



Precision Public Health

Using Data And Technology To Inform Policy And Improve Practice

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Commissioner 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



PHIT

Population Health Information Tool

Select Geography:

- ☒ Abington
- ☒ Acton
- ☒ Acushnet
- ☒ Adams
- ☒ Agawam
- ☒ Alford
- ☒ Amesbury
- ☒ Amherst

[Select all](#) [Deselect all](#)

Select Time Period:

From:

2009

To:

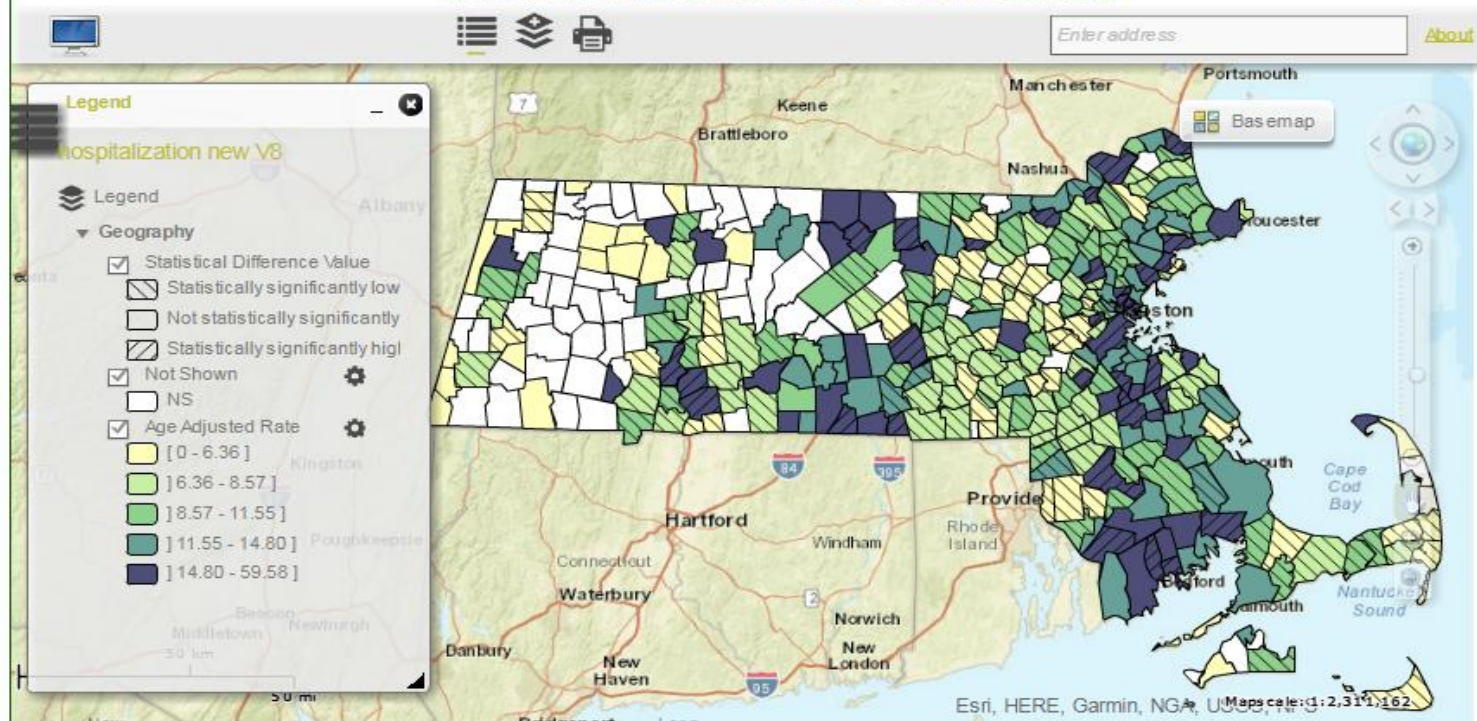
2012

Select Sex:

- ☐ Female
- ☐ Male
- ☒ Total

[Submit](#)[Revise Query](#)[New Query](#)

Annual Average Age Adjusted Rates of Hospital Admission for Asthma per 10,000 People, for Males and Females Combined for 2009 - 2012 by Community *



- U or Unstable indicates that a rate is unstable, because it has a relative standard error > 30%, and should be interpreted with caution.
 - CI represents 95% confidence interval.
 - Upper and lower confidence intervals are calculated using the age adjusted rate when it is displayed in the report.
 - NS = Not shown. Statistics are suppressed to protect confidentiality. Hospitalization rates may not represent all cases with a disease since not all cases may be hospitalized.
 - Incidence rates are based on the residential location of the cases and not necessarily the location of the source of exposure.
 - Numbers and rates may differ slightly from those contained in other publications. These differences may be due to file updates, differences in calculating rates and updates in population estimates.
 - Data source: Center for Health Information and Statistics (CHIAS)
 - Please refer to [Metadata](#) for more information about this dataset.
- * Map is not available when viewing data separately by age group or by State for geography type.

Health Priority Social Determinant of Health





ESPnet: EHR Support for Public Health

Practice EMR's



diagnoses



lab results



meds

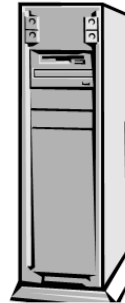


vital signs

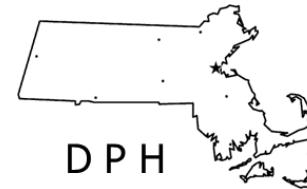


demographics

ESP Server



Health Department



Notifiable
disease
case reports

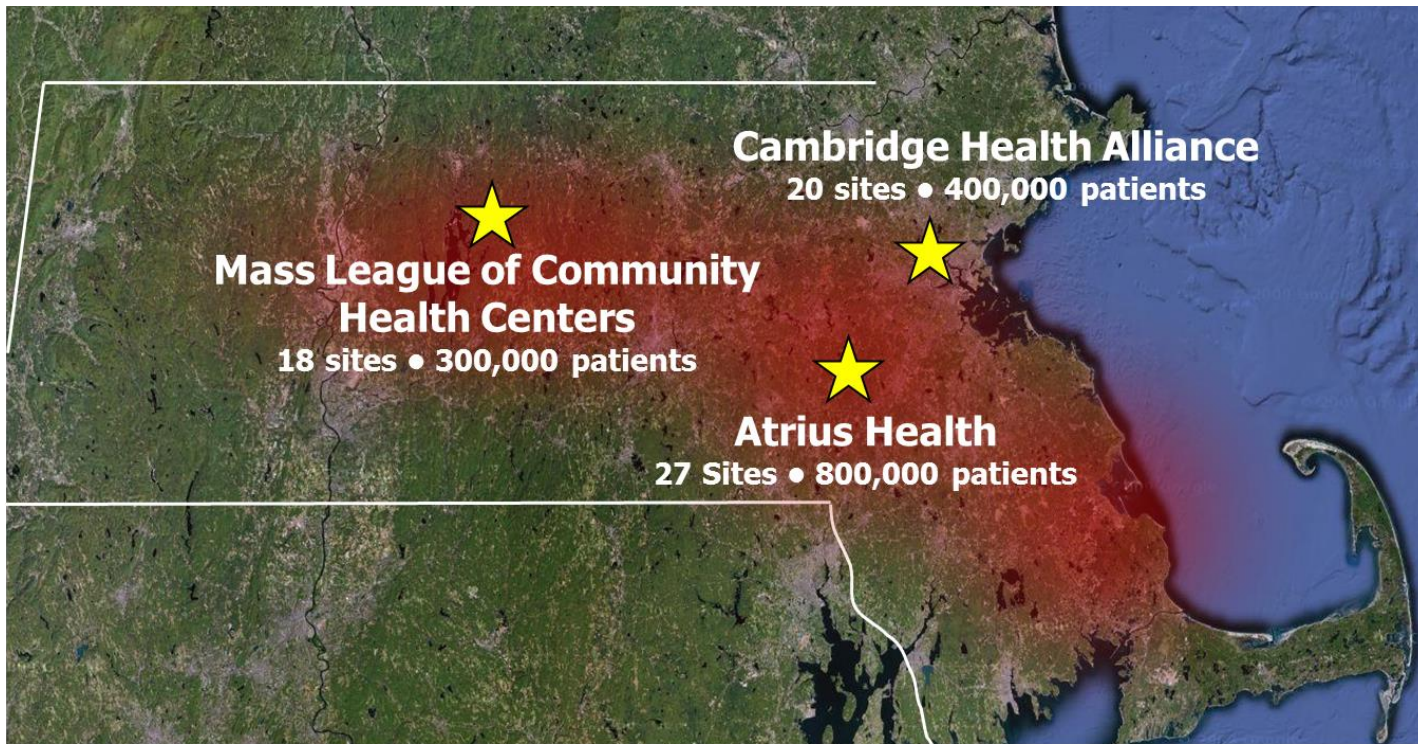
JAMIA 2009;16:18-24

Am J Public Health 2012;102:S325-S332

Am J Public Health 2014;104:2265-2270



ESPnet participating sites





Sharing data to improve clinical care and public health.

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News & Events

April 20, 2017

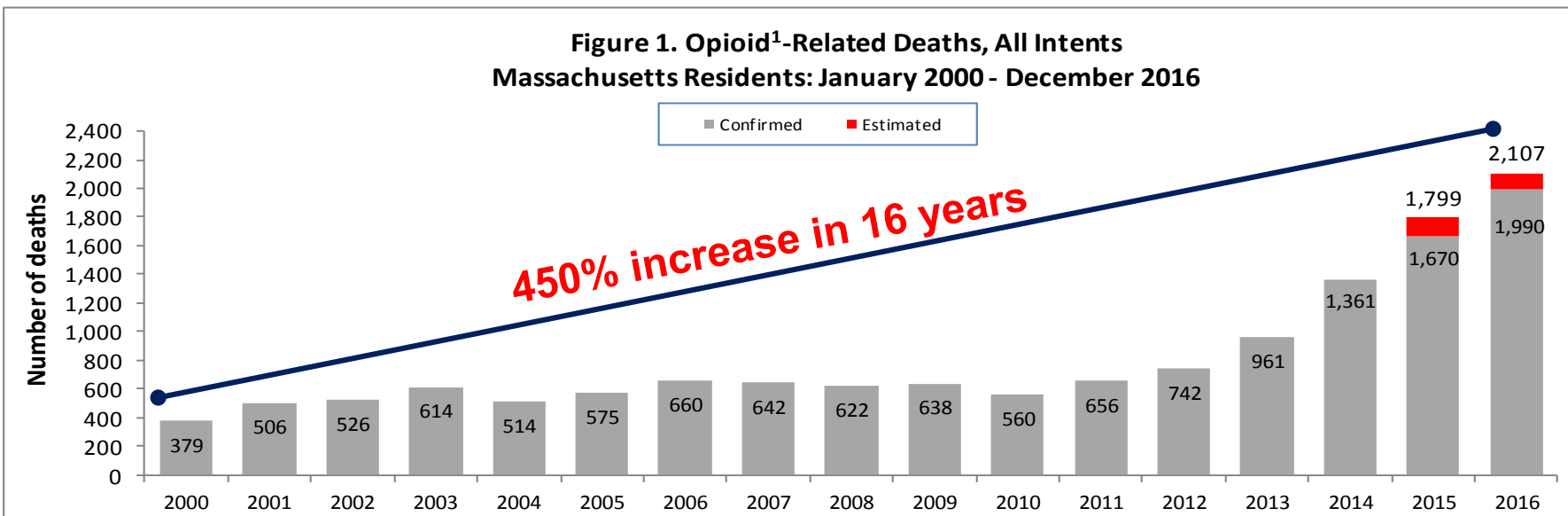
Seven sites selected to participate in eCR implementations

The Digital Bridge project management office has selected seven sites to participate in eCR implementations: California, Houston, Kansas, Massachusetts, New York City, Michigan and Utah. Site implementations will begin in the spring of 2017 and will continue through 2018 in a phased roll-out.



Opioid Related Deaths

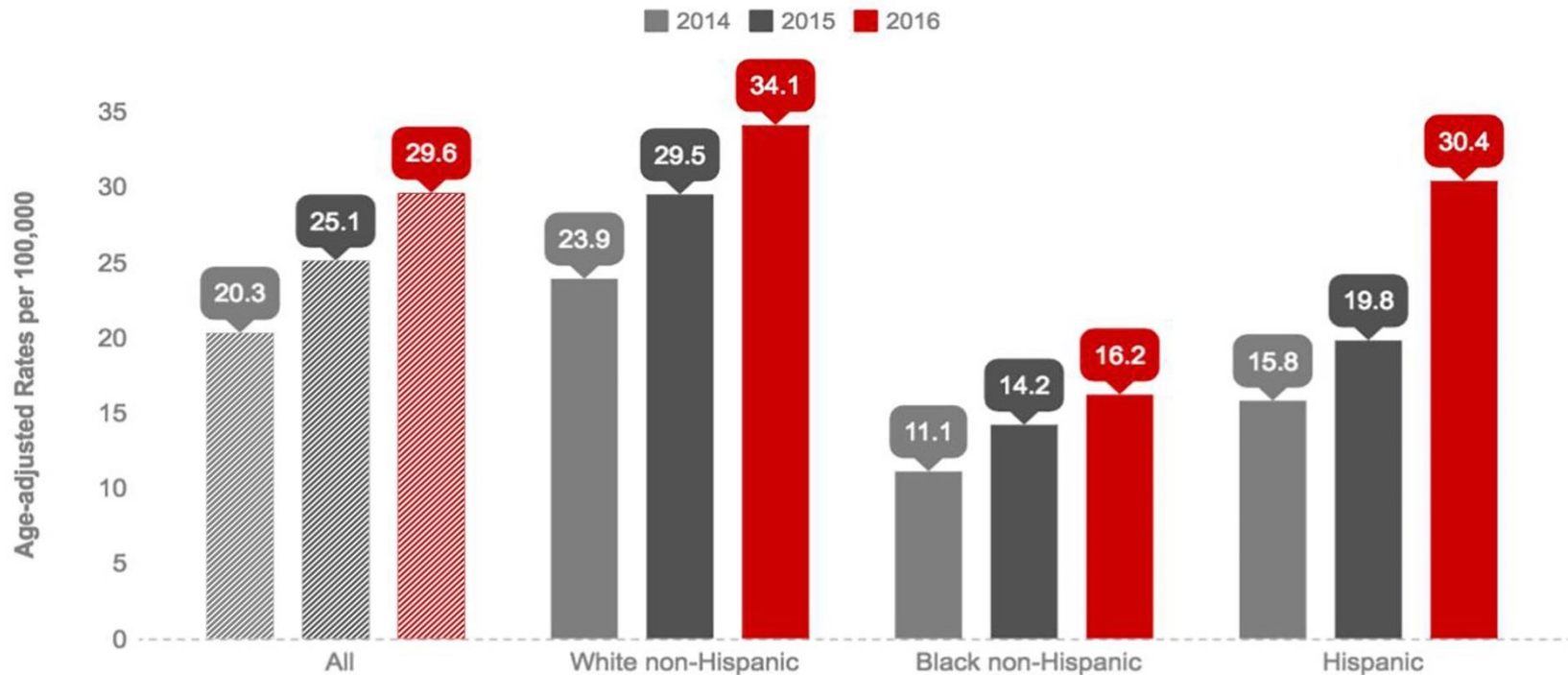
Figure 1. Opioid¹-Related Deaths, All Intent
Massachusetts Residents: January 2000 - December 2016





Opioid Related Deaths

Confirmed Opioid-Related Death Rates, All Intents, by Race and Year

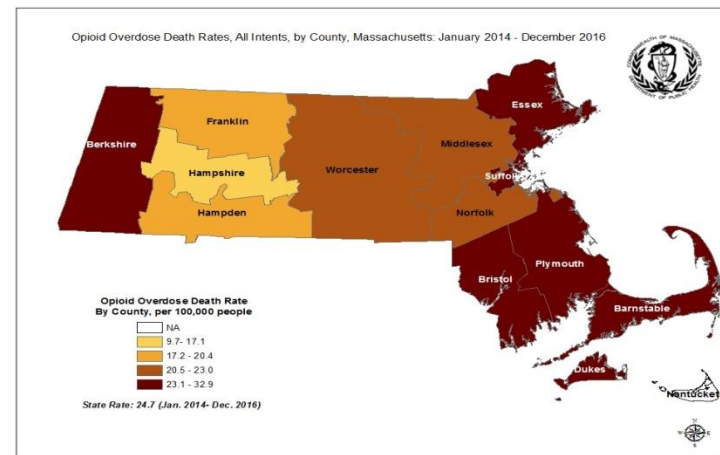
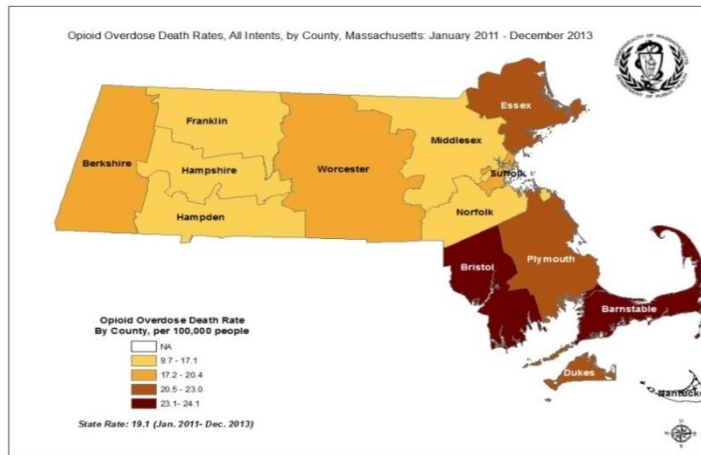


Opioid Overdose Death Rates by County

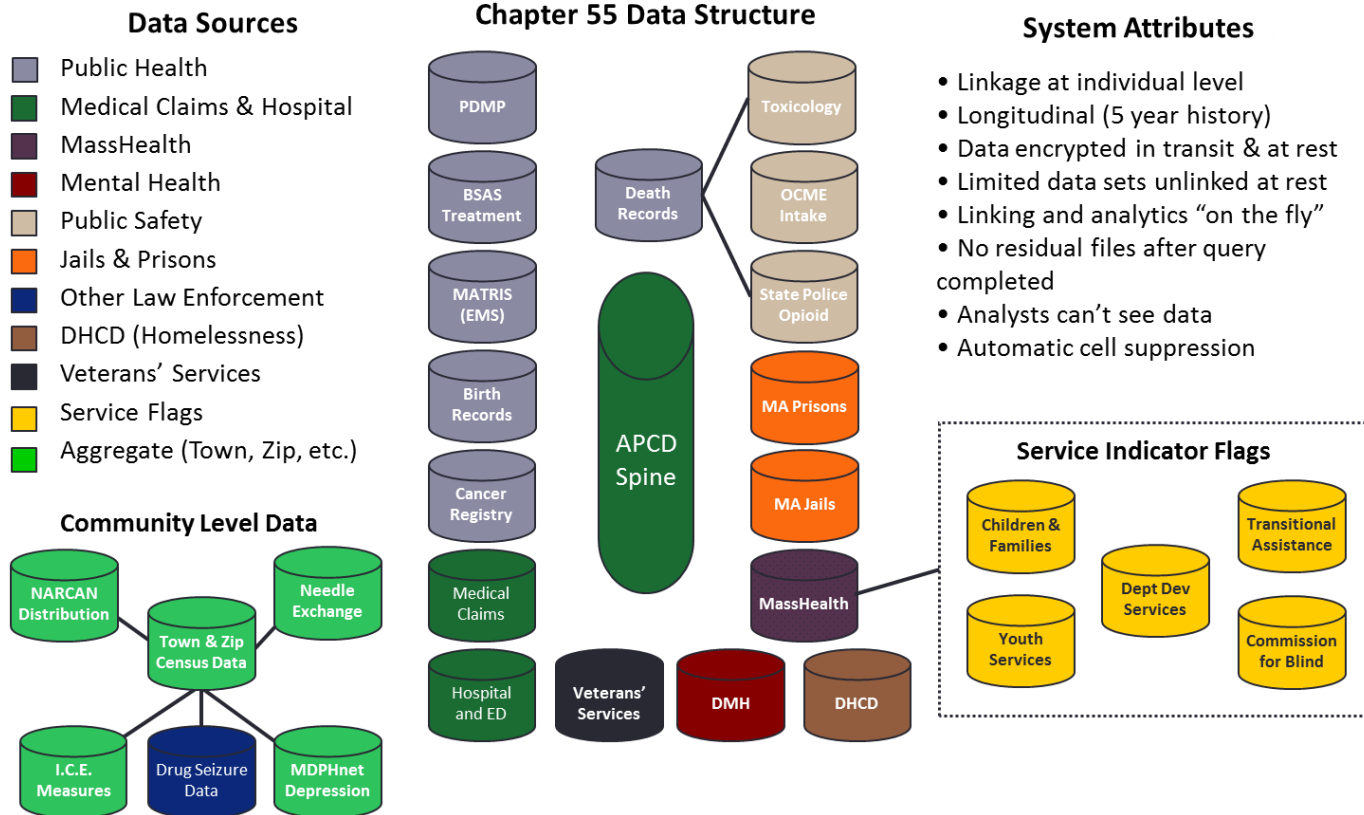
2011 - 2013

vs.

2014 - 2016



Chapter 55 Data Mapping



Academic

- Brandeis University
- Boston University
- Brown University
- Harvard Medical School
- Harvard School of Public Health
- Massachusetts College of Pharmacy and Health Sciences
- Massachusetts Institute of Technology
- Northeastern University
- Tufts University
- University of Massachusetts Amherst
- University of Massachusetts Boston
- University of Massachusetts Medical School

Hospitals & Private Industry

- Baystate Health
- Beth Israel Deaconess Medical Center
- Boston Medical Center
- Brigham & Women's Hospital
- Children's Hospital
- GE
- IBM
- Liberty Mutual
- Massachusetts General Hospital
- Massachusetts League of Community Health Centers
- McKinsey & Company
- The MITRE Corporation
- Partners Healthcare
- PwC
- Rand Corporation

State and Federal Government Agencies

- Boston Public Health Commission
- Center for Health Information and Analysis
- Department of Housing and Community Development
- Department of Mental Health
- Department of Correction
- Department of Public Health
- Executive Office of Health and Human Services
- Executive Office of Public Safety and Security
- Federal Bureau of Investigation
- High Intensity Drug Trafficking Area (NE)
- Health Policy Commission
- Massachusetts Sheriffs' Association
- MassIT
- Office of the Chief Medical Examiner
- State Auditor's Office



Report Organization

Re-Estimating Baseline

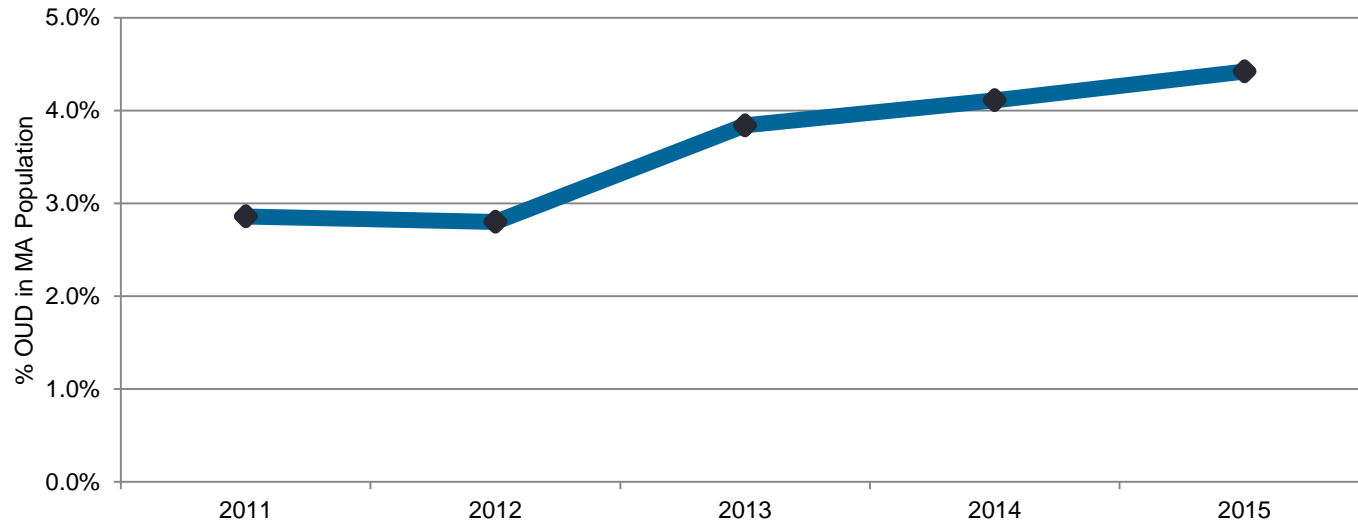
Time line and Influences

At –Risk Populations



Opioid Use Disorder (OUD)

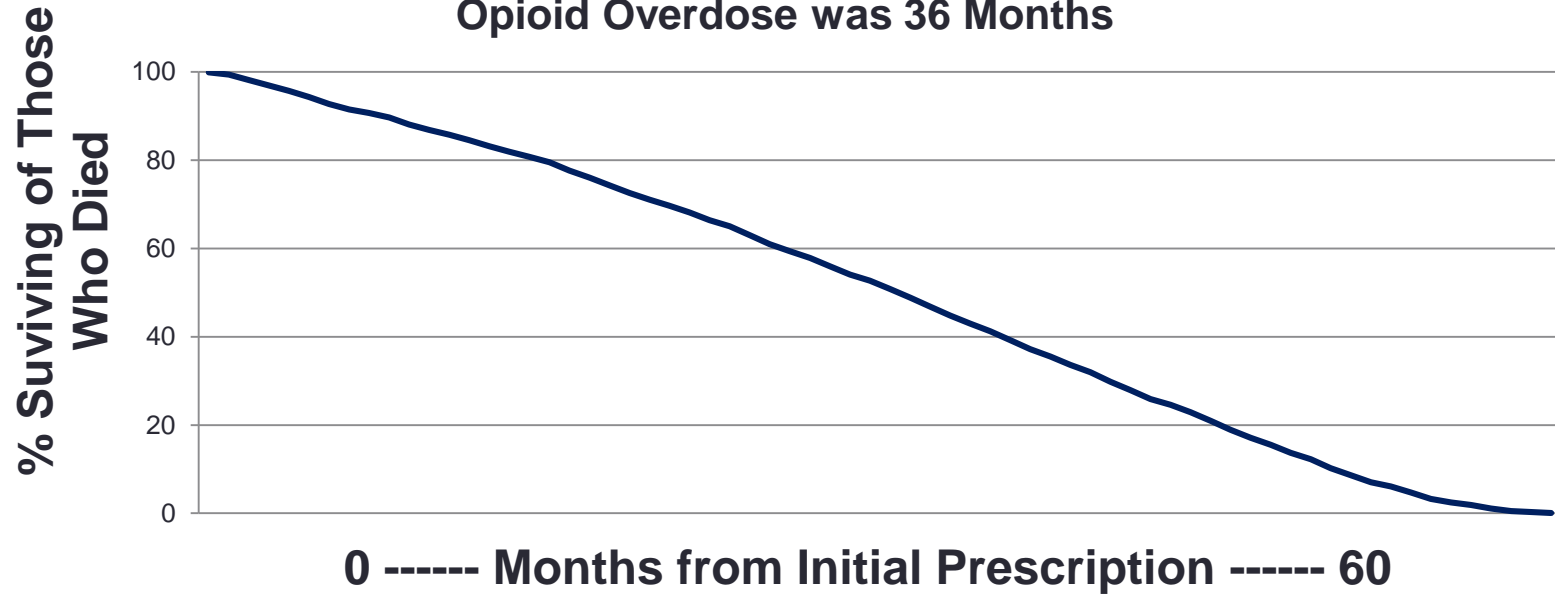
**Estimated OUD Population Rises Significantly
Between 2011-2015**





Time From Initial Rx to Overdose Death

**Average Survival Time For Those Who Died of
Opioid Overdose was 36 Months**

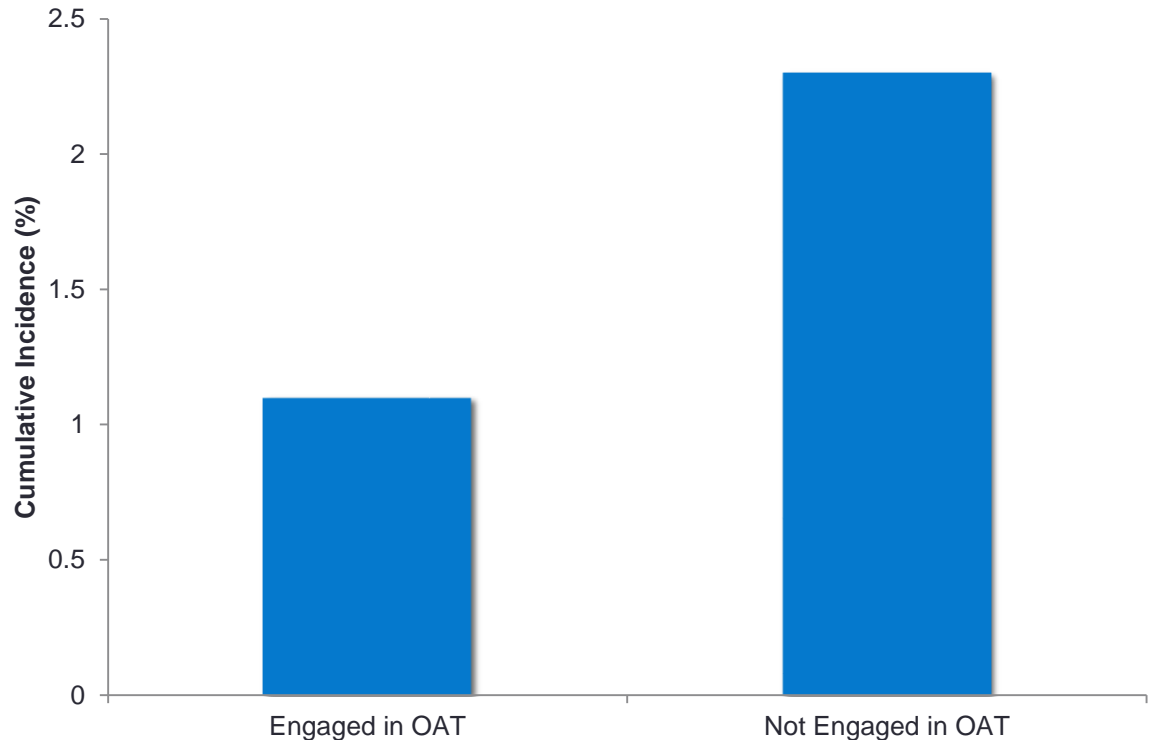




Treatment with Medication

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.

Figure 2: Cumulative Incidence of Opioid-Related Death by OAT Status

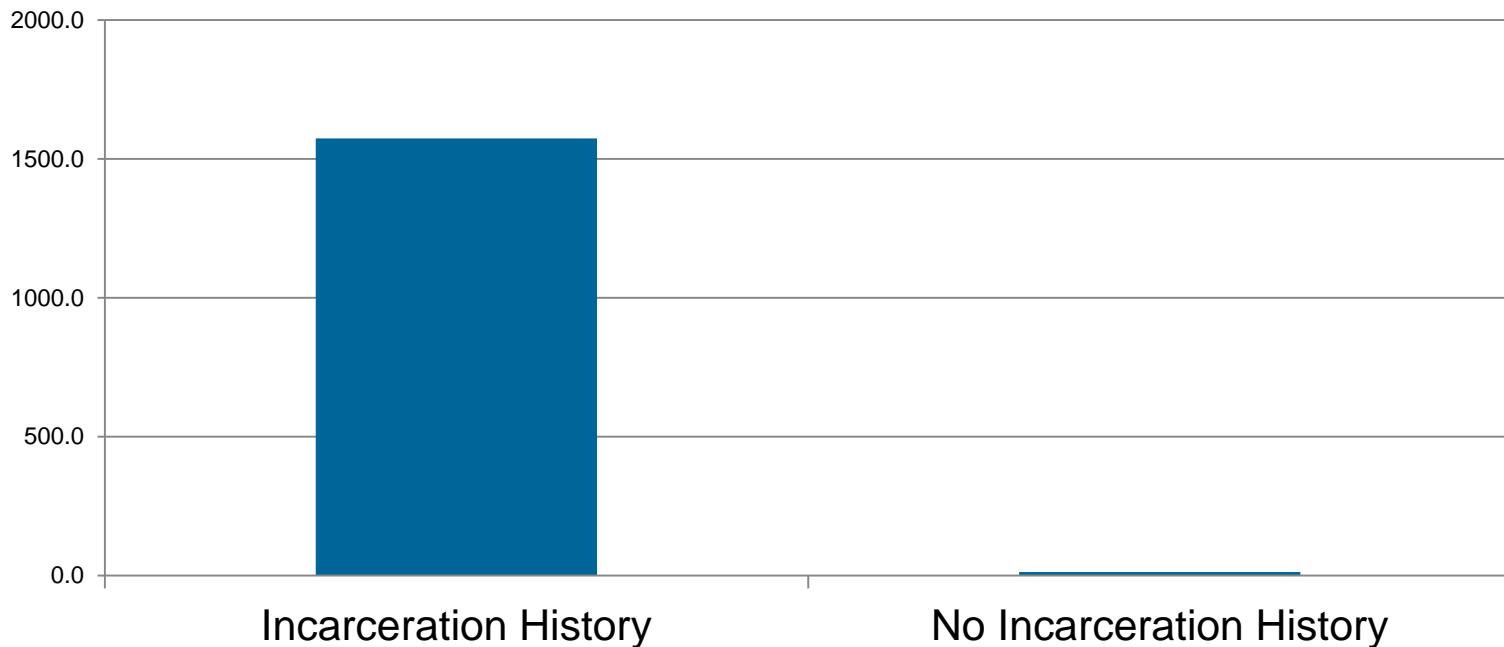




Persons with Histories of Incarceration

**Opioid Death Rate 120 Times Higher
for Individuals with Histories of Incarceration**

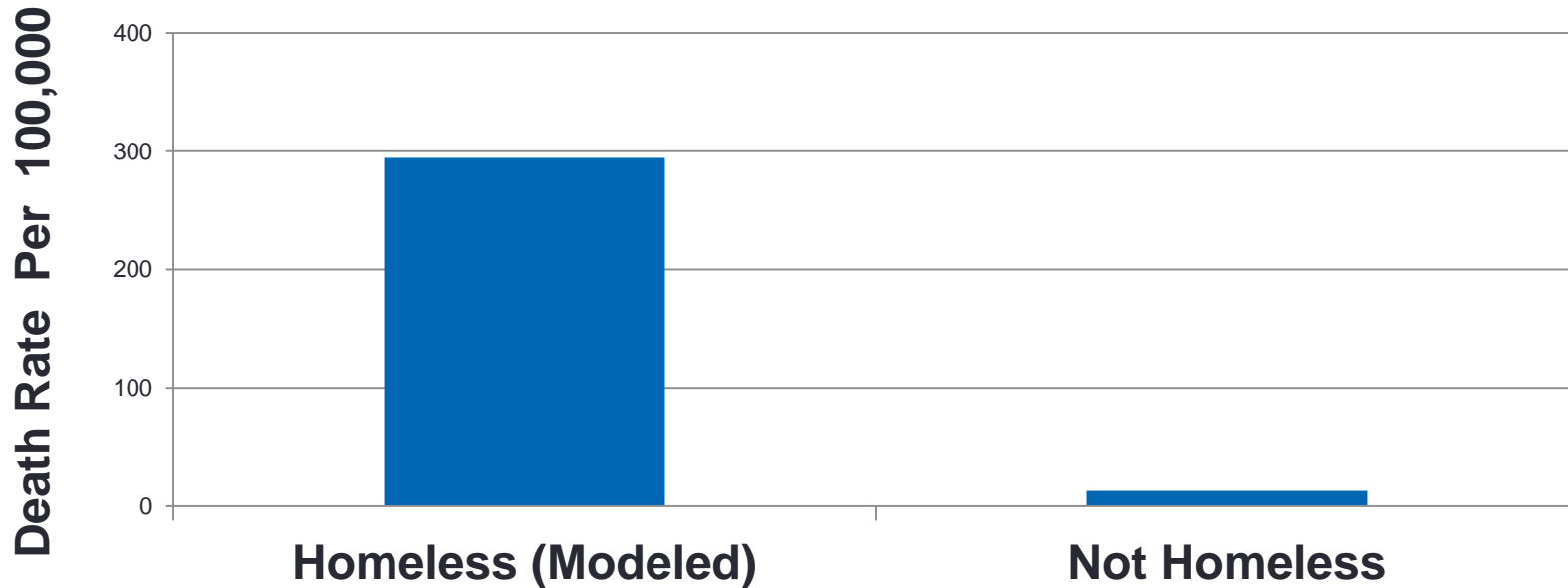
Death Rate Per 100,000





Persons Experiencing Homelessness

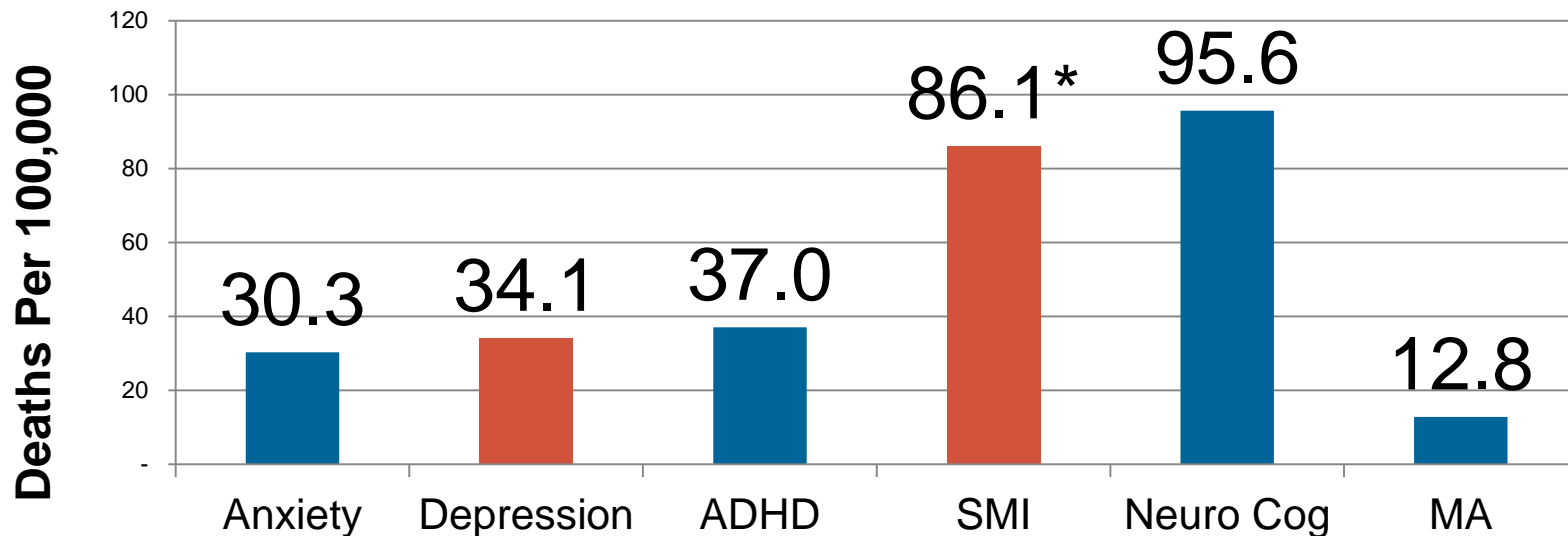
Opioid Death Rate **30 Times Higher**
for the Homeless Individuals





Individuals with Serious Mental Illness

**Very High Rates of Fatal Opioid Overdoses
for Persons with Some Mental Health Diagnoses**

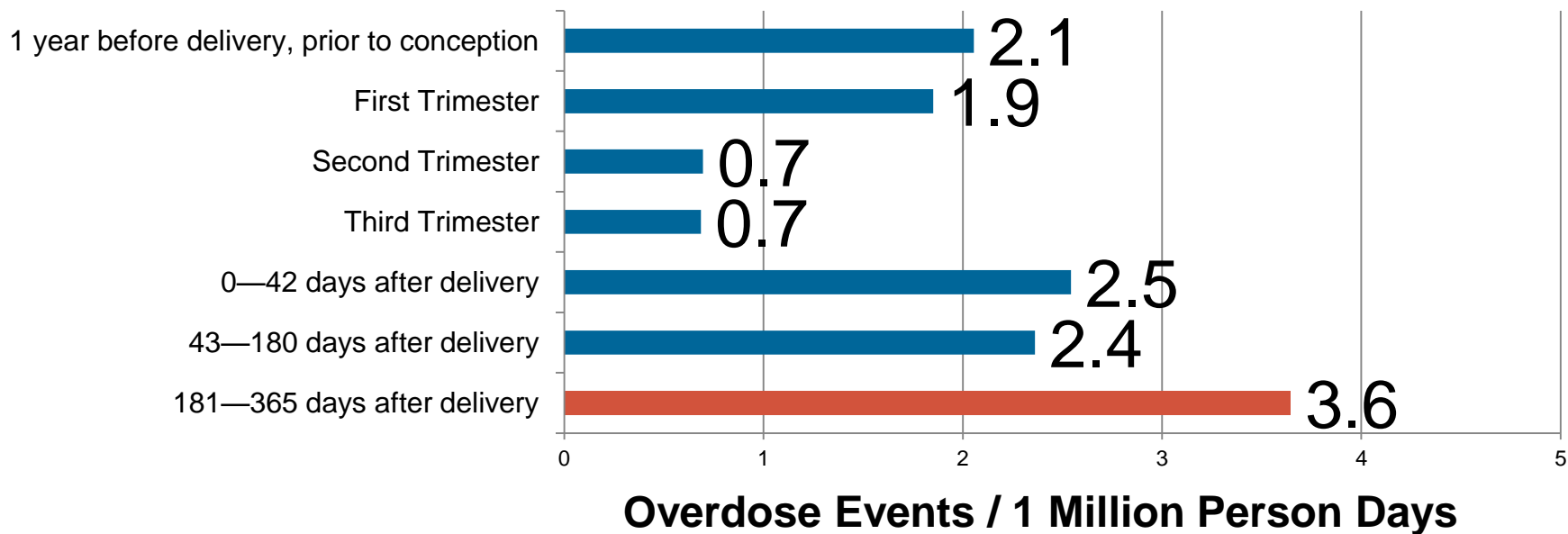


*Among MassHealth members only



Pregnant and Postpartum Risk

Rate of Opioid Overdose Events Increase Sharply After Delivery for OUD Mothers





Data visualization



A Deadly Problem

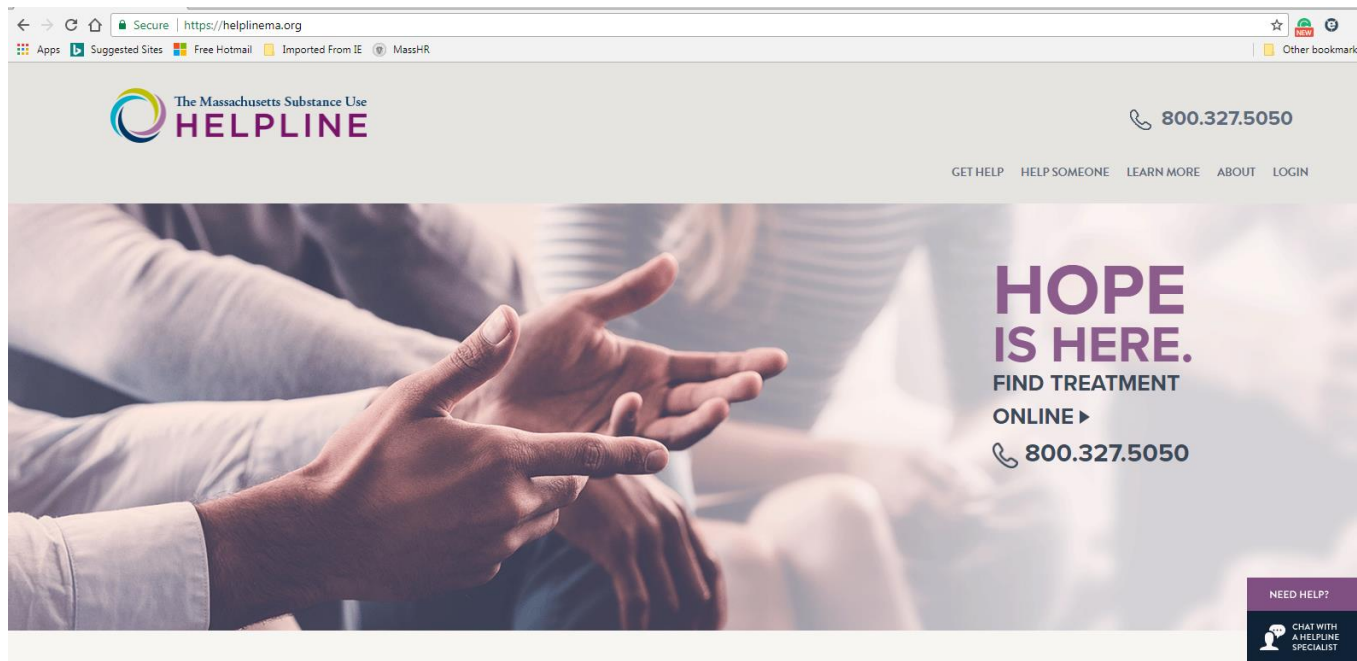
Massachusetts is currently experiencing an epidemic of opioid-related overdose and death.

These overdoses are driven by the underlying chronic disease of opioid addiction or opioid use disorders. People with opioid addiction are at high risk of overdose and death.

<http://www.mass.gov/chapter55/>



Revamped Helpline



A screenshot of the revamped Helpline website. The browser address bar shows "Secure | https://helpline.ma.org". The website header includes the logo "The Massachusetts Substance Use HELPLINE" and a phone number "800.327.5050". Navigation links include "GET HELP", "HELP SOMEONE", "LEARN MORE", "ABOUT", and "LOGIN". The main content area features a background image of hands reaching out, with the text "HOPE IS HERE. FIND TREATMENT ONLINE ►" and the phone number "800.327.5050". A "NEED HELP?" button is visible in the bottom right corner.





MassPAT

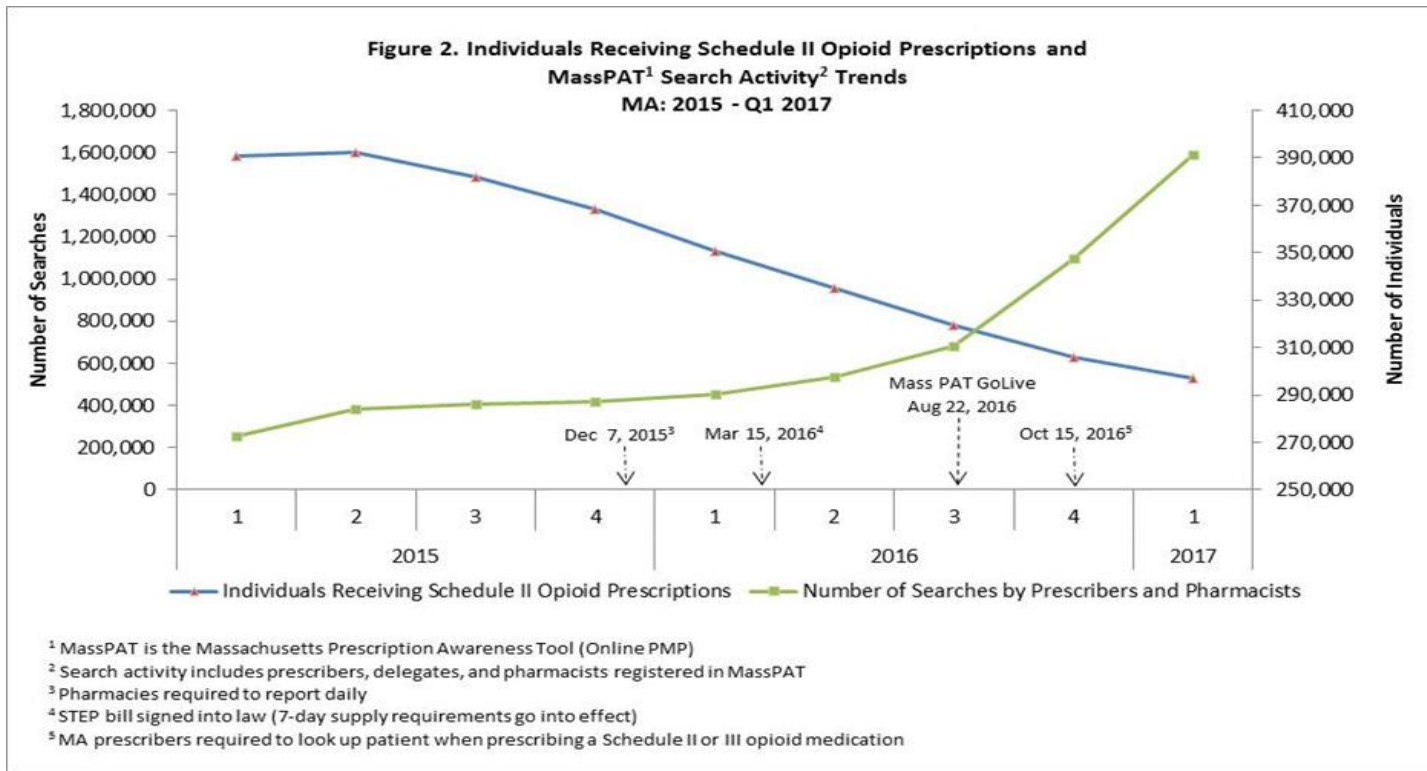
- 6.5 million searches
- Nearly 57,000 registered
- 97% prescribers of Schedule II or III
- 31 states

The screenshot shows the MassPAT PMP Awardee dashboard. At the top, there is a header with the Massachusetts Department of Public Health logo, contact information (MA PMP, 99 Chauncy Street, Boston, MA 02111, 1-866-Appias), and navigation links (Home, RxSearch, User Profile, Help, Log Out). Below the header is a secondary navigation bar with Home, Dashboard, and Announcements. The main content area is titled "My Dashboard" and contains several sections:

- Patient Alerts:** A table with columns: Patient Full Name, DOB, Alert Date, and Alert Letter. It lists three alerts for JOHN DOE and one for NEW BOB TESTPATIENT.
- Recent Requests:** A table with columns: Patient Name, DOB, Request Date, and Delegate. It lists five requests for John Doe, Jane Doe, and Jan Doe.
- Delegates:** A table with columns: Delegate Name, Status, and Request Date. It lists two delegates: John Provider (pending) and Rodd Kelly (approved).
- Announcements:** A section with a welcome message and a notice about the temporary disabling of the Rx Search functionality.
- Quick Links:** A section with links to the NPI Website, MA PMP, and PMP website.



PMP Activity Trends





Additional Resources

- Massachusetts Helpline:
 - www.helplinema.org
- Massachusetts Responds to The Opioid Epidemic:
 - With links to current stats & Chapter 55 Report
 - Mass.gov/opioidresponse
- Stop Addiction Before It Starts:
 - Mass.gov/stopaddiction