THE OPIOID EPIDEMIC IN MASSACHUSETTS: FINDINGS ON HOSPITAL IMPACT AND POLICY OPTIONS

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INTRODUCTION

- Increases in the rate of overdose deaths from 2012 to 2014 highlight the substantial burden of the opioid epidemic in Massachusetts.[1]
- Data from the Massachusetts Department of Public Health indicate there were 1,099 confirmed unintentional and/or undetermined opioid-related deaths in 2014, a 65% increase over 2012 and a 21% increase over 2013.[2]
- Medication-Assisted Treatment (MAT), is the use of FDA-approved medications, including methadone, buprenorphine, and naltrexone, in combination with evidence-based behavioral therapies to provide a whole-patient approach to treating opioid use disorder.[3] Consistent and reliable access to MAT reduces rates of addiction, infectious disease transmission and opioid-related hospital utilization.[4]

RESEARCH OBJECTIVES

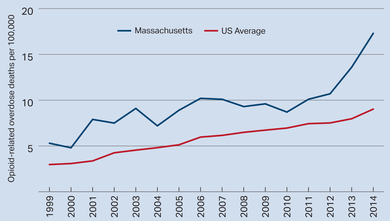
- Provide new research, data and evidence to support and inform legislative action.
- Assess the impact of the opioid epidemic on hospitals, communities and payers.
- Identify gaps in the addiction treatment system, with a focus on the availability of MAT.

STUDY DESIGN

- Descriptive analysis of hospital discharge data from the Center for Health Information and Analysis (CHIA) - Massachusetts Acute Hospital Case Mix Database and data on population demographics from the American Community Survey, 2010-2014.
- Descriptive analysis of data on MAT availability from the Substance Abuse and Mental Health Services Administration - Opioid Treatment Program (OTP) directory and Buprenorphine Treatment Physician Locator, as well as prescriber data from Alkermes Pharmaceuticals.
- A survey of buprenorphine providers to assess wait times and extent to which providers are prescribing up to or near the federally imposed cap on buprenorphine patient panel size. 150 buprenorphine providers were identified using SAMHSA's Buprenorphine Physician Locator Tool. 48 providers responded (32% of the sample).
- Analysis of patient travel distances, based on patients' zip codes of residence and location of nearest provider of MAT.

RESULTS

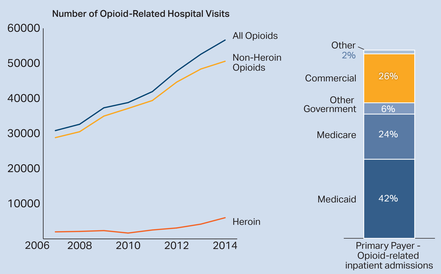
NATIONAL AND MASSACHUSETTS OPIOID-RELATED DRUG OVERDOSE DEATHS PER 100,000, 1999-2014: Between 1999 and 2014, the rate of opioid-related drug overdose deaths in Massachusetts was higher and increased more rapidly than the national average.



Source: Multiple Cause of Death data (1999-2014) are produced by the Division of Vital Statistics, National Center for Health Statistics (NCHS), Centers for Disease Control and Prevention (CDC), United States Department of Health and Human Services (US DHHS).[ii]

ii Drug overdose deaths (IDC-10 codes X40–44, X60–64, X85, Y10–Y14) that were opioid-related (ICD-10 codes T40.0, T40.1, T40.2, T40.3, T40.4, T40.6) between 1999 and 2014, were used in this analysis. CDC provided age-adjusted death rates per 100,000 for each state; for comparison purposes, the national age-adjusted death rate was adjusted for population.

THE NUMBER OF OPIOID-RELATED HOSPITAL VISITS IN MASSACHUSETTS HAS INCREASED SUBSTANTIALLY SINCE 2007 AND STATE AND FEDERAL GOVERNMENT IS PAYING FOR MOST OPIOID-RELATED INPATIENT ADMISSIONS: Between 2007 and 2014, non-heroin opioid-related hospital visits increased by 75%, heroin-related hospital visits increased by 201% and all opioid-related hospital visits increased by 84%. In 2014, MassHealth, the Massachusetts Medicaid program, paid for 42% of opioid-related admissions and Medicare covered an additional 24%.



Sources: HPC Analysis-CHIA, Hospital Inpatient Discharge Database, Outpatient Observation Database, Emergency Department Database, 2007-2014

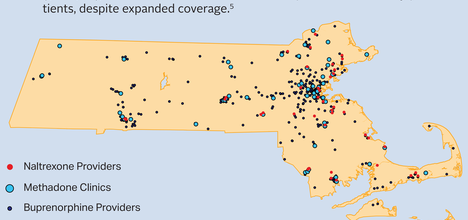
Notes: Principal Payer for Opioid-Related Inpatient Admissions, 2014, n=17,756
Hospital visits includes both inpatient admissions and ED visits

THE RATE OF OPIOID-RELATED HOSPITAL VISITS VARIES SIGNIFICANTLY ACROSS MASSACHUSETTS' REGIONS: Eight communities in Massachusetts are hot spots of opioid-related hospital visits. Hot spots are defined as the communities containing the ten zip codes with the greatest rate of opioid-related hospital visits and a population greater than 1,000 residents.

Sources: HPC Analysis—CHIA, Hospital Inpatient Discharge Database and Emergency Department Database, 2014
American Community Survey, 2010-2014.

Note: Hospital visits includes both inpatient admissions and ED visits

MAT AVAILABILITY VARIES WIDELY BY REGION, WITH NO CLEAR RELATIONSHIP TO THE BURDEN OF THE EPIDEMIC: In general, access to MAT in Massachusetts is insufficient with long wait times and high cost-sharing. In a survey of buprenorphine providers, the majority of respondents reported wait times ranging from 2 days to 24 weeks. Data from CHIA show that daily imposition of the typical commercial co-pay ($20-$30), would make access to methadone prohibitive for many patients, despite expanded coverage.[5]

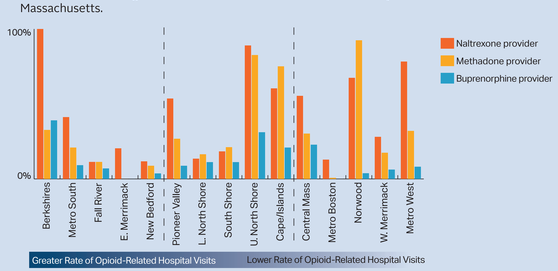


Sources: **Methadone:** Substance Abuse and Mental Health Services Administration. Opioid Treatment Program Directory (data retrieved from http://dpt2.samhsa.gov/treatment/directory.aspx on 11/20/2015)

Buprenorphine: Substance Abuse and Mental Health Services Administration. Buprenorphine Treatment Physician Locator (data retrieved from http://www.samhsa.gov/medication-assisted-treatment/physician-program-data/treatment-physician-locator on 11/5/2015)

Naltrexone: Prescriber lists provided by Alkermes Pharmaceuticals (data received on 8/20/2015)

THERE IS REGIONAL VARIATION IN THE PERCENTAGE OF PATIENTS WITH OPIOID-RELATED HOSPITAL VISITS WHO MUST TRAVEL MORE THAN 5 MILES TO ACCESS MAT: Those patients residing in less densely populated areas often have longer travel distances than those in more densely areas of Massachusetts.



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Notes: Travel distances are defined as the distance between the patient's zip code of residence and the zip code of the nearest in-state provider.
Hospital visits includes both inpatient admissions and ED visits

CONCLUSIONS

- In Massachusetts, mortality of opioid-related substance use disorder is increasing drastically: there were 1,099 confirmed opioid-related deaths in Massachusetts in 2014, a 65% increase over 2012.
- The impact of the opioid epidemic on the health care system is particularly acute in certain communities in the Commonwealth, and is disproportionately paid for by public payers.
- Opioid use disorder treatment capacity and payment design pose an ongoing challenge for the Commonwealth, making it difficult for many Massachusetts residents to access in a timely manner, if at all. Access is particularly problematic for residents in less populated regions of the Commonwealth, who must travel extended distances for treatment, in addition to facing long waitlists that are common throughout the state.

POLICY IMPLICATIONS

- Policy makers should consider local and regional variation in the intensity of the opioid epidemic as they design and implement programming to address the multifaceted and complex needs of individuals suffering from opioid use disorder.
- Given the geographic variation in access to MAT providers, state agencies should track the availability of MAT by provider type and insurance carrier and relate this data on availability to data on the intensity of the epidemic.
- Alternative Payment Models (APMs) could be used to support delivery system reforms necessary to better serve patients with opioid-related substance use disorder. Specifically, new payment models are needed to support primary care practices in integrating addiction treatment into care and provide appropriate wrap-around services and care coordination.
- Payers and policymakers should invest, scale, and evaluate innovative care models to care for at-risk populations with opioid-related substance use disorder such as telemedicine for behavioral health (e.g., telepsychiatry and teletherapy), initiation of buprenorphine in the emergency department, and best practices for care for mothers and infants with neonatal abstinence syndrome.

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