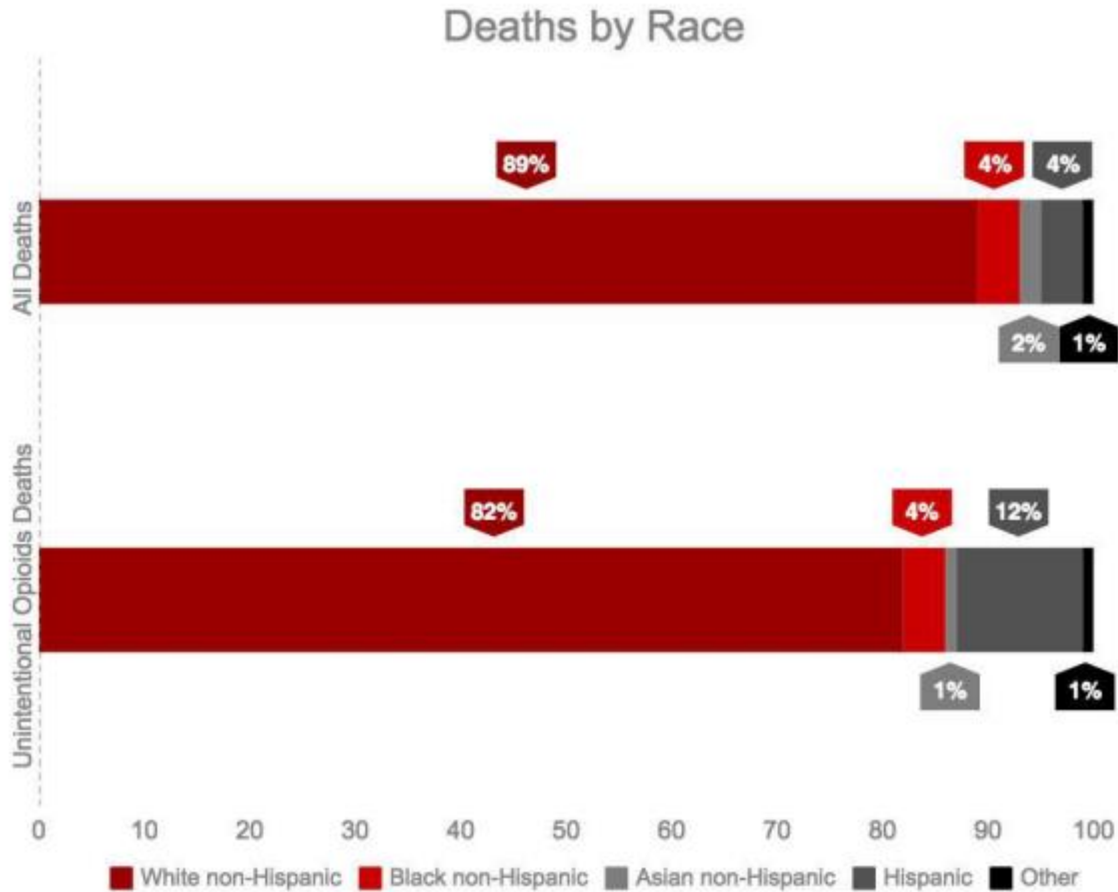
The opioid epidemic burden in Massachusetts



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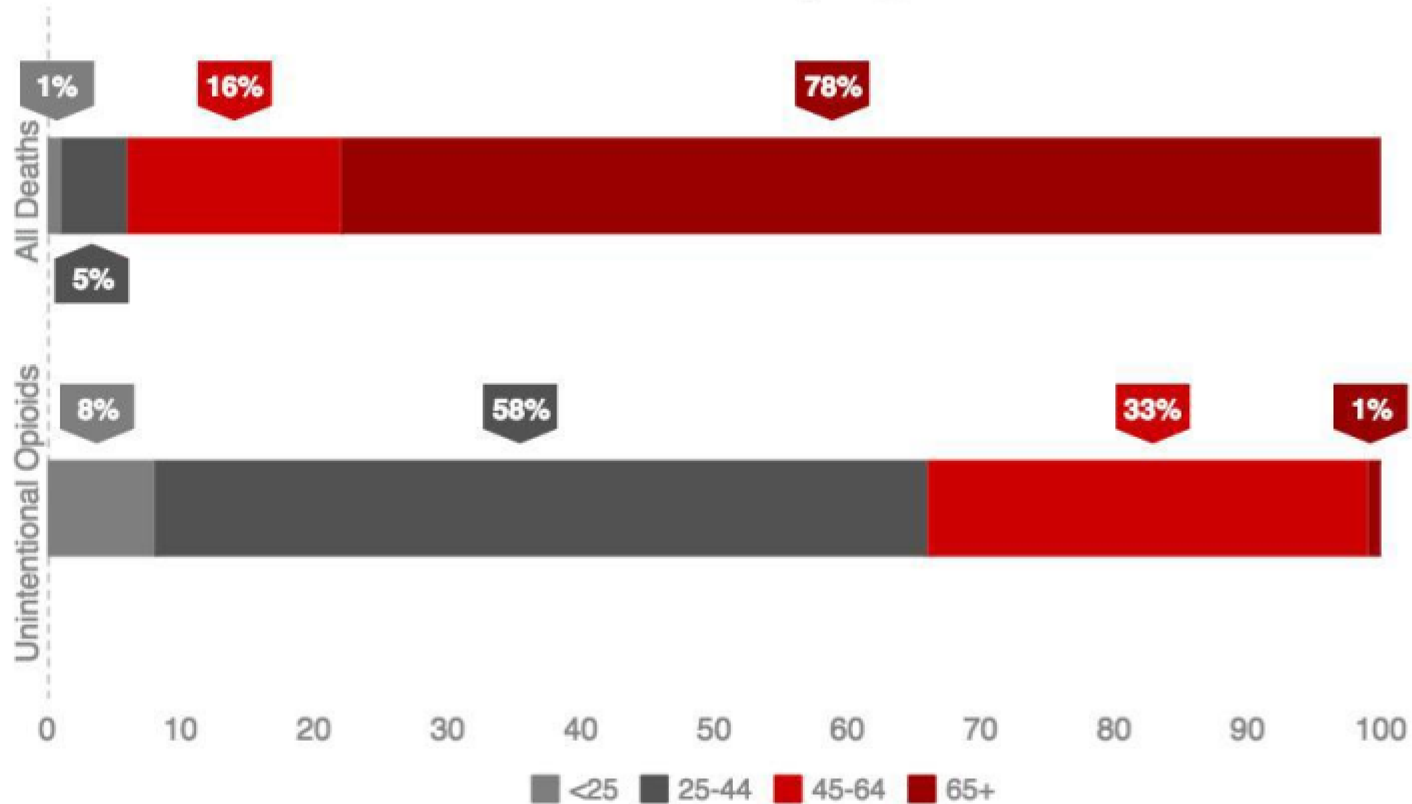
The opioid epidemic burden in Massachusetts



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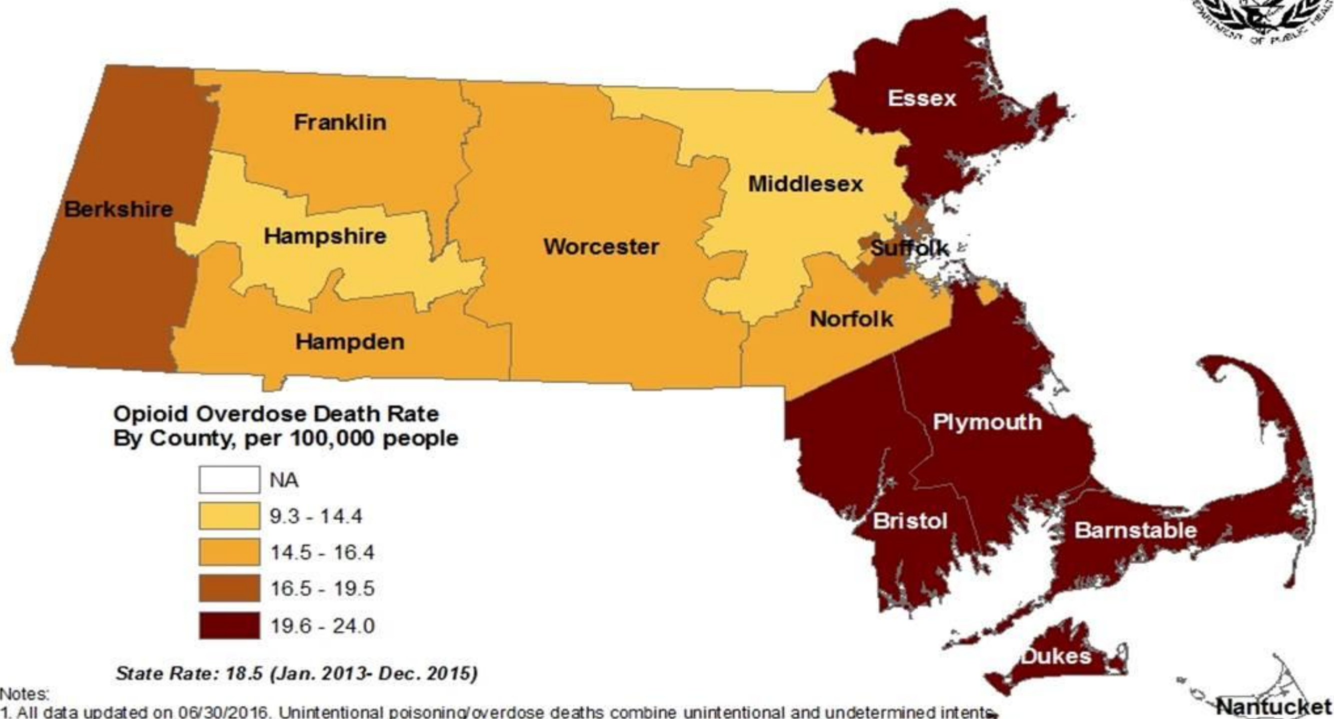
The opioid epidemic burden in Massachusetts

Unintentional Opioid Overdose Death Rates by County, January 2013- December 2015



State Rate: 18.5 (Jan. 2013- Dec. 2015)

Notes:

1. All data updated on 06/30/2016. Unintentional poisoning/overdose deaths combine unintentional and undetermined intents. Cases were defined using the International Classification of Disease (ICD-10) codes for mortality using the following codes in the underlying cause of death field: X40-X49, Y10-Y19. All multiple cause of death fields were then used to identify an opioid-related death, using the following ICD-10 codes: T40.0, T40.1, T40.2, T40.3, T40.4, and T40.6.
2. Opioids include heroin, opioid-based prescription painkillers, and other unspecified opioids.
3. Please note that 2014 and 2015 death data are preliminary and subject to updates.
4. Rates computed for smaller counties (populations <10,000) are likely to vary significantly from year to year.
5. Low rates of unintentional opioid overdose deaths in a county should not be taken as an indication that there is no opioid abuse problem in that community.
6. County level opioid overdose death rates are computed by averaging the number of opioid-related deaths between January 2013 and December 2015 by the estimated population in the community in that same time period. County is based on county of residence for the decedent.
7. The rate is expressed as a value per 100,000 residents.
8. 2013 counts have been updated after a review of cases that did not receive an official cause of death at the time the files were closed

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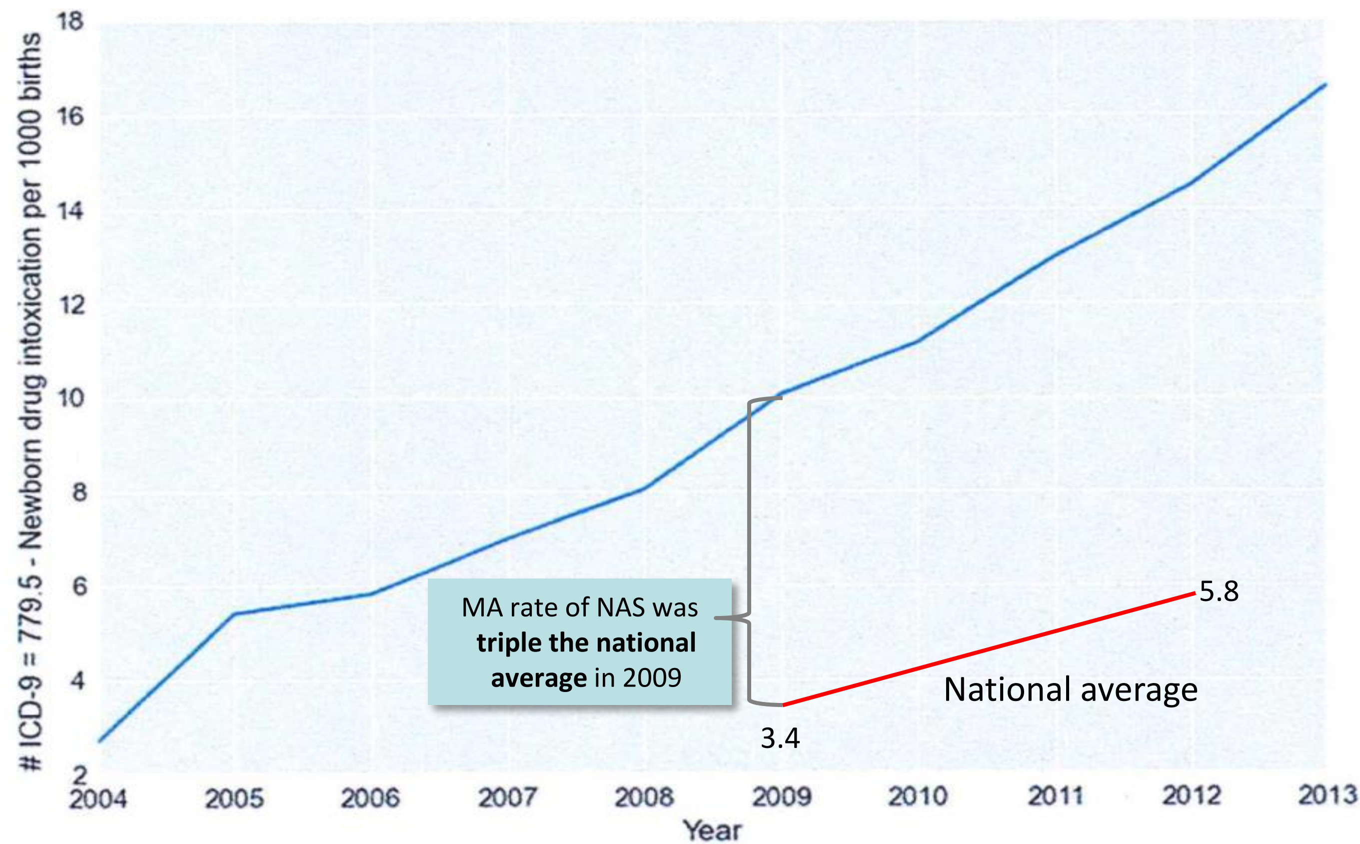
The rate of NAS is increasing significantly in Massachusetts

From 2004 to 2013 the Incidence of NAS increased from <3/1000 hospital births to **>16/1000 hospital births** per year

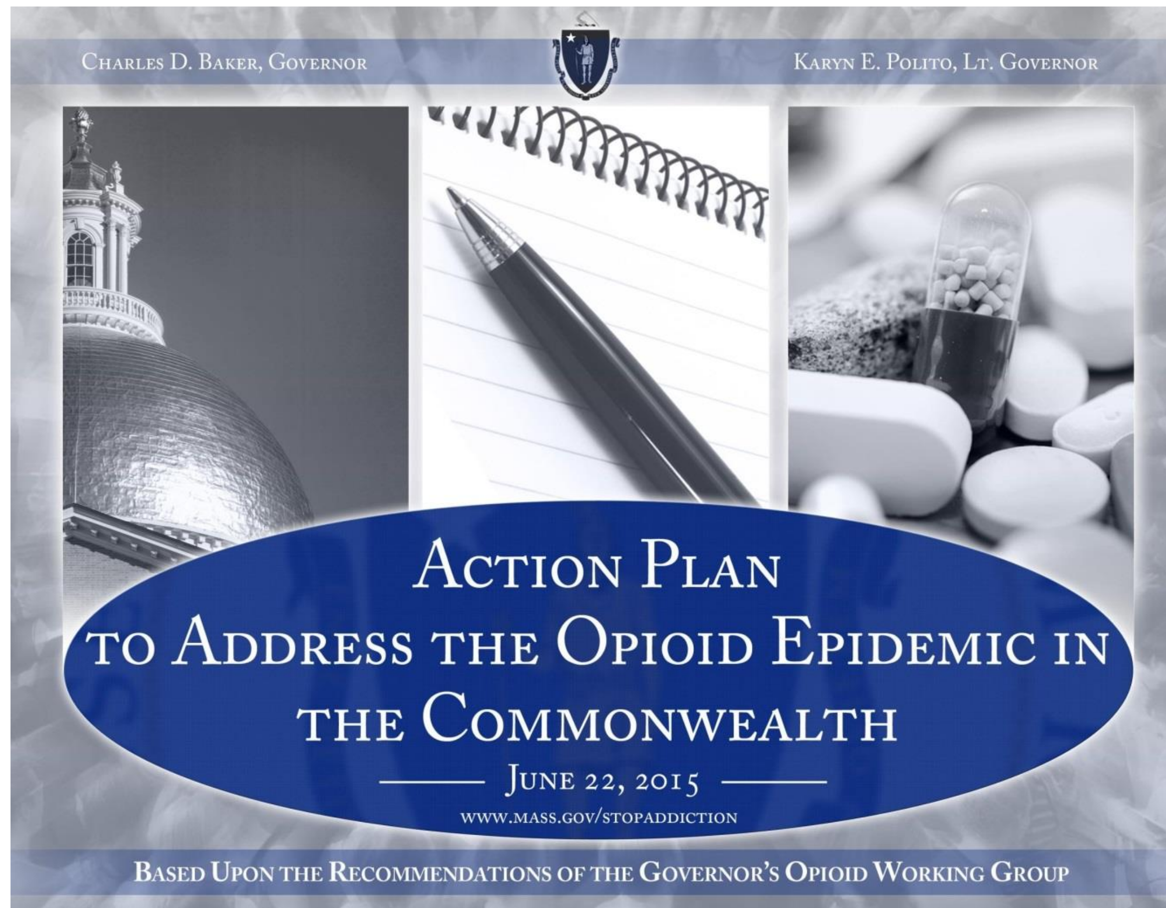


Sources:

1. Gupta M and Picarillo A. Neonatal abstinence syndrome (NAS): improvement efforts in Massachusetts. neoQIC. January 2015. PowerPoint presentation.
2. Patrick S, Davis M, Lehman C, Cooper W. Increasing incidence and geographic distribution of neonatal abstinence syndrome: Unites States 2009 to 2012. Journal of Perinatology 2015; doi: 10.1038/jp.2015.36. [Epub ahead of print]

Governor Baker's Opioid Working Group

Prevention Intervention Treatment Recovery



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WHAT IS STIGMA? | TAKE THE PLEDGE

TAKE THE QUIZ | SHOW YOUR SUPPORT

FOR HELP: 1-800-327-5050 (tty: 1-800-439-2370)

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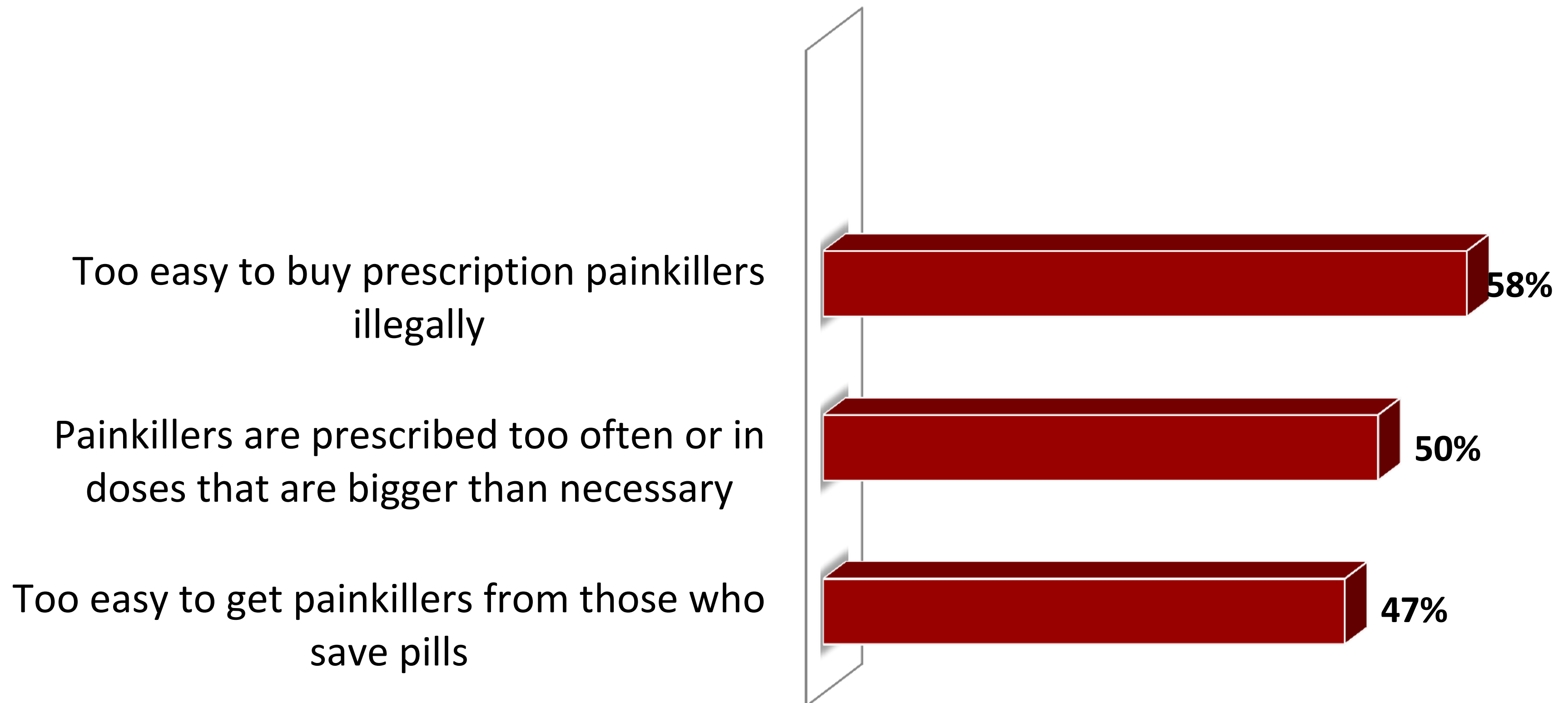
Survey: reason for prescription painkiller misuse



Source: Boston Globe and Harvard T.H. Chan School of Public Health, Prescription Painkiller Abuse: Attitudes among Adults in Massachusetts and the United States

Medical Core Competencies: Primary Prevention Domain

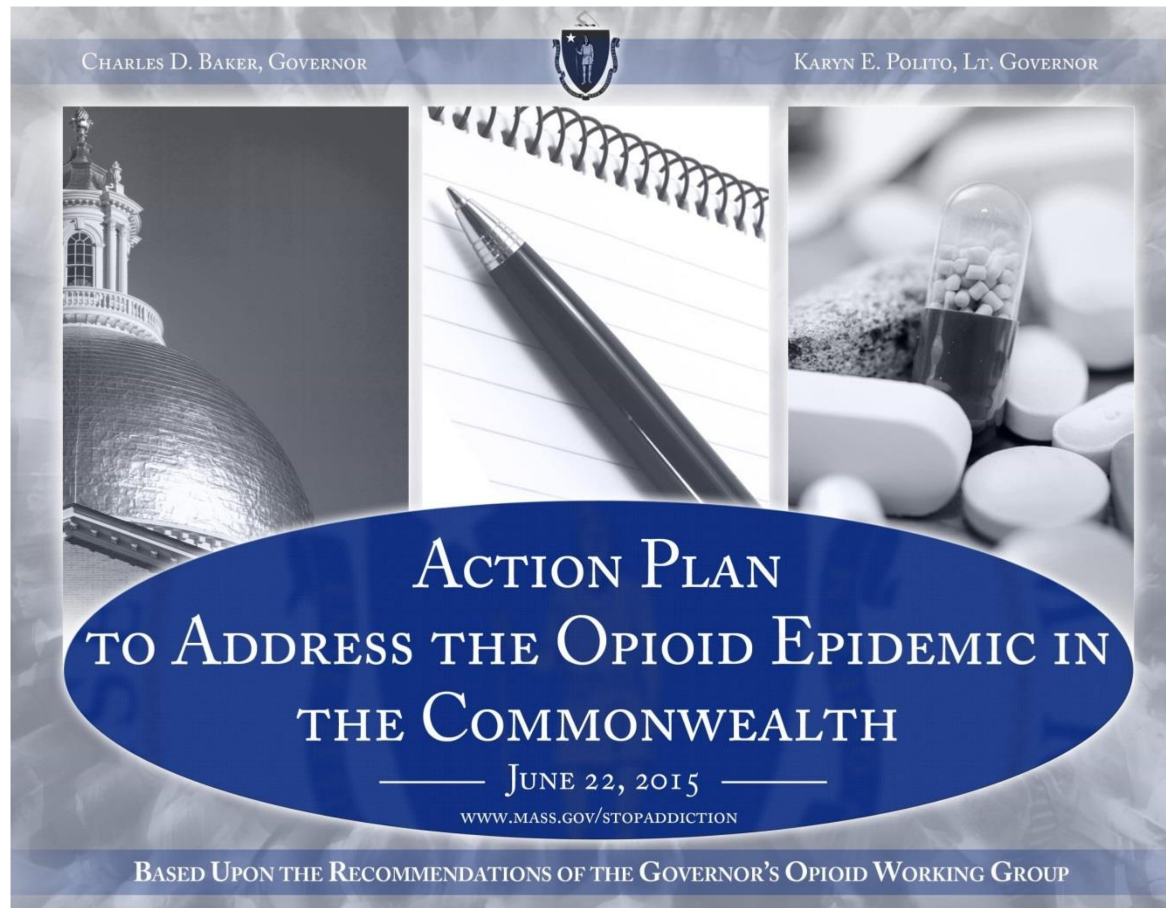
❑ Preventing Prescription Drug Misuse:
Screening, Evaluation, and Prevention

1. Evaluate a patient's pain using age, gender, and culturally appropriate evidence-based methodologies.

2. Evaluate a patient's risk for substance use disorders by utilizing age, gender, and culturally appropriate evidence-based communication skills and assessment methodologies, supplemented with relevant available patient information, including but not limited to health records, family history, prescription dispensing records (e.g. the Prescription Drug Monitoring Program or "PMP"), drug urine screenings, and screenings for commonly co-occurring psychiatric disorders (especially depression, anxiety disorders, and PTSD).

3. Identify and describe potential pharmacological and non-pharmacological treatment options including opioid and non-opioid pharmacological treatments for acute and chronic pain management, along with patient communication and education regarding the risks and benefits associated with each of these available treatment options.

Prevention Intervention Treatment Recovery



MassPAT: The new PMP

https://massachusetts.pmpaware.net/login

Steven Wojakowski

Summary Prescriptions:14 Prescribers:1 Pharmacies:3 Private Pay:4 Active Daily MME:0.0

Prescriptions

Filled	ID	Written	Drug	QTY	Days	Prescriber	Rx #	Pharmacy	Refills	MME/D	Pymt Type	PMP
04/14/2016	1	04/09/2016	ALPRAZOLAM 0.5 MG TABLET	90.0	90	JO BOG	00427148	WALGR (1885)	1		Private Pay	MA
03/23/2016	4	03/22/2016	LORAZEPAM 0.5 MG TABLET	40.0	30	JO BOG	01046793	FITCH (2622)	1		Private Pay	MA
02/16/2016	3	02/15/2016	ZOLPIDEM TARTRATE 5 MG TABLET	60.0	30	JO BOG	003554731	KMART (8665)	0		Private Pay	MA
01/19/2016	4	01/17/2016	ALPRAZOLAM 0.5 MG TABLET	40.0	30	JO BOG	6876638	FITCH (2622)	0		Other	MA
01/10/2016	1	01/02/2016	LORAZEPAM 0.5 MG TABLET	30.0	15	JO BOG	00991012	WALGR (1885)	1		Other	MA
11/21/2015	2	07/18/2015	ALPRAZOLAM 0.5 MG TABLET	30.0	30	JO BOG	394066	FITCH (2622)	5		Comm Ins	MA

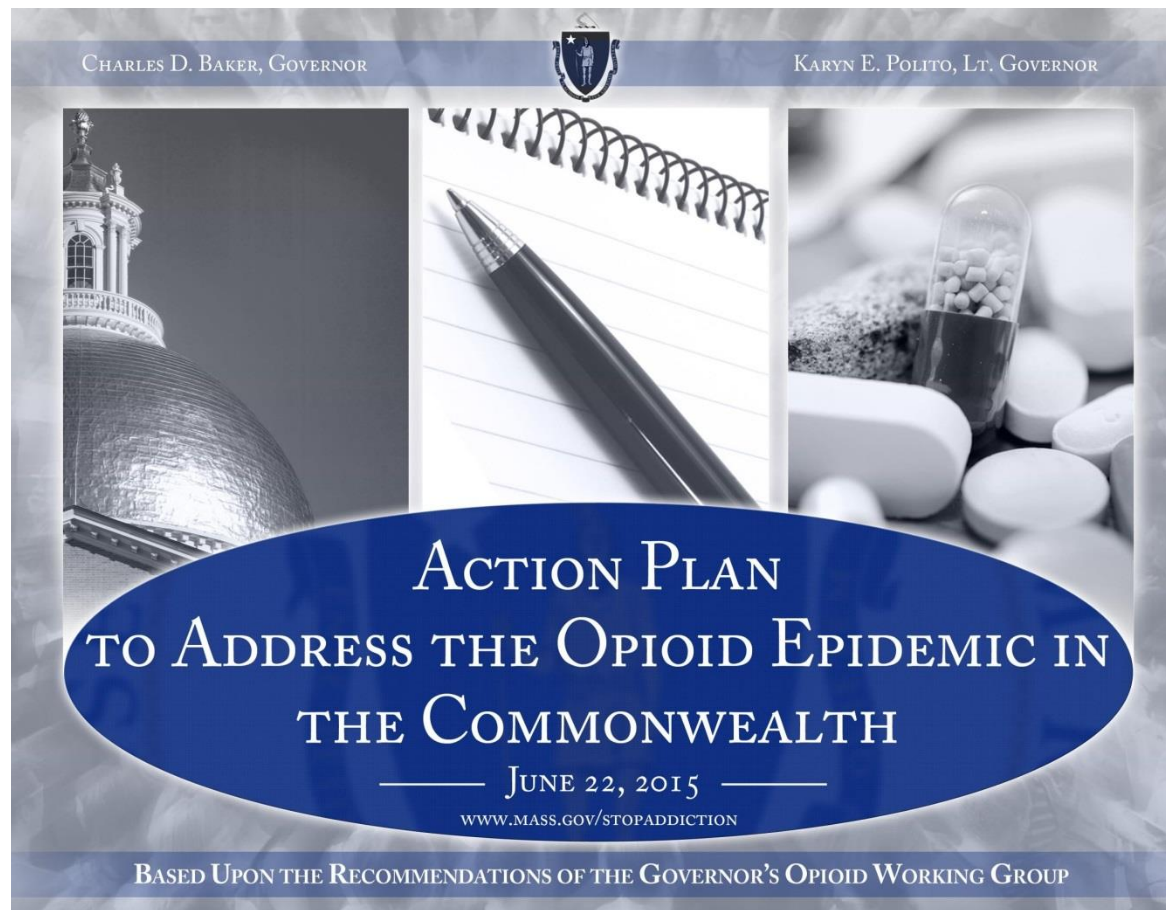
Reversing an Overdose: Use of Naloxone

THE LAW ***PROTECTS*** YOU.

mass.gov/MakeTheRightCall

Governor Baker's Opioid Working Group

Prevention Intervention Treatment Recovery



Treatment and Recovery: General Progress To-Date

- Adding hundreds of new treatment beds across the state;
- Beginning the transfer of women civilly committed under Section 35 at MCI Framingham to Taunton State Hospital;
- Reinforcing the requirement that all DPH licensed addiction treatment programs must accept patients who are on methadone or buprenorphine medication;
- Strengthening the state's commitment to residential recovery programs through rate increases.
- Issuance of Division of Insurance guidelines to commercial insurers on the implementation of the substance use disorder recovery law (Chapter 258) which requires insurers to cover the cost of medically necessary clinical stabilization services for up to 14 days without prior authorization;

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Substance Use, Treatment, Education and Prevention Law (STEP)

Ch. 52 of the Acts of 2016

- 7 day limit on a first time opioid prescription; allows for a pharmacist partial fill
- Patient voluntary non-opioid directive (12/16)
- SBIRT must be implemented in schools by June 2018
- Amends the Civil Liberties law so that any person who administers naloxone is not liable for injuries resulting from the injection
- Requires substance abuse evaluation in ED when present for an OD (7/16)

Chapter 55 – Data mapping

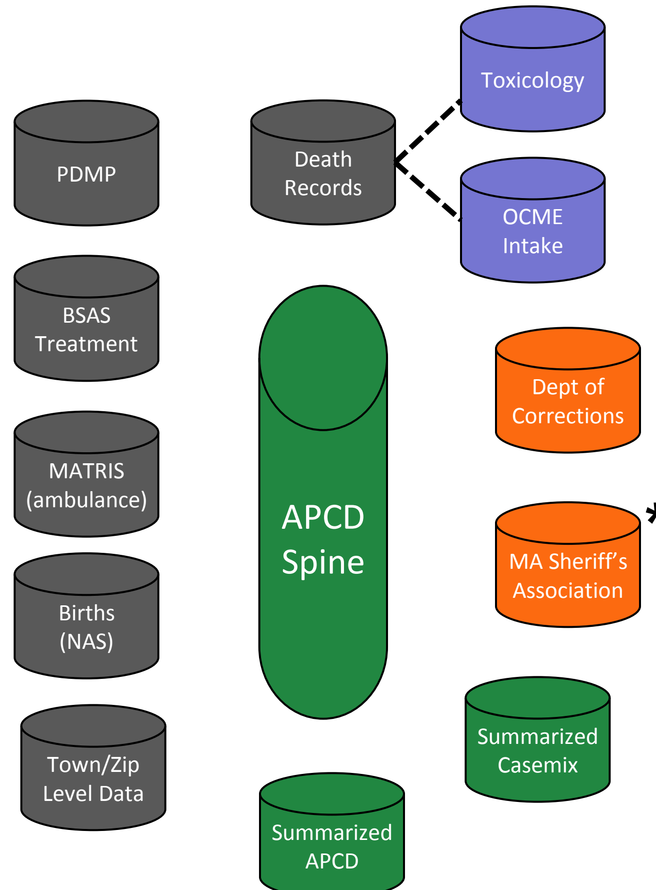
Data Sources

- DPH
- CHIA (MassHealth)
- EOPSS
- Jails & Prisons

System Attributes

- Data **encrypted** in transit & at rest
- Limited data sets **unlinked** at rest
- Simplified structure using **summarized** data
- Linking and analytics “on the fly”
- No residual files after query completed
- Analysts can’t see data
- Automatic cell suppression
- Possible resolution to issues related to 42 CFR part 2

Chapter 55 Data Structure



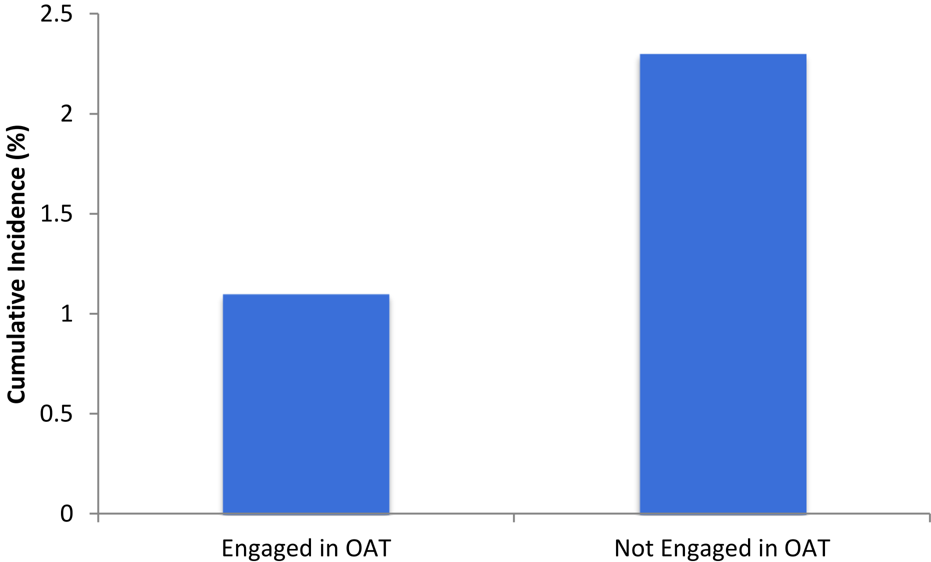
All Doors Opening

- Significant coordination within DPH
- Financial and technical support from MassIT’s Data Office
- CHIA takes on role as linking agent
- Coordination across agencies (legal & evaluation)
- Volunteer analytic support from academia and industry

* Note: Houses of Correction data was unavailable at the time this report was written. As such, assessment does not reflect HOC inmate outcomes.

DRAFT - FOR POLICY DEVELOPMENT ONLY

Chapter 55: Key Finding



Patients treated with methadone and/or buprenorphine (Opioid Agonist Treatment or "OAT" that block the effect of opioids) following a non-fatal overdose were significantly less likely to die; however, very few patients (~5%) engage in OAT following a non-fatal overdose.

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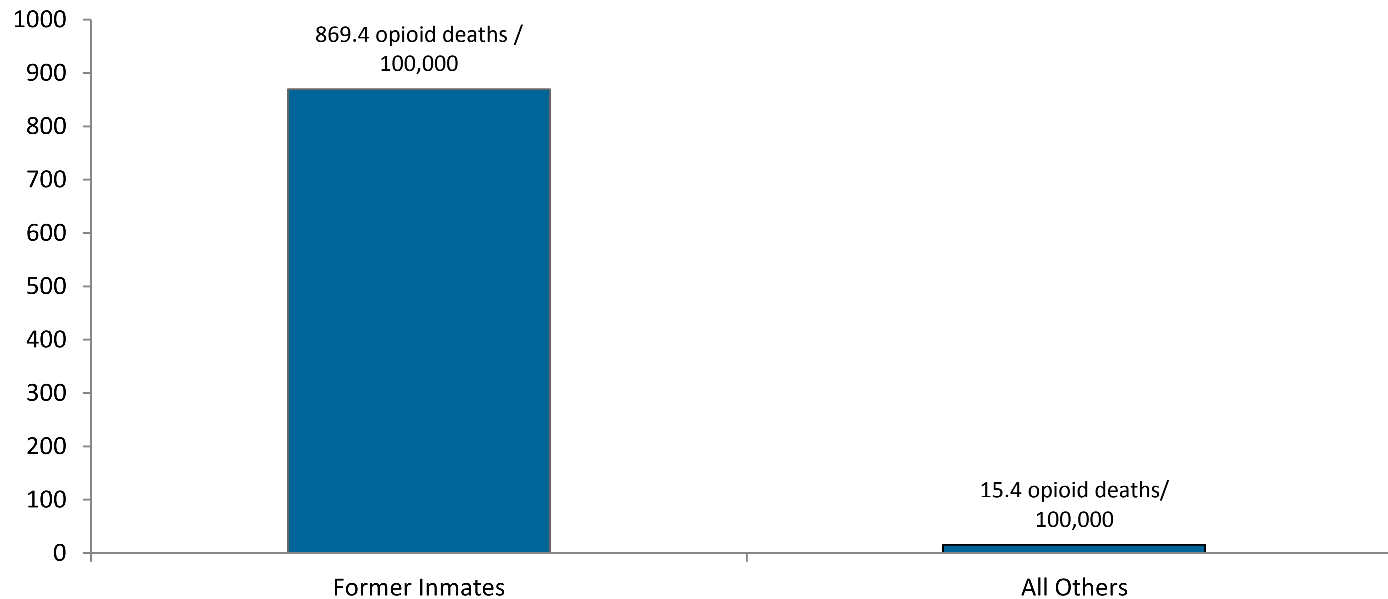
Chapter 55: Key Finding



The risk of opioid overdose death following incarceration is 56 times higher than for the general public.

DRAFT - FOR POLICY DEVELOPMENT ONLY

Monica Bharel, MD, MPH
Commissioner of Public Health