

### **The Challenge**

Opioid overdoses claim an average of six lives per day in Massachusetts, which places the state as the fifth highest in the nation for opioid-related deaths. Since 2000, the state's rate of fatal opioid overdoses has increased by 450 percent, with a particularly steep uptick in 2013 that marked a rate of rapidity not seen since the HIV crisis. While the issue of opioid abuse and addiction is a nationwide problem—affecting nearly every community and crossing every socioeconomic level—it is particularly acute in the Bay State where deaths from opioid overdoses are more than double the national average.

To combat this public health crisis, Gov. Charlie Baker signed into law Chapter 55 of the Acts of 2015, which permits the linkage and analysis of datasets from ten different state agencies to uncover insights into opioid addiction that can drive policy. The Department of Public Health (DPH) analyzed these datasets, which included birth and death records, toxicology reports, the prescription drug monitoring program, the Massachusetts ambulance trip records information system (MATRIS), and incarceration records. DPH released its findings in 2016 in a groundbreaking report that marked a dramatic shift in the use of data. Now rather than being trapped in silos, data can be compiled and analyzed holistically to spot trends and patterns, identify high-risk populations and intervention points and inform treatment options.

### **The Opportunity**

MITRE recently convened a group of diverse regional leaders from across the public and private sector—from police chiefs, public health officials, and professors, to doctors and activists—to share and discuss implications of the data released and to hear from researchers about the ways they had used data to pursue specific projects. The day-long workshop provided an opportunity to draw on different areas of expertise, and bring together diverse approaches and perspectives to identify potential next steps for making the state—and ultimately the nation—safer from the scourge of opioid use disorder.

### **Analytical Insights**

In sharing key findings from the most recent update to the original Chapter 55 data report, DPH Commissioner Monica Bharel demonstrated the way that numbers can dispel myths, persuade naysayers, and create opportunities for action. Among the findings:

- Patients treated with methadone or buprenorphine—known as opioid agonist treatments—following a nonfatal overdose are 50 percent less likely to die of a subsequent overdose than those who do not receive treatment. Yet less than 5 percent of these patients receive such treatments even as these health system encounters represent touch points for treatment engagement.



- The risk of opioid-related death is 56 percent higher for someone following incarceration, with most deaths occurring within the first month of release, compared to the general public. This is likely due to the limited treatment opportunities in correctional facilities, and it contradicts the commonly held belief that people actually clean up in prison due to the lack of access to drugs.

Given the nation-wide dearth of evidence-based findings, these insights could go a long way toward providing a roadmap not only for Massachusetts, but also for the country. In fact, the Centers for Disease Control has noted that it is “crucial to expand access to evidence-based treatments” including medication-assisted therapy, which combines medication with counseling and behavioral therapies.

### **Drilling Deeper**

Chapter 55 also offered researchers the chance to analyze the datasets to drill deeper into specific areas and identify further intervention points. Recent projects found two population subsets to be at particularly high risk of adverse effects, while also finding that most fatal overdoses are now linked to illicit (non-prescription) drugs in Massachusetts.

- Dual-prescribing veterans: Researchers at the Center for Healthcare Organization and Implementation Research identified a subset of people at high risk of adverse outcomes from prescription opioids. These are veterans who obtain prescriptions for the same drug from both inside and outside the Veterans Administration. Of the nearly 17,000 veterans in Mass. who were studied, some 45 percent are dual users who could be targeted for treatment.
- Plight of the homeless: Drug overdose is the leading cause of death among the homeless, which represent about 3.7 percent of state residents according to the DHP. The opioid death rate among the homeless is 16 to 23 times higher than for people living in homes.
- Trend toward illicit drugs: Boston Medical Center analyzed toxicology reports for 2916 people who died of overdoses during a 31-month period and found that only 134 had active prescriptions for opioids. For the vast majority (about 80 percent), fentanyl was the most common opioid present at death. This is a departure from previous years when most fatal overdoses were attributed to prescription opioids.

### **Voice of a Person in Recovery**

Who better to point out the gaps in the health system than someone who has fallen through them? “Susan” shared the story of her 17-year heroin addiction, during which she endured multiple hospitalizations and Emergency Department visits as a result of health issues related to her drug habit. Each interaction represented an opportunity for treatment engagement. Yet no help came. Instead, Susan was shamed and demoralized. “I would go in for treatment of an abscess and the doctors would say ‘What do you expect? This is what happens.’ They treated me terribly,” she said. “When I left, I felt so horrible about myself that I would go right back out and use heroin.” During every visit, the attending doctor focused exclusively on the immediate problem, rather



than taking the opportunity to engage Susan in a comprehensive treatment program that would address her addiction. The medical doctors and addiction specialists in the workshop agreed that these interactions should be leveraged for treatment engagement. Susan believes that had such engagement been standard practice, she might have reduced the life of her addiction by a factor of years. Instead, it took multiple hospitalizations for endocarditis, an infection of the heart that results from intravenous drug use, before Susan finally met an addiction specialist who treated her with compassion. That's what it took to change her life. Susan now takes agonist medications to help treat her disorder, but blames the largely negative stigma against them, especially within the recovery community, for discouraging many people with Opioid Use Disorder (OUD) from pursuing this effective treatment option.

### **RIZE Massachusetts**

Sarah Wakeman, M.D. and medical director of RIZE Massachusetts, described this new a state-wide, private sector initiative focused on bringing lasting change to those struggling with substance use disorders in the Commonwealth. RIZE is building a \$50 million fund to issue grants to address the opioid epidemic through a full continuum of programs from prevention to long-term sustainable recovery. Potential pilot studies include opioid urgent care centers and recovery coaches embedded within care teams. Wakeman is also the medical director for the Mass General Hospital Substance Use Disorder Initiative.

### **The Way Forward**

Workshop participants broke into small brainstorming sessions to address specific challenges identified by the Chapter 55 report. These sessions, together with a panel discussion with four addiction experts moderated by MITRE, resulted in a wide array of proposed interventions. These included:

- Improve training: Institute programs on opioid abuse disorder for healthcare professionals, as well as medical students, to emphasize that OAD is a medical problem (not a moral failing), to remove stigma/stop blaming the patient, and to consider agonist treatments as part of an overall recovery program.
- Enhance prevention: Institute state-wide introduction of prevention education in primary and secondary schools.
- Develop a continuum of care: Outline every step in the path to recovery so that a patient who arrives in the Emergency Room can be directed to detox, recovery, and beyond.
- Facilitate use of agonist treatments: Make medication-assisted treatment acceptable for care across Massachusetts; Permit pharmacists to dispense methadone and buprenorphine; Lower the threshold for buprenorphine wherever possible, using pharmacists, opioid treatment programs, physician volunteers, etc.
- Target high-risk cohorts: Provide complete access to treatment care, as well as agonist medications, in jails and prisons to avoid overdose fatalities upon release; educate people



leaving recovery on the fact that their drug tolerance has been greatly reduced and that if they need to relapse, they can no longer tolerate the same drug dose as before.

- Establish best practices: Develop a series of best practices to guide treatment for anyone with OUD arriving at an Emergency Department, as would be the case of any patient in cardiac arrest or suspected of having ebola; this could include electronic/remote consultations with addiction specialists.
- Promote collaboration: Develop a regional collaboration across all key stakeholders (i.e. public health, healthcare, public safety, treatment, recovery, academia); Given that all six New England states rank among the nation's top 20 in opioid overdose deaths, there is a great need to combine perspectives and share approaches.
- Introduce new tools, tests, and systems: Create an online state-wide "events" report on daily overdoses or Narcan administrations; Establish a system to track the opioid naïve population—patients who are not chronically receiving opioids—and flag individuals who begin to show escalation to poly-drug use; Include fentanyl testing in suspected overdoses treated at EDs/hospitals and in opioid and drug treatment programs.
- Improve public awareness: Research and design an effective public awareness campaign with consistent messaging to address the dangers of opioids and reduce stigma.

### **Conclusion**

The opioid addiction crisis in Mass. is so complicated and multi-faceted and the individual circumstances surrounding each situation of opioid use disorder are so unique that no one single intervention will resolve it. Going forward, the state will need to generate even more powerful insights from Chapter 55 data, while also building partnerships across the patient continuum to generate the type of innovative combination of solutions that will have a meaningful impact. Together, through public/private partnerships, regional collaborations, and initiatives like RIZE Massachusetts, we can learn to see past the stigma to treat the disease and see past the disease to treat the person.