Addressing the Opioid Epidemic through a Public Health Lens

Monica Bharel MD, MPH
Commissioner of Public Health
October 31, 2016
**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**
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**.
The opioid epidemic burden in Massachusetts

66% associated with fentanyl
The opioid epidemic burden in Massachusetts

Unintentional Opioid Deaths by Gender

- Male (74.80%)
- Female (25.20%)

Unintentional Opioid Deaths by Age

- <25: 1%
- 25-44: 16%
- 45-64: 78%
- 65+: 31%
- 65+: 1%
The opioid epidemic burden in Massachusetts

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

Opioid Overdose Death Rate By County, per 100,000 people

- NA
- 9.3 - 14.4
- 14.5 - 16.4
- 16.5 - 19.5
- 19.6 - 24.0

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

Notes:
1. All data updated on 09/30/2016. Unintentional poisoning/overdose deaths combine unintentional and undetermined intent.
2. 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-X44, 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.
3. Opioids include heroin, opioid-based prescription painkillers, and other unspecified opioids.
4. Please note that 2014 and 2015 death data are preliminary and subject to updates.
5. Rates computed for smaller counties (populations <10,000) are likely to vary significantly from year to year.
6. 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.
7. 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.
8. The rate is expressed as a value per 100,000 residents.
9. 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.
Governor Baker’s Opioid Working Group

Prevention Intervention Treatment Recovery

Action Plan to Address the Opioid Epidemic in the Commonwealth

June 22, 2015

Based Upon the Recommendations of the Governor’s Opioid Working Group

www.mass.gov/stoppediction
Let’s Make Massachusetts a #StateWithoutStigMA!

Residents of cities and towns across Massachusetts are using social media to join the movement to make us a #StateWithoutStigMA! Don’t see your city or town represented? Make it happen with just a few simple steps. See below!

Check out the #StateWithoutStigMA hashtag on ALL social media outlets and see what people are saying or doing.

Join the Movement for a #StateWithoutStigMA
Survey: reason for prescription painkiller misuse

- Too easy to buy prescription painkillers illegally: 58%
- Painkillers are prescribed too often or in doses that are bigger than necessary: 50%
- Too easy to get painkillers from those who save pills: 47%

Source: Boston Globe and Harvard T.H. Chan School of Public Health, Prescription Painkiller Abuse: Attitudes among Adults in Massachusetts and the United States
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.
Governor Baker’s Opioid Working Group

Prevention Intervention Treatment Recovery

Action Plan to Address the Opioid Epidemic in the Commonwealth

June 22, 2015

Based Upon the Recommendations of the Governor’s Opioid Working Group
Governor Baker’s Opioid Working Group

Prevention Intervention Treatment Recovery
MassPAT: The new PMP

![Image of MassPAT interface]

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

**Prescriptions**

<table>
<thead>
<tr>
<th>Filled</th>
<th>ID</th>
<th>Written</th>
<th>Drug</th>
<th>QTY</th>
<th>Days</th>
<th>Prescriber</th>
<th>Rx #</th>
<th>Pharmacy</th>
<th>Refills</th>
<th>MME/D</th>
<th>Pymt Type</th>
<th>PMP</th>
</tr>
</thead>
<tbody>
<tr>
<td>04/14/2016</td>
<td>1</td>
<td>04/09/2016</td>
<td>ALPRAZOLAM 0.5 MG TABLET</td>
<td>90.0</td>
<td>90</td>
<td>JO BOG</td>
<td>00427148</td>
<td>WALGR (1885)</td>
<td>1</td>
<td></td>
<td>Private Pay</td>
<td>MA</td>
</tr>
<tr>
<td>03/23/2016</td>
<td>4</td>
<td>03/22/2016</td>
<td>LORAZEPAM 0.5 MG TABLET</td>
<td>40.0</td>
<td>30</td>
<td>JO BOG</td>
<td>01046793</td>
<td>FITCH (2622)</td>
<td>1</td>
<td></td>
<td>Private Pay</td>
<td>MA</td>
</tr>
<tr>
<td>02/16/2016</td>
<td>3</td>
<td>02/15/2016</td>
<td>ZOLPIDEM TARTRATE 5 MG TABLET</td>
<td>60.0</td>
<td>30</td>
<td>JO BOG</td>
<td>003554731</td>
<td>KMART (8665)</td>
<td>0</td>
<td></td>
<td>Private Pay</td>
<td>MA</td>
</tr>
<tr>
<td>01/19/2016</td>
<td>4</td>
<td>01/17/2016</td>
<td>ALPRAZOLAM 0.5 MG TABLET</td>
<td>40.0</td>
<td>30</td>
<td>JO BOG</td>
<td>6876638</td>
<td>FITCH (2622)</td>
<td>0</td>
<td></td>
<td>Other</td>
<td>MA</td>
</tr>
<tr>
<td>01/10/2016</td>
<td>1</td>
<td>01/02/2016</td>
<td>LORAZEPAM 0.5 MG TABLET</td>
<td>30.0</td>
<td>15</td>
<td>JO BOG</td>
<td>00991012</td>
<td>WALGR (1885)</td>
<td>1</td>
<td></td>
<td>Other</td>
<td>MA</td>
</tr>
<tr>
<td>11/21/2015</td>
<td>2</td>
<td>07/18/2015</td>
<td>ALPRAZOLAM 0.5 MG TABLET</td>
<td>30.0</td>
<td>30</td>
<td>JO BOG</td>
<td>394066</td>
<td>FITCH (2622)</td>
<td>5</td>
<td></td>
<td>Comm Ins</td>
<td>MA</td>
</tr>
</tbody>
</table>
Reversing an Overdose: Use of Naloxone
Three Key Stakeholders in Naloxone Expansion

- Bystanders
- First Responders
- Pharmacies/Prescribers
Fatal opioid overdose rates reduced where OEND implemented

- No coverage
- 1-100 ppl
- 100+ ppl

Naloxone coverage per 100K

Opioid overdose death rate

27% reduction
46% reduction

IF YOU SEE AN OVERDOSE CALL 911

THE LAW PROTECTS YOU.

mass.gov/MakeTheRightCall
Governor Baker’s Opioid Working Group

Prevention Intervention Treatment Recovery

ACTION PLAN
TO ADDRESS THE OPIOID EPIDEMIC IN
THE COMMONWEALTH

JUNE 22, 2015
WWW.MASS.GOV/STOPADDICTION

BASED UPON THE RECOMMENDATIONS OF THE GOVERNOR’S OPIOID WORKING GROUP
Governor Baker’s Opioid Working Group

Prevention Intervention Treatment Recovery

Action Plan to Address the Opioid Epidemic in the Commonwealth

June 22, 2015

Based Upon the Recommendations of the Governor’s Opioid Working Group

www.mass.gov/stopaddiction
"Hotspotting" Substance Use Disorder Services

County Level

Unintentional Opioid Overdose Death Rate by County, January 2013 – September 2015

Community Level

Unintentional Opioid Overdose Death Rate by Community, 2013 – 2014

With Treatment Service Type Counts

Data source: Registry of Vital Records and Statistics, MSPH; Geographic data: Office of Geographic Information, Commonwealth of Massachusetts, MassGIS. Map created by BIOM-B, MSPH.
Adding hundreds of new treatment beds across the state;
Increased Office Based Opioid Treatment sites; expanded OTP
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;
• 7 day limit on a first time opioid prescription; allows for a pharmacist partial fill
• Patient voluntary non-opioid directive (12/16)
• Allows the Municipal Police Training Committee to establish a course within the recruit basic training curriculum to train officers on response to calls for assistance on drug related overdoses
• 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
- PDMP
- BSAS Treatment
- MATRIS (ambulance)
- Births (NAS)
- Town/Zip Level Data
- Death Records
- OCME Intake
- Toxicology
- Dept of Corrections
- MA Sheriff’s Association
- Summarized Casemix
- APCD Spine
- Summarized APCD

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.
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
### Chapter 55 – Key Findings

<table>
<thead>
<tr>
<th>Statute Question</th>
<th>Analytic Question</th>
<th>Preliminary Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Instances of multiple provider episodes, meaning a single patient having access to opiate prescriptions from more than 1 provider</td>
<td><em>Does an abnormally high amount of prescribing physicians increase a patient’s risk of fatal overdose?</em></td>
<td>Individuals who obtain prescriptions for opioids from more than one doctor may be at greater risk of death. Based on observed data, the use of 3 or more prescribers is associated with a <strong>7-fold increase in risk of fatal opioid overdose</strong>.</td>
</tr>
<tr>
<td>2. Instances of poly-substance access, meaning a patient having simultaneous prescriptions for an opiate and a benzodiazepine or for an opiate and another drug which may enhance the effects or the risks of drug abuse or overdose</td>
<td><em>Does the addition of benzodiazepines to opioids increase the risk of fatal opioid overdose relative to taking opioids alone?</em></td>
<td>Preliminary findings support the hypothesis of increased risk of fatal overdose associated with concurrent use of opioids and benzodiazepines. Based on observed data, the use of benzodiazepines concurrent to opioids is associated with a <strong>4-fold increase in risk of fatal opioid overdose</strong>. Future analysis should include other drugs.</td>
</tr>
</tbody>
</table>
Addressing the Opioid epidemic through a Public Health Lens

MONICA BHAREL, MD, MPH

MASSACHUSETTS COMMISSIONER OF PUBLIC HEALTH