



The Health, Economic, and Social Benefits of Allowing Adult-Use Recreational Cannabis in Methuen, MA

Prepared by

**Cannabis Community Care and Research Network (C3RN) in collaboration with
the Humble Bumble Company**

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About Cannabis Community Care and Research Network (C3RN)

Cannabis Community Care and Research Network (C3RN) is a strategic consulting firm that specializes in providing high-quality advocacy, research, and analytic services related to the impacts of medical and adult-use recreational Cannabis. As a social justice-oriented organization, we specialize in designing, monitoring, and evaluating models of integrating adult-use and medical Cannabis to positively impact social, clinical, and public health outcomes. Our goal is to support the development of a Center of Excellence in Massachusetts that advances the scientific evidence-base for medical and legal Cannabis in the Commonwealth and beyond. For more information about our work, please visit: www.cannaresearchnetwork.com or follow us on Facebook or Instagram: @C3RN_cannaresearchnetwork.

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This white paper was developed by C3RN and the Humble Bumble Company to advance the roll out of legal adult-use and medical Cannabis in Methuen, Massachusetts.

Executive Summary

In November 2016, 1.8 million voters (53.6% of those who voted) in Massachusetts approved ballot questions 4 to legalize Cannabis in the Commonwealth.¹ With the adult-use of Cannabis now legal in Massachusetts it is expected to become an over \$1.1 billion industry by 2020, and reach \$300 million in 2018 alone.² This reality opens many economic and financial opportunities for both the State as well as local municipalities and cities in the Commonwealth. With new legalization comes concerns related to safety, youth prevention, and effective local control and regulations. With the new law, local cities and towns can benefit from local control over adult use licenses, including for cultivation and retail sales of Cannabis.

Methuen is a city in Massachusetts along the northern banks of the Merrimack River, located in Essex County and just south of the New Hampshire border. As of September 2017, the City Council has voted on a moratorium related to adult-use retail and cultivation until November 2018. However, the city is also considering passing a zoning ordinance to outright ban adult use cultivation and sale in the city. This paper and recommendations were developed to support the city council to consider not passing an ordinance to ban, but rather consider designing an appropriate regulatory and roll out system for new adult use licensure during the moratorium period.

The following are recommendations for the city to consider, with supporting evidence to back the recommendations.

Recommendation #1: Allowing the cultivation, retail, and processing of recreational adult use Cannabis can improve health, economic, and social outcomes in Methuen

- There are an estimated 5,474 medical cases in Methuen that could benefit from medical Cannabis and adult-use Cannabis as many users overlap.
- Medical patients face barriers of stigma, fear of loss of jobs due to Cannabis testing, and inability to access healthcare providers who will recommend and oversee Cannabis treatments.
- Allowing adult use retail and sales, in addition to medical Cannabis outlets, will reduce the barrier to entry for patients to have consistent access to Cannabis to treat health conditions while in the process of changing regulations and ensuring patient protections.

- Developing a research agenda for both adult-use and medical Cannabis in Methuen to document the impact on health, social, and economic outcomes can make Methuen a leading city in the Commonwealth.

Recommendation #2: Allowing Adult-Use Recreational Cannabis can offer options for those addicted to opioids in Methuen

- The opioid epidemic in Methuen is of great concern, and the city is in the Merrimack Valley which has one of the worst epidemics in the Commonwealth.
- The majority of overdose deaths are among young people aged 35 years or less.
- There has never been a death from Cannabis.
- There is clear scientific evidence that Cannabis can be used as a treatment substitute and alternative for opioid addiction
- There are many who are impacted by opioid addiction that can benefit from recreational sales that are hesitant or unable to register for medical cannabis (Veterans, elderly, etc)

Recommendation #3: Develop Comprehensive Youth Prevention Program Specific for Methuen, MA

- Youth consumption of Cannabis has not increased in other states with legal Cannabis.
- Youth are more likely to consume alcohol, which is legal and can be deadly, than Cannabis in Massachusetts.
- Youth are already accessing Cannabis in Methuen, and allow legal sales will remove the need for those to go to the black market, thereby reducing the black market overall.
- There are successful Cannabis youth prevention programs that can be adapted for Methuen and researched over time to see the impact.

Recommendation #4: Use Adult-Use Cannabis Tax Benefits to Improve Community Development and Addiction Recovery Services in Methuen

- Towns in the Commonwealth can elect to have a 3% optional sales tax on local retail sales, while medical Cannabis will still be untaxed³
 - Only allowing medical Cannabis can create a problem where people with medical cards might resell their untaxed Cannabis to those without medical cards.³
- Tax monies can be directed towards opioid addiction and recovery services in Methuen. There are over 4,000 estimated people addicted to opioids in Methuen alone.

Background

As of March 2017, twenty-nine states and the District of Columbia have laws that legalize the consumption of Cannabis in some form, whether for medical or legal adult-use of Cannabis.⁴ As more and more States are adopting laws, the potential economic gains across the United States are expected to be \$48-68 billion by 2021.⁵ According to a report released in April 2017, states with legalized Cannabis are expected to generate \$655 million (85% directly from Cannabis) in state taxes on retail sales in 2017 alone.⁶

In November 2016, 1.8 million voters (53.6% of those who voted) in Massachusetts approved ballot questions 4 to legalize Cannabis in the Commonwealth.¹ With the adult-use of Cannabis now legal in Massachusetts it is expected to become an over \$1.1 billion industry by 2020, and reach \$300 million in 2018 alone.² This reality opens many economic and financial opportunities for both the State as well as local municipalities and cities in the Commonwealth.

As legal, Adult-Use Cannabis rolls out in communities, there is a lack of specific guidelines or toolkits about how to integrate recreational Cannabis into mainstream use and healthcare settings, while ensuring youth prevention and addiction services remain at the forefront. This is causing cities and towns to face challenges with the legalization of Cannabis in the Commonwealth.

Methuen is a city along the northern banks of the Merrimack River, located in Essex County and just south of the New Hampshire border. As of 2016, the population in Methuen was 49,917, with 24% below the age of 18 and 14% over 65 years.⁷ In Methuen, 82% of the population is white and 89% of the population is a high school graduate or higher with 29% having a bachelor's degree or higher.⁷ In 2015, the median household income was \$71,392.⁷

As of September 2017, the Methuen City Council has yet to allow medical Cannabis in the city and has voted on a moratorium related to adult-use retail and cultivation until November 2018. As of Sept 10, the city is also considering passing a zoning ordinance to outright ban adult use cultivation, processing, and retail. This paper and recommendations were developed to support the city council to consider not passing an ordinance to ban, but rather consider designing an appropriate regulatory and roll out system for new adult use licensure during the moratorium period.

Under each section, specific recommendations of how Methuen can benefit from a social, economic, and health perspective are listed. Supporting evidence from other legal medical and adult-use states, including lessons learned, models, and

recommendations are then listed for local adaptation. Below are the key recommendations for Methuen based on the new 2017 compromise bill.

Recommendation 1: Allowing the cultivation, retail, processing of recreational adult use Cannabis can improve health, social, and economic outcomes in Methuen

- There are an estimated 5,474 medical cases in Methuen that could benefit from medical Cannabis and adult-use Cannabis as many users overlap.
- Medical patients face barriers of stigma, fear of loss of jobs due to Cannabis testing, and inability to access healthcare providers who will recommend and oversee Cannabis treatments.
- Allowing adult use retail and sales, in addition to medical Cannabis outlets, will reduce the barrier to entry for patients to have consistent access to Cannabis to treat health conditions while in the process of changing regulations and ensuring patient protections.
- Developing a research agenda for both adult-use and medical Cannabis in Methuen to document the impact on health, social, and economic outcomes can make Methuen a leading city in the Commonwealth.

Supporting Evidence

Overlap among Medical and Recreational Cannabis Users is great

- Researchers, using data from four states, report that 86% of people who report ever using cannabis for medical purposes also use it recreationally.⁸
- Recreational Cannabis is often not consumed for a specific medical purpose, but rather users may consume it with the goal of getting “high”.⁹
- Research reveals that “self-medication” is common among recreational users, and some adults may report recreational use prior to consuming it for medical purposes.⁹
- The current paradigm and course of treatment for a cannabis patient is challenging and patients are left in the position of self-medicating and experimenting with dosing, edibles and other ways to relieve pain and symptoms.⁹

State of the Medical Evidence Related to Cannabis

The evidence base related to medical Cannabis is growing. In January 2017, *The Health Effects of Cannabis and Cannabinoids: The Current State of Evidence and Recommendations for*

Research, was published by the National Academies of Sciences, Engineering, and Medicine, provides the latest evidence available around the medical benefits of cannabis use. The following are the most up to date findings regarding cannabis use available.¹⁰

There is conclusive or substantial evidence that cannabis or cannabinoids are effective in the treatment of:¹⁰

- chronic pain in adults
- as an antiemetic in the treatment of chemotherapy induced nausea/vomiting
- improving patient-reported multiple sclerosis spasticity symptoms

There is substantial evidence of a statistical association between cannabis use and:¹⁰

- increased risk of a motor vehicle crash (MVC)
- the development of schizophrenia or other psychoses

There is moderate evidence of a statistical association between cannabis use and:¹⁰

- better cognitive performance among individuals with psychotic disorders
- increased incidence of social anxiety disorder
- increased incidence of suicide contemplation

There is limited evidence of a statistical association between cannabis use and:¹⁰

- the triggering of an acute myocardial infarction
- risk of ischemic stroke or subarachnoid hemorrhage
- risk of prediabetes
- risk of developing chronic obstructive pulmonary disorder (COPD)
- impaired academic achievement and education outcomes
- increased rate of unemployment and / or low income
- impaired social functioning in developmentally appropriate social roles
- increased symptoms of anxiety
- increased severity of posttraumatic stress disorder symptoms
- initiation of tobacco use

There is insufficient or no evidence of statistical association between cannabis use and:¹⁰

- death due to cannabis overdose

There is moderate evidence to support the lack of statistical association between cannabis use and:¹⁰

- the incidence of lung, head, and neck cancer
- worsening of negative symptoms of schizophrenia among individuals with psychotic disorders

There is High Unmet Need for Cannabis in Massachusetts and Methuen

- There are an estimated 5,474 medical cases in Methuen that could benefit from medical Cannabis (please see table below)

- No medical Cannabis dispensary is open in Methuen to date¹¹
- There is only one clinician who is licensed in the city to recommend medical Cannabis
- Most Doctors are afraid of the medical board in Massachusetts and fear losing their licenses for making recommendations.¹²
- There is a need to continue to educate clinicians and the community on the benefits of medical Cannabis.
- Only 2% of clinicians in the Commonwealth are Licensed to Recommend Medical Cannabis.

Estimated Medical Cases that Can Benefit Methuen, MA Residents

Health Condition	Rate per 100,000 Population	Potential Medical Cases in Massachusetts*	Potential Medical Cases in Methuen**
Cancer	170.3 per 100,000 ¹³	11,495	85
Glaucoma	N/A	58,588 ¹⁴	-
HIV	261 per 100,000 ¹³	17,618	107
Hepatitis C	190.2 per 100,000 ¹⁵	12,839	95
ALS	2.4 per 100,000 ¹⁶	162	1.2
Crohn's disease	241 per 100,000 ¹⁷	16,268	120
Parkinson's disease	1.6% of people over of the age of 65 ^{18,19}	16,632	145
Multiple Sclerosis	103 per 100,000 ¹⁶	6,953	51
Opioid Addiction	9,756 per 100,000 ²⁰	658,530	4,870
Total Estimated Patients with "unmet need" for Medical Cannabis in Massachusetts and Methuen		799,555	5,474

*Population of Massachusetts use to estimate cases: 6.75 million²¹

**Population of Methuen used to estimate cases: 49,917 (2016 estimates)⁷

Barriers to Accessing Medical Cannabis for Key Populations in Methuen

- **As of 2015 there were 2,440 veterans living in Methuen that can benefit from medical Cannabis.**⁷
 - Veterans cannot access medical cannabis due to VA regulations. In Methuen, a veteran testing positive for Cannabis will lose benefits. Yet Veterans suffer greatly from PTSD and other conditions where Cannabis can be a therapeutic alternative.

- In 2016 alone, nationally there were 18,249 deaths of Veterans.²² The VA also estimates that PTSD affects 31% of Vietnam veterans, 10% of Gulf War veterans, and 20% of Iraq War veterans.²² The death rate from opioids among VA health care is nearly double the national average.²³
- Introducing Cannabis immediately following trauma has been shown to actually prevent development of PTSD symptoms²⁴. CBD has also been proven an effective treatment for anxiety, common in people with PTSD.²⁴
- **Methuen has an aging population that can benefit from Cannabis**
 - According to the city of Methuen, there are 9,063 residents aged 60 years and over, with the council on aging (COA) support health and wellness activities for residents.²⁵
 - They can benefit from accessing, but education and changing regulations in assisted living facilities needs to be done.
- According to the new law, towns and cities cannot pass zoning bylaws or other regulations that prohibit locating an adult use establishment in any area where a medical Cannabis treatment center is registered for the same activity.

Recommendation #2: Allowing Adult-Use Recreational Cannabis can offer options for those addicted to opioids in Methuen

- The opioid epidemic in Methuen is of great concern, and the city is in the Merrimack Valley which has one of the worst epidemics in the Commonwealth.
- The majority of overdose deaths are among young people aged 35 years or less.
- There has never been a death from Cannabis.
- There is clear scientific evidence that Cannabis can be used as a treatment substitute and alternative for opioid addiction
- There are many who are impacted by opioid addiction that can benefit from recreational sales that are hesitant or unable to register for medical cannabis (Veterans, elderly, etc)

Supporting Evidence

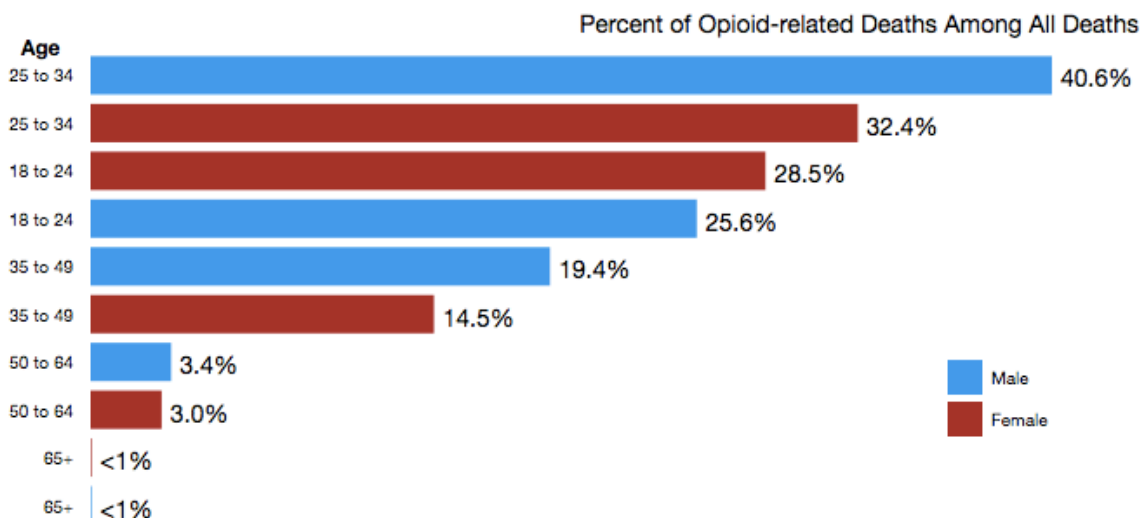
Scientific Evidence for Use of Cannabis in Opioid Recovery Programs

- The scientific evidence related the effect of Cannabis for the treatment of opioid addiction and chronic pain is well established²⁶. Studies have documented a range of 31% - 80% of medical patients reporting successfully substituting cannabis for opioids and other prescription medications²⁶.
- Due to increasing evidence that Cannabis can have an impact on opioid addiction and recovery, in September 2016, the CDC published new guidelines

for opioid addiction and recovery treatment programs calling for clinicians to stop Cannabis (THC) drug testing as a requirement for their treatment. The guidelines also urge doctors not to drop patients who test positive for THC²⁷.

Massachusetts Opioid Epidemic

- Opioid- related overdose deaths in 2016 increased by 17% since 2015, smaller than the 31% increase from 2015 and 40% in 2014.²⁸
- Governor Baker has made fighting this epidemic a key part of his campaign, with initiatives to limit painkiller prescriptions, educate medical professionals on pain management and treatment addition, fight stigma, and expand access to naloxone.²⁸
- As of 2017, the Department of Public Health (DPH) Heroin and prescription opioids have lower roles in deaths, and fentanyl is on the rise representing 81% of overdose deaths in the first quarter of 2017, up from 19% in the third quarter of 2014.²⁸
- As of 2017, 82% of opioid related deaths occur in white residents.²⁸
- Young people are most affected by opioid addiction in Massachusetts as seen in the graph below



[View the dataset powering this visualization](#) 

Sources: [Massachusetts Registry of Vital Records and Statistics](#), [Massachusetts Department of Public Health](#)

Graph Source: Chapter 55 Overdose Report, Massachusetts Department of Public Health²⁹

Methuen Opioid Crisis

- According to an article by the Methuen Police Chief in August 2017, deaths by overdoses have increased by 50% in 2017 compared to 2016; with a 20% reduction in calls for overdoses, likely due to the use of Narcan.³⁰
- As of 2017, Essex county is one of the top four counties with highest rates of overdoses in the Commonwealth.³¹
- In 2016, Methuen had 13 overdose deaths, and is in the hot bed for some of the most affected cities in the Commonwealth. Among the top ten cities with the highest number of overdoses in 2016, Lowell had 63, Lawrence 46, and Lynn 47.³²
- 144 cases of overdoses were reported in 2016, a rise from 132 in 2015 and 84 in 2014.²⁵
- In 2015, Governor Baker put into the place the prescription monitoring program (PMP) to monitor and limit the prescriptions by physicians. In that same year of physician registration, a Methuen Doctor was cited as 6th highest out of the top 25 in the state to prescribe the most Medicare Oxycodone prescriptions.³³
- In January 2017, 15 KG of fentanyl worth \$1.2 million was seized in the city.³⁴
- In January 2017, a 10-month-old girl narrowly survived an accidental ingestion of fentanyl in Methuen, further highlighting the tool opioids have on young children.³⁴

Recommendation #3: Develop Comprehensive Youth Prevention Program Specific for Methuen, MA

- Youth consumption of Cannabis has not increased in other states with legal Cannabis.
- Youth are more likely to consume alcohol, which is legal and can be deadly, than Cannabis in Massachusetts.
- Youth are already accessing Cannabis in Methuen, and allow legal sales will remove the need for those to go to the black market, thereby reducing the black market overall.
- There are successful Cannabis youth prevention programs that can be adapted for Methuen.

Supporting Evidence

Youth Consumption of Alcohol and Cannabis in Massachusetts

- According to the Massachusetts youth, health, and risk survey of 2015:
 - **61% of high school students reported ever drinking alcohol, compared to 41% ever using marijuana in their life time.**³⁵

- 11% reported having ever used prescription drugs, with 4% in the last 30 days and 1% Injecting drugs.³⁵
- 20% of youth reported being offered, sold, or given drugs at school in the past year.³⁵
- Approximately 1% of students reported ever using heroin, and 11% reported ever using prescription drugs that were not their own. This has remained unchanged since 2013 in the State.³⁵

Youth Cannabis Consumption has not increased in States where it is legal

- In 2016, the Monitoring the Future (MTF) Survey found that Cannabis use among 8th and 10th graders has declined, resulting in the lowest level of Cannabis use amongst 8th and 10th graders in more than two decades. The survey found that disapproval of Cannabis remains high in 12th graders, with 69% of the 12th graders surveyed saying they “disapprove of smoking Cannabis regularly”.³⁶
- According to a CDC review of national data from 2002-2014, found Cannabis use increased among persons aged 18 years and over, but not among those aged 12-17 years.³⁷
- Colorado has not shown an increase in youth use or abuse of Cannabis and levels of perceived risk among youth remains static despite legalization.³⁸
- State surveys in Colorado, Washington, Oregon, and Alaska show after legalization the number of students in grades 6-12 who used or ever used Cannabis, stayed stable or decreased slightly, while alcohol abuse remained high.³⁸
- A study conducted by Columbia University showed no association with increased teen use as a result of medical Cannabis laws.³⁹
- A study published in Lancet Psychiatry also found no evidence for an increase in adolescent use of Cannabis within the first or second year after passing medical Cannabis laws.⁴⁰
- Although some studies found frequent Cannabis use can impact cognitive development, a 2016 review of four states with legal Cannabis show no changes in standardized testing performance of 8-10th graders.⁴¹

Recommendation #4: Use Adult-Use Cannabis Tax Benefits to Improve Community Development and Addiction Recovery Services in Methuen

- Towns in the Commonwealth can elect to have a 2% optional sales tax on local retail sales, while medical Cannabis will still be untaxed³

- Only allowing medical Cannabis can create a problem where people with medical cards may resell their untaxed Cannabis to those without medical cards.³
- Tax monies can be directed towards opioid addiction and recovery services in Methuen. There are over 4,000 estimated opioid addicts in Methuen alone.

Supporting Evidence

Revenue seen in other Massachusetts cities

- Alternative Therapies Group, the first to open a medical Cannabis dispensary in the State in Salem, MA, paid the city \$330,750 for host agreement and sales from 2015 to early 2017.⁴² The city is using the revenue for public infrastructure, traffic mitigation, and community wellness programs.⁴²
- Brockton has received \$200,000 from the first year of the agreement with In Good Health host community agreement. Additionally, the dispensary gave \$72,000 to local organizations involved with addition, representing 1% of the total sales. Meaning, they took in \$7.2 million last year.⁴³
- Additional jobs including sales, construction, installation of HVAC systems have also been cited as economic development opportunities.⁴³

Methuen Economic Impact

- FY18 budget revenue and appropriates are balanced at 160,408,560; 53.97% of revenue in FY2017 was from Tax levy's (\$144,440,925).²⁵
- FY18 goals for the city of Methuen include continuing to increase grant funding for municipal projects as well as continue to expand the city's commercial tax base with the promotion of addition economic develop and job creation projects.²⁵
- In FY17, the city had a total of \$4,285,000 in grant awards.²⁵ Allowing adult-use sales and cultivation can bring in more revenue for the city's community development projects.

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