

**CENTER FOR HEALTH
INFORMATION AND ANALYSIS**

**MANDATED BENEFIT REVIEW OF CHAPTER 258 OF THE ACTS OF 2014
AN ACT TO INCREASE OPPORTUNITIES
FOR LONG-TERM SUBSTANCE ABUSE RECOVERY**

**FOR MANDATE PROVISIONS IN EFFECT OCTOBER 1, 2015:
ABUSE-DETERRENT OPIOIDS
LICENSED ALCOHOL AND DRUG COUNSELORS I
ACUTE TREATMENT AND CLINICAL STABILIZATION SERVICES
SUBSTANCE ABUSE TREATMENT PREAUTHORIZATION**

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MANDATED BENEFIT REVIEW OF CHAPTER 258 OF THE ACTS OF 2014: AN ACT TO INCREASE OPPORTUNITIES FOR LONG-TERM SUBSTANCE ABUSE RECOVERY

Overview of Chapter 258 Benefit Mandates

SUMMARY OF THE LAW

Chapter 258 of the Acts of 2014 was signed by Governor Deval Patrick on August 6, 2014, enacting Senate Bill 2341. Section 33 of the new law requires the Center for Health Information and Analysis (CHIA) to review and evaluate the potential fiscal impact of four mandated insurance benefits, consistent with its responsibilities under section 38C of chapter 3 of the Massachusetts General Laws.

- Abuse-deterrent Opioids: Chapter 258 requires insurers to cover abuse-deterrent opioid drug products on a basis not less favorable – i.e., with equal member cost sharing – than they cover non-abuse-deterrent products.
- Licensed Alcohol and Drug Counselors I: Chapter 258 amends the Massachusetts mental health parity statutes to require insurers to cover services provided by licensed alcohol and drug counselors I.
- Acute Treatment and Clinical Stabilization Services: Chapter 258 requires insurers to cover medically necessary acute treatment and clinical stabilization services for up to a total of 14 days of an episode involving either or both types of service, prohibits them from requiring preauthorization for those services, and provides that the medical necessity of such treatment shall be determined by the treating clinician. It allows insurers to initiate utilization review procedures on day 7.
- Substance Abuse Treatment Prior Authorization: Chapter 258 prevents insurers from requiring a member to obtain preauthorization for a wide range of substance abuse treatment.

These benefit mandates are contained in sections 9, 10, and 20 to 27, inclusive, of Chapter 258, which modify the sections of the Massachusetts General Laws that require commercial fully-insured health insurance plans and the Massachusetts Group Insurance Commission to cover specific services. The provisions apply to policies from fully-insured commercial insurance plans issued or renewed on or after October 1, 2015, and apply to both fully-insured and self-insured plans operated for state and local employees by the Group Insurance Commission (GIC), with an effective date for all GIC policies on October 1, 2015.

CHIA evaluated all four provisions. The services described in the last two are closely entwined elements, both conceptually and practically, of the spectrum of substance abuse treatment services, and therefore this document addresses those two provisions in one section. The actuarial estimate of the effect of Chapter 258 on premiums also addresses them in one report.

PLANS AFFECTED BY THE BENEFIT MANDATES

Individual and group accident and sickness insurance policies, corporate group insurance policies, and HMO policies issued pursuant to Massachusetts General Laws, as well as the Group Insurance Commission (GIC) covering public employees and their dependents, are subject to these mandates. The mandates apply to members covered under the relevant plans, regardless of whether they reside within the Commonwealth or merely have their principal place of employment in the Commonwealth.

PLANS NOT AFFECTED BY THE BENEFIT MANDATES

Self-insured plans (i.e., where the employer policyholder retains the risk for medical expenses and uses a carrier to provide administrative functions), except for those managed under the GIC, are not subject to state-level health insurance benefit mandates. State health benefit mandates do not apply to Medicare and Medicare Advantage plans whose benefits are qualified by Medicare; consequently this analysis excludes members of commercial fully-insured plans over 64 years of age. These mandates also do not apply to federally-funded plans including TRICARE (covering military personnel and dependents), the Veterans Administration, and the Federal Employee’s Health Benefit Plan. Finally, with the exception of a provision related to acute treatment and clinical stabilization services, the mandate provisions of Chapter 258 do not apply to Massachusetts Medicaid programs.

COST OF IMPLEMENTING THE MANDATES

The actuarial appendices estimate the cost to insurers, and therefore to premium payers, of the four benefit mandates enacted in Chapter 258. Overview Table 1 shows for each mandate the range of the estimated average annual increase in the typical fully-insured member’s monthly health insurance premiums (premium charged per member per month) from 2015 to 2019.

**Overview Table 1:
Estimated Average Annual Increase in Premium**

	Increase in monthly premium	Percent increase in premium
Abuse-deterrent Opioids	\$0.11-\$1.28	0.02%-0.23%
Licensed Alcohol and Drug Counselors I	\$0.02-\$0.17	0.00%-0.03%
Acute Treatment and Clinical Stabilization Services (ATS/CSS)	\$0.04-\$0.10	0.01%-0.02%
Substance Abuse Treatment (SAT) Preauthorization	\$0.00	0%
Total	\$0.17-\$1.55	0.03%-0.28%

Because the last two provisions deal with components of the same spectrum of substance abuse services, they are closely related. While any effect on premiums will probably come from increased utilization of inpatient (ATS/CSS) services, as shown, to the extent use of outpatient services increases,

it will tend to offset projected increased utilization in ATS/CSS services, and vice versa. Hence if the outpatient-oriented substance abuse treatment (SAT) preauthorization provision has a positive cost, it will reduce the cost of the ATS/CSS provision. On balance, we expect the ATS/CSS projection to capture the net effect of these two provisions. See the actuarial estimate for detail on how these two provisions interact to produce this set of estimates.

PRELIMINARY ESTIMATE OF POTENTIAL MASSACHUSETTS LIABILITY UNDER THE ACA

Analysis of the cost associated with proposed state benefit mandates is important in light of new requirements introduced by the Affordable Care Act (ACA). In accordance with the ACA, all states must set an Essential Health Benefits (EHB) benchmark that all qualified health plans (QHPs), and those plans sold in the individual and small-group markets, must cover, at a minimum. Section 1311(d)(3)(B) of the ACA, as codified in 45 C.F.R. § 155.170, explicitly permits a state to require QHPs to offer benefits in addition to EHB, provided that the state is liable to defray the cost of additional mandated benefits by making payments to or on behalf of individuals enrolled in QHPs. The requirement to make such payments applies to QHPs sold both on and off the Exchange, but not to non-QHP plans. The state is not financially responsible for the costs of state-required benefits that are considered part of the EHB benchmark plan. In Massachusetts, the Benchmark Plan is the Blue Cross and Blue Shield HMO Blue \$2000 Deductible (HMO Blue).

State-required benefits enacted on or before December 31, 2011 (even if effective after that date) are not considered “in addition” to EHB and therefore will not be the financial obligation of the state, if such additional benefits are *not* already covered benefits under the State’s EHB Benchmark Plan, HMO Blue. This ACA requirement was effective January 1, 2014 and is intended to apply for at least plan years 2014 and 2015.

CHIA’s *preliminary* estimate of the proposed health benefit mandate is not intended to determine whether or not these mandates are subject to state liability under the ACA.ⁱ CHIA generated this estimate to provide neutral, reliable information to stakeholders who make decisions that impact health care access and costs in the Commonwealth.

The relevant mandate provisions of Chapter 258 apply to policies from fully-insured commercial insurance plans issued or renewed on or after October 1, 2015, and apply to both fully-insured and self-insured plans operated for state and local employees by the Group Insurance Commission (GIC), with an effective date for all GIC policies of October 1, 2015. Only a small proportion of policies renew between October 1 and the end of December 2015, limiting the amount added to the Commonwealth’s potential obligation to defray mandate costs in 2015. For each mandate, CHIA applied the mid-range PMPM (per-member per-

ⁱ The Health Connector, in consultation with the Massachusetts Division of Insurance, will need to be consulted to provide an analysis of estimated state liability associated with a given proposed mandated benefit bill.

month) actuarial projection for 2015 cost to an estimated maximum of 800,000 potential QHP members,ⁱⁱ adjusted for the portion of the 800,000 members with policies likely to be issued or renewed in the last quarter of the year (only about 2.5 percent of the annual member-months.)ⁱⁱⁱ Overview Table 2 displays the resulting estimated maximum potential incremental premium increase to QHPs (rounded to thousands); the monthly value is an average for the last three months of 2015.

**Overview Table 2:
Estimated Incremental Increase in 2015 QHP Premium**

	Projected PMPM cost	Increase in annual premium
Abuse-deterrent Opioids	\$0.37	\$90,000
Licensed Alcohol and Drug Counselors	\$0.03	\$7,000
Acute Treatment and Clinical Stabilization Services	\$0.05	\$12,000
Substance Abuse Treatment Prior Authorization	\$0.00	\$0
Total	\$0.45	\$109,000

The federal government may remove or modify the obligation after 2015, but for reference, if it remains the same, CHIA estimated the 2016 cost – the first full year after the effective date – for each mandate by applying the mid-range PMPM (per-member per-month) actuarial projection for 2016 cost to the estimated maximum of 800,000 potential QHP members. Overview Table 3 displays the resulting estimated maximum potential incremental premium increase to QHPs.

**Overview Table 3:
Estimated Incremental Increase in 2016 QHP Premium**

	Projected PMPM cost	Increase in annual premium
Abuse-deterrent Opioids	\$0.50	\$4,800,000
Licensed Alcohol and Drug Counselors	\$0.03	\$276,000
Acute Treatment and Clinical Stabilization Services	\$0.06	\$572,000
Substance Abuse Treatment Prior Authorization	\$0.00	\$0
Total	\$0.59	\$5,548,000

An estimate and eventually a final determination of the Commonwealth’s liability will require a detailed analysis by the appropriate state agencies, including an assessment of whether this mandate is subject to state liability under the ACA and the actual number of QHP enrollees.

ⁱⁱ Estimated maximum QHP membership provided by the Massachusetts Division of Insurance.

ⁱⁱⁱ Based on a distribution of the commercial fully-insured market by market segment (large group, individual, etc.) taken from the Massachusetts All Payer Claim Database and typical renewal patterns by market segment.

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Abuse-Deterrent Opioids: Provision Overview

WHAT DOES THIS PROVISION DO?

Opioids are drugs that reduce pain signals to the brain. When properly used, they can be safe and effective tools to manage pain, but they can be misused or abused by individuals seeking their euphoric effect, sometimes leading to addiction, a chronic illness. An abuse-deterrent drug product is manufactured with physical, chemical, or other barriers that make abuse more difficult or less attractive or rewarding.

Chapter 258 amends statutes establishing the drug formulary commission in the Department of Public Health (DPH) to charge that commission with identifying drugs with a heightened public health risk due to their potential for abuse, and with identifying formulations of abuse-deterrent drugs that may be substituted for these risky drugs. It also requires that, when a prescriber writes a prescription for an opioid with heightened risk, the pharmacist must dispense an interchangeable abuse-deterrent product from the formulary, if one exists, except when the prescriber indicates “no substitution.”

The largest insurance carriers in Massachusetts all report coverage for abuse-deterrent opioids. But many abuse-deterrent formulations are relatively new and more expensive than interchangeable non-abuse-deterrent formulations, and so carriers often assign them to classes (tiers) that require relatively higher copayments. Chapter 258 requires health insurance plans to cover abuse-deterrent opioids on the formulary on a cost-sharing basis not less favorable than they do non-abuse-deterrent opioids, that is, with equivalent copayments. The effect of this requirement, on top of the changes to pharmacy substitution procedure, is to encourage a shift to abuse-deterrent opioids but to insulate patients from the increased cost.

MEDICAL EFFICACY OF ABUSE-DETERRENT OPIOIDS

In 2010, the leading cause of injury death in the United States was drug overdose.ⁱ In Massachusetts in 2011, general unintentional injury was the fifth leading cause of death, accounting for approximately 2,200 deaths;ⁱⁱ of those, about one-third were related to drug overdoses.ⁱⁱⁱ The CDC has declared deaths

ⁱ U.S. Centers for Disease Control and Prevention (US-CDC): Home & Recreational Safety, Prescription Drug Overdose in the United States Fact Sheet. Updated 10 February 2014; accessed 18 June 2014: <http://www.cdc.gov/homeandrecreational/safety/overdose/facts.html>.

ⁱⁱ US-CDC, National Center for Injury Prevention and Control, Office of Statistics and Programming. Leading Causes of Death Reports, 1999-2011, for National, Regional, and States (RESTRICTED). 10 Leading Causes of Death, Massachusetts 2011, All Races, Both Sexes. WISQARS Home, Fatal Injury Queries. In order, the top five: malignant neoplasms, heart disease, chronic low respiratory disease, cerebrovascular, unintentional injury. Accessed 23 September 2011: http://webappa.cdc.gov/sasweb/ncipc/dataRestriction_lcd.html.

ⁱⁱⁱ US-CDC: Vital Signs: Prescription Painkiller Overdoses in the US infographic. Updated 1 November 2011; accessed 18 June 2014: <http://www.cdc.gov/vitalsigns/painkilleroverdoses/infographic.html>.

from prescription painkillers, including opioids, as an epidemic, with the number of prescription overdose deaths surpassing those from heroin and cocaine combined.^{iv}

Abuse-deterrent opioid formulations are emerging as important tools for addressing prescription opioid abuse. However, the science of deterrent formulation technology is new, and these formulations will not alter an individual's potential for dependence or addiction. Further, while these formulations will make certain methods of manipulation and/or abuse less likely, the FDA has stated that "the extent to which an abuse-deterrent product is able to reduce abuse will never be absolute."^v Moreover, with the inclusion of abuse-deterrent technologies, prescription drug abusers may replace their current drug of choice with other forms of opioids, including heroin, with its risk of overdose or death. Overall, evaluations of the effectiveness of new formulations in deterring abuse are still inconclusive, and further research is needed to understand fully their impact.

COST OF IMPLEMENTING THE PROVISION

The cost to insurers, and therefore to premium payers, of this provision over the coming years depends on the number and use of abuse-deterrent opioids that appear on the market and are adopted into the formulary. Setting reasonable assumptions for these parameters, as described in the actuarial appendix, leads to an estimated average annual increase to the typical fully-insured member's monthly health insurance premiums, from 2015 to 2019, of between \$0.11 (0.02%) and \$1.28 (0.23%) per year. See the actuarial estimate for the effect on self-insured and fully-insured GIC plans.

^{iv} *Op. cit.* US-CDC: Prescription Drug Overdose in the United States Fact Sheet.

^v *Op. cit.* US-FDA/CDER: Guidance for Industry Abuse-Deterrent Opioids — Evaluation and Labeling.

Abuse-Deterrent Opioids: Medical Efficacy Assessment

Massachusetts Chapter 258 of the Acts of 2014¹ requires in part that health insurance plans “shall provide coverage for abuse-deterrent opioid drug products...on a basis not less favorable than non-abuse-deterrent opioid drug products that are covered.... An increase in patient cost sharing shall not be allowed to achieve compliance with this section.” M.G.L. c. 3 § 38C charges the Massachusetts Center for Health Information and Analysis (CHIA) with reviewing the medical efficacy of proposed mandated health insurance benefits. Medical efficacy reviews summarize current literature on the effectiveness and use of the mandated treatment or service, and describe the potential impact of a mandated benefit on the quality of patient care and the health status of the population.

OPIOID USE, DEPENDENCE, ADDICTION, AND ABUSE

Opioids are drugs that reduce pain signals to the brain, decreasing one’s perception of and reaction to pain, and increasing pain tolerance and feelings of pleasure.^{2,3} Opioids may be prescribed to alleviate pain from injuries, surgeries, dental procedures, and acute and chronic illnesses and to treat addiction.⁴ Side effects of opioid use include drowsiness, constipation, nausea, and mental confusion; these drugs may also produce a euphoric reaction in some users.⁵ In large doses, even a single use of an opioid can result in respiratory depression or death.⁶

Medications in the opioid class include morphine, codeine, oxycodone (including brand names OxyContin® and Percocet®), hydrocodone (including brand name Vicodin®), methadone, buprenorphine, and fentanyl, among others.⁷ In the United States, heroin is classified as an illicit opioid.⁸ When properly prescribed and used, opioids can be safe and effective tools to manage pain, both short-term and long-term. When used regularly or over a longer period of time, opioids can lead to physical dependence, meaning the user’s body develops a tolerance for the medication and needs an increased dose to achieve the same effect, and a gradual reduction in dosage is necessary to avoid withdrawal symptoms when stopping use. Withdrawal symptoms can include restlessness, sleeplessness, severe pain, diarrhea, and vomiting.⁹ It is important to note that physical dependence is “a normal adaptation to chronic exposure to a drug and is not the same as addiction.”¹⁰

According to the American Psychiatric Association, “substance use disorder” is a “cluster of cognitive, behavioral, and physiological symptoms indicating that the individual continues using the substance despite significant substance-related problems.”¹¹ Symptoms may include some combination of “impaired control, social impairment, risky use and [tolerance and/or withdrawal].”¹² The National Institute on Drug Abuse defines substance addiction as a chronic illness, in which the use of drugs or alcohol physically changes the structure and function of the brain, affecting “multiple brain circuits, including those involved in reward and motivation, learning and memory, and inhibitory control over behavior.”¹³ Addiction, which may or may not include dependence, “is distinguished by compulsive drug seeking and use despite sometimes devastating consequences.”¹⁴ Abuse occurs when individuals use opioids outside of legitimate medical purposes to achieve the euphoric effect of the drug.

When someone is prescribed an opioid for pain, close medical management is necessary to ensure the patient does not misuse or abuse the drug. This may include an initial assessment of risk factors associated with addiction prior to prescribing the opioid, physician monitoring of patient prescriptions across multiple providers through, for example, use of the Prescription Monitoring Program data, medication counts, and regularly scheduled office visits to monitor the effectiveness of the medication and the patient’s adherence to prescribing guidelines.

IMPACT OF OPIOID ABUSE

In 2012, the leading cause of injury death in the United States was drug overdoses; more people aged 25 to 64 died from drug overdoses in that year than from car accidents.¹⁵ Since 1990, the number of drug overdose deaths in Massachusetts has nearly tripled, from 3.7 to 11 per 100,000 people in 2010, with the majority attributable to prescription drug abuse.¹⁶ In 2011, general unintentional injury statewide was the fifth leading cause of death, with over 33.6 deaths per 100,000 people, or approximately 2,200 deaths;¹⁷ of those, about one-third, or 9.5 to 12.3 deaths per 100,000 people were related to drug overdoses.¹⁸ A 2014 national report on drug abuse patterns and trends found an 11-year peak for unintentional drug overdoses for the Greater Boston area, with a 40 percent increase from 780 patients in 2010 to 1,089 in 2012.¹⁹

According to the CDC, “deaths from prescription painkillers have reached epidemic levels in the past decade,” with the number of prescription overdose deaths surpassing those from heroin and cocaine combined.²⁰ Of overdose deaths, 80 percent were unintentional; 53 percent of these were related to pharmaceuticals, with 72 percent of pharmaceutical deaths caused by opioids.²¹ Opioid abuse also burdens the health care system and the broader economy.²² In 2011, of the 1.4 million emergency department visits resulting from the non-medical use of pharmaceuticals, 30 percent were related to opioids.²³ One 2007 study estimated the cost of prescription opioid abuse in the United States at \$55.7 billion, including workplace, healthcare, and criminal justice expenses.²⁴ A similar study concluded that in one five-year period, abusers of opioid medications cost insurers over \$14,000 more per patient annually (over 8 times more) than average patients, due primarily to their high utilization of medical services and prescription drugs, as well as their higher prevalence of other diseases or conditions.²⁵

The CDC has stated that the “[o]verprescribing of opioid pain relievers (OPR) can result in multiple adverse health outcomes, including fatal overdoses.”²⁶ A recent report evaluated interstate prescription patterns for OPRs to identify variability in prescribing for drugs “prone to abuse.”²⁷ Selected statistics comparing the national average to prescriptions in Massachusetts are highlighted in Table 1.

Table 1: 2012 Opioid Prescriptions ²⁸	Prescriptions per 100 persons		State Rank
	U.S. (Average)	Massachusetts	
Opioid pain relievers	82.5	70.8	41
Long-acting/extended release opioids	10.3	14.9	9
High-dose opioids	4.2	3.5	41

While Massachusetts ranks 41st in the nation in opioid pain relievers prescribed per 100 people, it ranks ninth in the number of long-acting or extended-release opioid prescriptions. According to the FDA, “extended-release (ER) and long-acting (LA) (ER/LA) opioids have clearly emerged as products with the highest potential for harm, misuse and abuse. These products contain large amounts of opioids in a single dosage form, sometimes in sufficient quantity to be lethal, especially in children, and they are a prime target of drug abusers.”²⁹

ABUSE-DETERRENT OPIOIDS

An abuse-deterrent drug is one manufactured with one or more physical, chemical, or other barriers designed to make drug “product manipulation more difficult or to make abuse of the manipulated product less attractive or rewarding.”³⁰ The U.S. Food & Drug Administration (FDA) issued draft guidance in 2013 outlining five general categories for abuse-deterrent formulations.³¹

Most commonly, individuals abusing prescription opioids swallow multiple pills or tablets. In addition, non-abuse-deterrent drug products can be physically manipulated (e.g. crushed) to alter the method of administration for abuse purposes.³² The resulting mixture of the opiate active ingredient, along with inactive ingredients, can be snorted, smoked, or dissolved and injected. Therefore, the FDA advises that abuse-deterrent opioid formulations “should target known or expected routes of abuse for the opioid drug substance for that formulation.”³³

In an October 2013 letter, Dr. Janet Woodcock, the FDA’s Director of the Center for Drug Evaluation and Research, wrote that the “FDA considers the development of opioid analgesics with abuse-deterrent properties to be a public health priority....”³⁴ Dr. Woodcock further stated that “the science of abuse deterrence technology is in its early stages,” and that methods to formulate and evaluate such new medications are “rapidly evolving.”³⁵

FDA APPROVAL OF OPIOID DRUG PRODUCTS FORMULATED WITH ABUSE-DETERRENT TECHNOLOGY

When a drug is submitted to the FDA for approval as an abuse-deterrent formulation, the FDA may take several actions. For drug applications with abuse-deterrent claims, the FDA can allow specific labeling to identify an abuse-deterrent formulation, and has outlined labeling tiers that can be applied describing either the formulation or the expected outcomes of the abuse-deterrent technology.³⁶

The FDA will also evaluate an abuse-deterrent drug formulation against previous formulations to compare each product’s benefits and risks. Based on this risk assessment, and the availability and effectiveness of the new abuse-deterrent formulation, the FDA will consider withdrawing approval for the original or existing drug product. If the FDA withdraws approval for the existing non-abuse-deterrent opioid formulation, then both the brand-name (reference drug product) and any approved generic equivalents of that formulation would no longer be available. Recently when the FDA approved a new abuse-deterrent formulation of OxyContin®, the agency determined that the previous formulation of OxyContin®, including the approved generic equivalents, posed an increased risk of abuse which outweighed its benefits,³⁷

and withdrew approval of the original formulation of OxyContin® and its generic versions. At the time of this analysis, FDA-approved “labeling characterizing a product’s expected impact on abuse” has been applied to only four drug products: the new, reformulated version of OxyContin®,³⁸ Targiniq ER®, a combination of oxycodone and naloxone;³⁹ Embeda®, a combination of morphine and naltrexone, approved in October 2014;⁴⁰ and Hysingla ER®, approved in November 2014.⁴¹ However, when the FDA approves an abuse-deterrent formulation, it is not obligated to withdraw approval of previous non-abuse-deterrent formulations; if it does not, these formulations remain on the market. This occurred when the FDA approved a new formulation of Opana ER® (oxymorphone hydrochloride extended-release) but found “insufficient evidence that the original formulation poses an increased risk of abuse compared to reformulated Opana ER®.” Therefore, the original formulation and any generic equivalents continue to be available. In practice, this means that even though an abuse-deterrent formulation of Opana ER® is available, providers and patients might continue to use the original formulation, especially the less costly generic equivalents.

EFFECTIVENESS OF ABUSE-DETERRENT FORMULATIONS AND TECHNOLOGY

Abuse-deterrent formulations are seen as important tools for addressing opioid abuse. However, as previously stated, the science of deterrent formulation technology is new, and methods for evaluating the effectiveness of new formulations in deterring abuse are still under development. Studies confirming or rejecting the medical efficacy of Chapter 258, i.e., the overall effectiveness of abuse-deterrent formulations in reducing abuse, are not yet available.

While many government agencies and community stakeholders support and encourage development and submission of drug products with abuse-deterrent technologies, the FDA has stated that the agency “will take a flexible, adaptive approach to the evaluation and labeling of potentially abuse-deterrent products.”⁴² In January 2013 the FDA published draft guidance for the pharmaceutical industry on evaluating and labeling abuse-deterrent opioids, but as a draft it is not binding upon the FDA nor industry sponsors of new formulations.⁴³

The agency has stated that “the extent to which an abuse-deterrent product is able to reduce abuse will never be absolute.”⁴⁴ While most opioid solid dosage forms are designed to be swallowed whole, abusers will take multiple pills and/or chew or crush tablets or capsules to release the total dose at once and achieve the desired effect.⁴⁵

Therefore, because no abuse-deterrent technology will completely eliminate the risk of abuse, the FDA proposes evaluating the new formulations as more or less risky compared to previous formulations.⁴⁶ One limitation is that effectiveness can only be measured in post-marketing studies in which patients will not be in controlled environments. The goal of these studies will be to measure any change in overall reports of abuse, and not strictly to prove that a new formulation deters abuse better than a previous formulation. However, even the study metrics for outcomes associated with a single abuse-deterrent product, which could include reductions in addiction, non-fatal overdoses, unintentional poisonings, and death, have not yet been clearly established.⁴⁷ For example the manufacturer of Targiniq ER® is required by the FDA

to produce post-marketing studies “to assess the serious risks of misuse, abuse, increased sensitivity to pain (hyperalgesia), addiction, overdose, and death associated with long term use beyond 12 weeks... [as well as] studies to further assess the effects of the abuse-deterrent features...”⁴⁸ So while studies are required, exactly what must be measured has not been clearly defined by the FDA at this time.

Despite the intent in developing abuse-deterrent opioids, studies of abuse-deterrent drug products and prescription drug abusers have shown unanticipated outcomes. One study pointed out that “[d]rug-seeking individuals are extremely resourceful and show little loyalty to a particular drug when other drugs are available. It is possible that abuse-deterrent formulations may divert such individuals to find other drugs that are easier to compromise.”⁴⁹ In an evaluation of the new formulation of OxyContin®, researchers found the new formulation was successful in reducing the abuse of that specific drug product; but instead of deterring overall abuse, abusers replaced the abuse-deterrent formulation “with alternative opioid medications and heroin, a drug that may pose a much greater overall risk to public health than OxyContin. Thus, abuse-deterrent formulations may not be the ‘magic bullets’ that many hoped they would be in solving the growing problem of opioid abuse.”^{50,51}

In summary, as the technology for engineering abuse-deterrent opioid prescription drug products is new and still developing, studies are as yet inconclusive on the new drug formulations’ impact on curbing negative, unintended consequences from their misuse or abuse. First, such formulations do not alter the potential for dependence, or an individual’s physical adaptation to prescribed opioids, or the potential for addiction. Second, while some formulations may deter or make certain methods of abuse less likely, not all risk can be eliminated; drug diversion and intentional misuse of prescription drugs may not be affected by the new abuse-deterrent technologies, which are aimed at making drug product manipulation more difficult or at making abuse of the manipulated product less attractive or rewarding. Third, prescription drug abusers may replace their current drug of choice with other forms of opioids, including heroin, with its risk of overdose or death; evaluations of the impact of this behavior will need to be conducted to understand the full effect of these new abuse-deterrent formulations.

ENDNOTES: ABUSE-DETERRENT OPIOIDS

- ¹ Massachusetts Acts of 2014, Chapter 258, “An Act to Increase Opportunities for Long-Term Substance Abuse Recovery.” Accessed 2 October 2014: <https://malegislature.gov/Laws/SessionLaws/Acts/2014/Chapter258>.
- ² National Institutes of Health, National Institute on Drug Abuse (NIH-NIDA): Prescription Drug Abuse, What are opioids? Accessed 2 July 2014: <http://www.drugabuse.gov/publications/research-reports/prescription-drugs/opioids/what-are-opioids>.
- ³ NIH-NIDA: Prescription Drug Abuse, What are the possible consequences of opioid use and abuse? Accessed 24 October 2014: <http://www.drugabuse.gov/publications/prescription-drugs-abuse-addiction/opioids/what-are-possible-consequences-opioid-use-abuse>.
- ⁴ *Op. cit.* NIH-NIDA: What are opioids?
- ⁵ NIH-NIDA: Prescription Drug Abuse, How do opioids affect the brain and body? Accessed 2 July 2014: <http://www.drugabuse.gov/publications/research-reports/prescription-drugs/opioids/how-do-opioids-affect-brain-body>.
- ⁶ *Op. cit.* NIH-NIDA: What are the possible consequences of opioid use and abuse?
- ⁷ *Op. cit.* NIH-NIDA: What are opioids?
- ⁸ U.S. Food and Drug Administration (US-FDA). Attention Prescribers: FDA seeks your help in curtailing the U.S. opioid epidemic. Updated 20 May 2013; accessed 18 June 2014: <http://www.fda.gov/Drugs/DrugSafety/InformationbyDrugClass/ucm330614.htm>. While accounting for only two percent of opioid prescriptions filled, methadone accounts for almost one-third of prescription pain-medication-related deaths in the U.S.
- ⁹ *Op. cit.* NIH-NIDA: What are the possible consequences of opioid use and abuse?
- ¹⁰ *Op. cit.* NIH-NIDA: What are the possible consequences of opioid use and abuse?
- ¹¹ American Psychiatric Association (APA). Diagnostic and Statistical Manual of Mental Disorders (Fifth edition, text review; DSM-V). 2013.
- ¹² *Op. cit.* APA. Diagnostic and Statistical Manual of Mental Disorders – Fifth Edition (DSM-V).
- ¹³ National Institute of Drug Abuse, National Institutes of Health, U.S. Department of Health and Human Services (NIDA). Principles of Drug Addiction Treatment: A Research-Based Guide, Third Edition. NIH Publication No. 12–4180. Printed 1999, revised December 2012; accessed 29 August 2014: http://www.drugabuse.gov/sites/default/files/podat_1.pdf.
- ¹⁴ *Op. cit.* NIH-NIDA: How do opioids affect the brain and body?

Comparison of Relapse Rates

Chronic Illness	% Patients Who Relapse
Type 1 Diabetes	30%-50%
Substance Abuse	40%-60%
Hypertension	50%-70%
Asthma	50%-70%

- ¹⁵ U.S. Centers for Disease Control and Prevention (US-CDC): Home & Recreational Safety, Prescription Drug Overdose in the United States Fact Sheet. Updated 17 October 2014; accessed 12 November 2014: <http://www.cdc.gov/homeandrecreationsafety/overdose/facts.html>.
- ¹⁶ Levi J, Segal LM, Fuchs Miller A. Prescription Drug Abuse: Strategies to Stop the Epidemic, 2013. Trust for America’s Health. Released October 2013; accessed 3 November 2014: <http://www.rwjf.org/content/dam/farm/reports/reports/2013/rwjf408045>. State information from Robert Wood Johnson Foundation (RWJF), Interactive: Prescription Drug Abuse. Accessed 3 November 2014: <http://www.rwjf.org/en/about-rwjf/newsroom/newsroom-content/2013/09/interactive--prescription-drug-abuse.html>.

¹⁷ US-CDC, National Center for Injury Prevention and Control, Office of Statistics and Programming. Leading Causes of Death Reports, 1999-2011, for National, Regional, and States (RESTRICTED). 10 Leading Causes of Death, Massachusetts 2011, All Races, Both Sexes. WISQARS Home, Fatal Injury Queries.

1. Malignant Neoplasms
2. Heart Disease
3. Chronic Low Respiratory Disease
4. Cerebrovascular
5. Unintentional Injury

Accessed 23 September 2011: http://webappa.cdc.gov/sasweb/ncipc/dataRestriction_lcd.html.

¹⁸ US-CDC: Vital Signs: Prescription Painkiller Overdoses in the US infographic. Updated 1 November 2011; accessed 18 June 2014: <http://www.cdc.gov/vitalsigns/painkilleroverdoses/infographic.html>.

¹⁹ Dooley DP. Drug Abuse Patterns and Trends in Greater Boston—Update: January 2014. NIDA Community Epidemiology Work Group (CEWG): Greater Boston, Massachusetts. Revised February 2014; accessed 3 November 2014: <http://www.drugabuse.gov/about-nida/organization/workgroups-interest-groups-consortia/community-epidemiology-work-group-cewg/meeting-reports/highlights-summaries-january-2014-1>.

²⁰ *Op. cit.* US-CDC: Prescription Drug Overdose in the United States Fact Sheet.

²¹ *Op. cit.* US-CDC: Home & Recreational Safety, Prescription Drug Overdose in the United States Fact Sheet.

²² US-CDC, National Center for Injury Prevention and Control. Policy Impact: Prescription Painkiller Overdoses. Updated 2 July 2013; accessed 3 July 2014: <http://www.cdc.gov/homeandrecreationalafety/rxbrief/>. For each prescription painkiller death in the U.S., there are 32 emergency department visits, 10 inpatient treatment admissions for abuse, 130 people who are dependent on abuse, and 825 non-medical users.

²³ *Op. cit.* US-CDC: Prescription Drug Overdose in the United States Fact Sheet.

²⁴ White AG, Birnbaum HG, Mareva MN, et. al. Direct costs of opioid abuse in an insured population in the United States. *J Manag Care Pharm.* 2005 Jul-Aug;11(6):469-79. Accessed 18 June 2014: <http://www.ncbi.nlm.nih.gov/pubmed/15998164>.

²⁵ *Op. cit.* White AG, Birnbaum HG, Mareva MN, et. al.

²⁶ Paulozzi LJ, Mack KA, Hockenberry JM; Office on Smoking and Health, Division of Unintentional Injury Prevention, National Center for Injury Prevention and Control, CDC. Vital Signs: Variation Among States in Prescribing of Opioid Pain Relievers and Benzodiazepines — United States, 2012. *MMWR Morb Mortal Wkly Rep.* 2014 Jul 4; 63(26):563-568. Released as an MMWR Early Release on the MMWR website, 1 July 2014; accessed 3 July 2014: http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6326a2.htm?s_cid=mm6326a2_w.

²⁷ *Op. cit.* Paulozzi LJ, Mack KA, Hockenberry JM. Vital Signs: Variation Among States in Prescribing of Opioid Pain Relievers and Benzodiazepines — United States, 2012.

²⁸ *Op. cit.* Paulozzi LJ, Mack KA, Hockenberry JM. Vital Signs: Variation Among States in Prescribing of Opioid Pain Relievers and Benzodiazepines — United States, 2012.

²⁹ *Op. cit.* US-FDA: Attention Prescribers: FDA seeks your help in curtailing the U.S. opioid epidemic. ER/LA (extended-release/long-acting) opioid formulations are labeled with the FDA's highest level of warning for a drug's risk potential, a so-called "Boxed Warning," which emphasizes the various risks of a drug, including the potential for abuse, addiction, and fatal overdose from accidental ingestion.

³⁰ US-FDA, Center for Drug Evaluation and Research (CDER): Guidance for Industry Abuse-Deterrent Opioids — Evaluation and Labeling. Draft guidance released January 2013; accessed 18 June 2014: <http://www.fda.gov/downloads/Drugs/GuidanceComplianceRegulatoryInformation/Guidances/UCM334743.pdf>.

³¹ *Op. cit.* US-FDA/CDER: Guidance for Industry Abuse-Deterrent Opioids — Evaluation and Labeling. Formulation categories include:

1. Physical/chemical barriers: In an attempt to change the form of a particular drug to make abuse more difficult, barriers can be added to a drug formulation. For example, physical barriers to prevent crushing or grinding, or chemical barriers that resist extracting the opioid through solvent use are included in this category.
2. Agonist/antagonist combinations: Antagonists can be added to a drug formulation and are released upon manipulation to interfere with or eliminate the euphoric reaction sought from abusing the opioid.
3. Aversion: These substances can be added to a drug formulation, causing unpleasant side effects if a prescription is manipulated or ingested at higher-than-recommended doses.
4. Delivery system: Changing the method of drug delivery, using for example a sustained-release injectable formulation or implant, can reduce or eliminate the possibility of abuse.
5. Prodrug: This type of formulation does not become active until reaching a user's gastrointestinal tract, reducing the attractiveness of injectable or intranasal abuse.

³² *Op. cit.* US-FDA/CDER: Guidance for Industry Abuse-Deterrent Opioids — Evaluation and Labeling.

³³ *Op. cit.* US-FDA/CDER: Guidance for Industry Abuse-Deterrent Opioids — Evaluation and Labeling.

³⁴ US-FDA/CDER: Response to Center for Lawful Access and Abuse Deterrence - Partial Petition Approval and Denial. Letter from Janet Woodcock, MD, Director of the Center for Drug Evaluation and Research to Barnes, Cicchon, Haight and Sapp. Docket No. FDA-2013-P-0703. Date marked 25 October 2013; accessed 19 June 2014: <http://www.regulations.gov/#!documentDetail;D=FDA-2013-P-0703-0004>.

³⁵ *Op. cit.* US-FDA/CDER: Response to Center for Lawful Access and Abuse Deterrence - Partial Petition Approval and Denial.

³⁶ *Op. cit.* US-FDA/CDER: Guidance for Industry Abuse-Deterrent Opioids — Evaluation and Labeling. Labeling tiers include:

- Tier 1: Claims that a Product is Formulated with Physicochemical Barriers to Abuse
- Tier 2: Claims that a Product is Expected to Reduce or Block the Effect of the Opioid When the Product is Manipulated
- Tier 3: Claims that a Product is Expected to Result in a Meaningful Reduction in Abuse
- Tier 4: Claims that a Product has Demonstrated Reduced Abuse in the Community

³⁷ *Op. cit.* US-FDA/CDER: Response to Center for Lawful Access and Abuse Deterrence - Partial Petition Approval and Denial.

³⁸ “The new labeling indicates that the product has physical and chemical properties that are expected to make abuse via injection difficult and to reduce abuse via the intranasal route (snorting). Additionally, because original OxyContin provides the same therapeutic benefits as reformulated OxyContin, but poses an increased potential for certain types of abuse, the FDA has determined that the benefits of original OxyContin no longer outweigh its risks and that original OxyContin was withdrawn from sale for reasons of safety or effectiveness. Accordingly, the agency will not accept or approve any abbreviated new drug applications (generics) that rely upon the approval of original OxyContin.”

US-FDA: FDA approves abuse-deterrent labeling for reformulated OxyContin. Released 16 April 2013; accessed 2 December 2014: <http://www.fda.gov/newsevents/newsroom/pressannouncements/ucm348252.htm>.

³⁹ “Targiniq ER has properties that are expected to deter, but not totally prevent, abuse of the drug by snorting and injection. When crushed and snorted, or crushed, dissolved and injected, the naloxone in Targiniq ER blocks the euphoric effects of oxycodone, making it less liked by abusers than oxycodone alone.”

US-FDA: FDA approves new extended-release oxycodone with abuse-deterrent properties. Released 23 July 2014; accessed 24 July 2014: <http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm406407.htm>.

⁴⁰ “Embeda has properties that are expected to reduce, but not totally prevent, abuse of the drug when crushed and taken orally or snorted. Embeda works by releasing only the morphine in the capsule when taken properly. When crushed, the naltrexone in Embeda blocks some of the euphoric effects of the morphine and can precipitate withdrawal in persons dependent on opioids.”

US-FDA: FDA approves labeling with abuse-deterrent features for third extended-release opioid analgesic. Released 17 October 2014; accessed 2 December 2014: <http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm419288.htm>.

⁴¹ “Hysingla ER has properties that are expected to reduce, but not totally prevent, abuse of the drug when chewed and then taken orally, or crushed and snorted or injected. The tablet is difficult to crush, break or dissolve. It also forms a viscous hydrogel (thick gel) and cannot be easily prepared for injection. The FDA has determined that the physical and chemical properties of Hysingla ER are expected to make abuse by these routes difficult. However, abuse of Hysingla ER by these routes is still possible. It is important to note that taking too much Hysingla ER, whether by intentional abuse or by accident, can cause an overdose that may result in death.”

US-FDA: FDA approves extended-release, single-entity hydrocodone product with abuse-deterrent properties. Released 20 November 2014; accessed 2 December 2014: <http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm423977.htm>.

⁴² *Op. cit.* US-FDA/CDER: Guidance for Industry Abuse-Deterrent Opioids — Evaluation and Labeling.

⁴³ *Op. cit.* US-FDA/CDER: Guidance for Industry Abuse-Deterrent Opioids — Evaluation and Labeling.

⁴⁴ *Op. cit.* US-FDA/CDER: Guidance for Industry Abuse-Deterrent Opioids — Evaluation and Labeling.

⁴⁵ *Op. cit.* US-FDA/CDER: Guidance for Industry Abuse-Deterrent Opioids — Evaluation and Labeling.

⁴⁶ *Op. cit.* US-FDA/CDER: Guidance for Industry Abuse-Deterrent Opioids — Evaluation and Labeling.

⁴⁷ Category 4: Postmarketing Studies. *Op. cit.* US-FDA/CDER: Guidance for Industry Abuse-Deterrent Opioids — Evaluation and Labeling.

“The goal of postmarketing studies, Category 4, is to determine whether the marketing of the potentially abuse-deterrent formulation results in a significant decrease in population-based and use-based estimates of abuse compared to estimates of abuse if only formulations without abuse-deterrent properties are marketed.

Because data on the actual impact of an abuse-deterrent formulation on drug abuse are limited, the optimal design features of postmarketing epidemiological studies capable of detecting a change in the occurrence of abuse and abuse-related clinical outcomes (addiction, overdoses, poisonings, and death) as a result of the drug product’s abuse-deterrent formulation have not yet been established.”

⁴⁸ *Op. cit.* US-FDA: FDA approves new extended-release oxycodone with abuse-deterrent properties.

⁴⁹ Raffa RB, Pergolizzi JV Jr. Opioid formulations designed to resist/deter abuse. *Drugs*. 2010 Sep 10;70(13):1657-75. Accessed 11 July 2014: <http://link.springer.com/article/10.2165/11537940-000000000-00000#page-1>.

⁵⁰ Cicero TJ, Ellis MS, Surratt HL. Effect of abuse-deterrent formulation of OxyContin. *N Engl J Med*. 2012 Jul 12;367(2):187-9. Accessed 17 July 2014: <http://www.nejm.org/doi/full/10.1056/nejmc1204141>.

⁵¹ *Op. cit.* US-FDA: FDA approves new extended-release oxycodone with abuse-deterrent properties. The FDA requires new formulations to be part of its ER/LA Opioid Analgesics Risk Evaluation and Mitigation Strategy. This program focuses on prescribers and health care professionals, requiring pharmaceutical manufacturers to produce and distribute educational programs on safe prescribing practices, as well as guides and patient counseling documents the provide information on “safe use, storage, and disposal of ER/LA opioids.”

⁵² *Op. cit.* US-FDA/CDER: Guidance for Industry Abuse-Deterrent Opioids — Evaluation and Labeling.

MANDATED BENEFIT REVIEW OF CHAPTER 258 OF THE ACTS OF 2014: AN ACT TO INCREASE OPPORTUNITIES FOR LONG-TERM SUBSTANCE ABUSE RECOVERY

Licensed Alcohol and Drug Counselor I: Provision Overview

WHAT DOES THIS PROVISION DO?

The Massachusetts mental health parity mandate statutes require insurers to provide mental health benefits on a non-discriminatory basis for biologically-based mental disorders, including substance abuse disorders.ⁱ Massachusetts Chapter 258 of the Acts of 2014 expands the list of licensed mental health professionals that insurers must reimburse under the mental health parity statutes to include “licensed alcohol and drug counselor I” (LADC-I).ⁱⁱ Chapter 258 requires insurers to pay for the services provided by LADC-Is within the lawful scope of their practice if they credential these providers into their networks; currently, insurers pay for counseling provided by licensed and credentialed clinical psychologists and master’s level mental health professionals defined in the parity statutes.

MEDICAL EFFICACY OF LADC-I SERVICES

Efficacy has been demonstrated for a wide variety of services within the scope of LADC-I licensure, especially individual and group therapy integrated into a comprehensive substance abuse treatment program.ⁱⁱⁱ However, this review found no published studies quantifying the efficacy of the work of alcohol and drug counselors specifically, comparing the relative quality of services provided by LADC-Is with differing amounts of education or training, or comparing the relative quality of LADC-I services against services provided by other provider types. To the extent that reimbursement for services by LADC-Is improves patient access to needed and effective addiction counseling by increasing the supply or availability of these practitioners, a shortage of which was recently identified in a report by New England Comparative Effectiveness Public Advisory Council (CEPAC) on managing patients with opioid dependence,^{iv} Chapter 258 may contribute to improving the health of the population covered by fully-insured commercial and self-insured GIC plans.

ⁱ M.G.L. c.32A §22, c.175 §47B, c.176A §8A, c.176B §4A, c.176G §4M.

ⁱⁱ Massachusetts Acts of 2014, Chapter 258, “An Act to Increase Opportunities for Long-Term Substance Abuse Recovery.” Accessed 2 October 2014: <https://malegislature.gov/Laws/SessionLaws/Acts/2014/Chapter258>.

ⁱⁱⁱ U.S. Department of Health and Human Services, National Institutes of Health, National Institute on Drug Abuse (NIDA). Principles of drug addiction treatment: A research-based guide. Third edition, NIH Publication No. 12–4180. Revised December 2012; accessed 15 July 2014: http://www.drugabuse.gov/sites/default/files/podat_1.pdf.

^{iv} Institute for Clinical and Economic Review. Management of Patients with Opioid Dependence: A Review of Clinical, Delivery System, and Policy Options; Final Report 2014. The New England Comparative Effectiveness Public Advisory Council. Released 20 June 2014; accessed 19 September 2014: <http://cepac.icer-review.org/wp-content/uploads/2014/04/CEPAC-Opioid-Dependence-Final-Report-For-Posting-July-211.pdf>.

CURRENT COVERAGE

LADC-Is are not currently contracted or reimbursed by Massachusetts insurers as independent practitioners.^v While some practice independently and are reimbursed directly by patients, most are contracted or employed to provide services in certain programs or settings where the care that they provide is reimbursed as part of a package or per-diem payment made through facility-based agreements.^{vi} Other insurers do not reimburse for care provided by LADC-Is even when those services are in a clinic or facility setting.^{vii} While Chapter 258 requires insurers to reimburse LADC-Is if the insurers credential them, the legislation does not explicitly remove the insurers' ability to determine whom they will credential, and insurers might choose to impose credentialing requirements (such as a master's degree) that will exclude some LADC-Is from reimbursement.

COST OF IMPLEMENTING THE PROVISION

Requiring coverage for this benefit by fully-insured health plans would result in an average annual increase to the typical member's monthly health insurance premiums, from 2015 to 2019, of between \$0.02 (less than 0.01%) and \$0.17 (0.03%) per year. See the actuarial estimate for the effect on self-insured and fully-insured GIC plans.

^v Email communication with Department of Public Health, Bureau of Substance Abuse Services, 9 July 2014.

^{vi} Survey of Massachusetts insurance carriers, distributed by Massachusetts Center for Health Information and Analysis, 27 August 2014.

^{vii} *Op. cit.* Survey of Massachusetts insurance carriers, distributed by Massachusetts Center for Health Information and Analysis, 27 August 2014.

Licensed Alcohol and Drug Counselor I: Medical Efficacy Assessment

The Massachusetts mental health parity mandate statutes require insurers to provide mental health benefits on a non-discriminatory basis for biologically-based mental disorders, including substance abuse disorders.¹ Massachusetts Chapter 258 of the Acts of 2014 expands the list of licensed mental health professionals that insurers must reimburse under the mental health parity statutes to include “licensed alcohol and drug counselor I.”² M.G.L. c. 3 § 38C charges the Massachusetts Center for Health Information and Analysis (CHIA) with reviewing the medical efficacy of proposed mandated health insurance benefits. Medical efficacy reviews summarize current literature on the effectiveness and use of the mandated service and describe the potential impact of a mandated benefit on the quality of patient care and the health status of the population.

LICENSURE REQUIREMENTS FOR ALCOHOL AND DRUG COUNSELOR I

Licensure for alcohol and drug counselors in Massachusetts is administered by the Bureau of Substance Abuse Services in the state’s Department of Public Health. Applicants for the title “Licensed Alcohol and Drug Counselor I” (LADC-I) are required to have a master’s or doctoral degree in behavioral sciences,³ including a supervised counseling practicum, to have at least three years of approved work experience, and to pass a written examination. Qualifying work experience must have focused on substance abuse treatment, intervention, and prevention, including “diagnostic assessment, intervention, and alcohol and/or drug counseling to establish and maintain recovery and prevent relapse....”⁴

Professionals practicing as alcohol and drug counselors in the Commonwealth prior to the issuance of the licensing regulations and who applied for licensure during a defined period were exempt from the licensure requirements previously listed. These counselors, receiving so-called “grandparenting licensure,” were licensed under criteria which did not require a master’s or doctoral degree.⁵ Currently, there are 1,071 LADC-Is in Massachusetts, of whom 895 obtained their licensure under the grandparenting exemption.⁶ Of the grandparented LADC-Is, some have master’s or doctoral degrees; however, the exact number is not known.⁷

SERVICES PROVIDED BY ALCOHOL AND DRUG COUNSELORS

In Massachusetts, an LADC-I is permitted to independently provide alcohol and drug counseling, without supervision and/or apart from a licensed facility, and to supervise other alcohol and drug counselors.⁸ Core functions of LADC-Is include: screening, intake, orientation, assessment, treatment planning, counseling, case management, crisis intervention, client education, referrals, reports and record keeping, and consultation with other professionals.⁹ These services can also be provided by a variety of other professionals not specifically licensed by the state for alcohol and drug counseling, such as clinical psychologists, licensed independent social workers and marriage and family therapists.¹⁰ The scope of practice for licensed drug and alcohol counselors is not statutorily defined.¹¹

Massachusetts LADC-Is are required to have education and experience focused on “the full range of knowledge, skills, and professional techniques related to alcohol and drug counseling.”¹² They are also required to abide by the Code of Ethical Principles as defined by the National Association of Alcoholism and Drug Abuse Counselors.¹³ While the code does not specifically set a scope of practice for alcohol and drug counselors, it was written to govern the conduct of its members and “is the accepted standard of conduct for addiction professionals certified by the National Certification Commission....[It] is designed as a statement of the values of the profession and as a guide for making clinical decisions. This code is also utilized by state certification boards and educational institutions to evaluate the behavior of addiction professionals and to guide the certification process.”¹⁴

REIMBURSEMENT FOR SERVICES PROVIDED BY ALCOHOL AND DRUG COUNSELORS

LADC-Is are not currently contracted or reimbursed by Massachusetts insurers as independent practitioners.¹⁵ While some practice independently and are reimbursed directly by patients, most are contracted or employed to provide services in other settings, such as licensed substance abuse and/or mental health treatment programs and facilities, or in other healthcare, governmental, or educational programs or settings. According to a recent survey of Massachusetts carriers, a few insurers do pay for care delivered by LADC-Is as part of a package or per-diem payment through facility-based agreements.¹⁶ Chapter 258 requires insurers to reimburse LADC-Is independently as mental health professionals if the insurers credential (admit) these practitioners into their networks.

Again based on responses to a recent carrier survey, some insurers do not reimburse for care provided by LADC-Is even when those services are in a clinic or facility setting.¹⁷ Therefore some facilities that hire LADC-Is, faced with a mix of insurers that may or may not pay for LADC-I services, must limit LADC-I duties and patient mix because of the administrative burden of managing practitioner assignments and reimbursement.¹⁸ Chapter 258 requires insurers to reimburse clinics/facilities for (non-bundled) LADC-I services if the insurers credential these practitioners.

While Chapter 258 requires insurers to reimburse LADC-Is if the insurers credential them, the legislation does not explicitly remove the insurers’ ability to determine whom they will credential, and insurers might choose to impose credentialing requirements (such as a master’s degree) that will exclude some LADC-Is from reimbursement.

EFFICACY OF THE LADC PROVISIONS OF CHAPTER 258

Efficacy has been demonstrated for a wide variety of services within the scope of LADC-I licensure, especially individual and group therapy integrated into a comprehensive substance abuse treatment program.¹⁹ According to the National Institute on Drug Abuse, behavioral therapy and counseling are key components of comprehensive treatment.^{20,21} In its Treatment Improvement Protocol for Medication-Assisted Treatment for Opioid Addiction in Opioid Treatment Programs, the U.S. Substance Abuse and Mental Health Services Administration (SAMHSA) emphasized that counseling is integral to comprehensive maintenance treatment, and can be behavioral, psychotherapeutic, or family-oriented.²²

Chapter 258 requires insurers to pay for these services provided by LADC-Is within the lawful scope of their practice if they credential these providers into their networks; currently, insurers pay for counseling provided by licensed and credentialed clinical psychologists and master's level mental health professionals defined in the parity statutes. To the extent reimbursement for services by LADC-Is improves patient access to needed and effective addiction counseling by increasing the supply or availability of these practitioners, Chapter 258 may contribute to improving the health of the population covered by fully-insured commercial plans.

This review found no published studies quantifying the efficacy of the work of alcohol and drug counselors specifically, comparing the relative quality of services provided by LADC-Is with differing amounts of education or training, or comparing the relative quality of LADC-I services against services provided by other provider types. However, there is evidence that selected counseling programs improve the effectiveness of certain substance abuse treatment programs overall, and LADC-Is are trained and experienced in delivering these types of programs and therapies. For example, major increases in efficacy have been shown when basic counseling is added to methadone treatment programs; efficacy is further improved in these programs with the provision of, or referral to, other needed psychological, social service, medical, or psychiatric services.^{23,24} Further, the frequency of individual and group counseling is associated with fewer relapses.^{25,26}

A recent review of the National Registry of Evidence-Based Programs and Practices of the U.S. Department of Health and Human Services Substance Abuse and Mental Health Administration (SAMSHA) yielded over 35 interventions, many or most of which could be delivered by LADC-Is, focused on substance abuse treatment and counseling in a variety of settings, and proven effective.²⁷ These interventions cover a wide range of topics and treatments, including relapse prevention and abstinence reinforcement, communication and decision-making skills, motivation, social networks, healthy behaviors, contingency management, and employment supports. Some interventions are focused on specific populations, such as adolescents and young adults, HIV-positive individuals, women, juvenile offenders, incarcerated individuals, parolees and probationers, and the indigent and residentially unstable.²⁸ LADC-Is are among the practitioners who can deliver these types of evidence-based interventions to individuals and families needing substance abuse treatment in a variety of settings.

As noted, this review found no studies on the efficacy of LADC-I services specifically. Still, these types of services have been proven effective in improving outcomes for substance abuse treatment, and c. 258 requires LADC-Is to be reimbursed for such services if credentialed by carriers. Whether any individual LADC-I is qualified to deliver the services is a case-by-case evaluation best carried out by the credentialing functions of carriers. With that screening process intact, the law's language supports the effectiveness of LADC-Is to deliver these services when credentialed to do so.

Finally, increasing access to LADC-Is may, in part, mitigate the shortage of counselors identified in a recently released report by the New England Comparative Effectiveness Public Advisory Council (CEPAC) on managing patients with opioid dependence.²⁹ This group, comprised of members of state Medicaid

agencies, insurers, and providers from New England, asserted that “there are not enough counselors to serve every patient with addiction,” and that many of those currently practicing are not “specifically trained in addiction.”³⁰ To be licensed in Massachusetts, LADC-Is must have specific training in addiction and dependency, and their inclusion in insurer networks may help to alleviate the “bottleneck” to counseling that is a currently identified barrier to treatment for substance abuse.

ENDNOTES: LICENSED ALCOHOL AND DRUG COUNSELOR I

¹ M.G.L. c.32A §22, c.175 §47B, c.176A §8A, c.176B §4A, c.176G §4M.

² Massachusetts Acts of 2014, Chapter 258, “An Act to Increase Opportunities for Long-Term Substance Abuse Recovery.” Accessed 2 October 2014: <https://malegislature.gov/Laws/SessionLaws/Acts/2014/Chapter258>.

³ Behavioral Sciences includes: anthropology, art/dance therapy, child development/family relations, community mental health, chemical dependence, counseling/guidance, criminal justice, divinity/religion/theology, drama therapy, education, gerontology, health administration, health education, human services, music therapy, nursing/medicine, occupational therapy, pastoral counseling, physical therapy, psychology, recreational therapy, rehabilitation counseling, social work, sociology, special education, speech pathology, and vocational counseling. *Op. cit.* 105 CMR 168.004: Licensure of Alcohol and Drug Counselors, Definitions.

⁴ *Op. cit.* 105 CMR 168.004: Licensure of Alcohol and Drug Counselors, Definitions.

⁵ Licensure would be granted to those who: 1) Received certification as Certified Alcohol and Drug Abuse Counselor (CADAC), Certified Clinical Supervision (CCS), Certified Addiction Specialist (CAS), Certified Employment Assistance Professional (CEAP) or Certified Alcohol Counselor (CAC); OR 2) Served as an executive director, program director or clinical director of a substance abuse program; OR 3) Served as a clinical or administrative supervisor in a substance abuse program and has defined clinical and supervisory experience; OR 4) Has a master’s degree in behavioral science and 4,000 hours of substance abuse clinical experience and 270 hours of alcohol and drug counseling education; OR 5) has a bachelors degree and 6,000 hours of substance abuse clinical experience and 270 hours of alcohol and drug counseling education. 105 CMR 168.012: Licensure of Alcohol and Drug Counselors, Grandparenting Licensure. Accessed 14 July 2014: <http://www.mass.gov/eohhs/docs/dph/regs/105cmr168.pdf>.

⁶ Email communication with Department of Public Health, Bureau of Substance Abuse Services, 9 July 2014.

⁷ Email communication with Department of Public Health, Bureau of Substance Abuse Services, 26 August 2014.

⁸ 105 CMR 168.004: Licensure of Alcohol and Drug Counselors, Definitions. Accessed 14 July 2014: <http://www.mass.gov/eohhs/docs/dph/regs/105cmr168.pdf>.

⁹ *Op. cit.* 105 CMR 168.004: Licensure of Alcohol and Drug Counselors, Definitions.

¹⁰ These include governmental and school employees acting under the jurisdiction or on behalf of their respective agency, employees of licensed alcohol and drug treatment programs, as well as educational psychologists, marriage and family therapists, mental health counselors, nurse practitioners, occupational therapists, physicians, physician assistants, practical nurses, psychologists, registered nurses, rehabilitation counselors and social workers. 105 CMR 168.005: Licensure of Alcohol and Drug Counselors, Exemptions. Accessed 14 July 2014: <http://www.mass.gov/eohhs/docs/dph/regs/105cmr168.pdf>.

¹¹ Email communication with Department of Public Health, Bureau of Substance Abuse Services, 15 July 2014.

¹² 105 CMR 168.006: Licensure of Alcohol and Drug Counselors, Eligibility Requirements. Accessed 15 July 2014: <http://www.mass.gov/eohhs/docs/dph/regs/105cmr168.pdf>.

Specifically, work experience must at a minimum include:

- a) practice in diagnostic assessment, intervention, and alcoholism and/or drug counseling in both individual and group settings;
- b) practice in alcoholism and/or drug counseling to establish and maintain recovery and prevent relapse; and
- c) weekly, on-site and documented clinical experience.

¹³ Email communication with Department of Public Health, Bureau of Substance Abuse Services, 9 July 2014. As referenced in 105 CMR 168.006: Licensure of Alcohol and Drug Counselors, Eligibility Requirements. Accessed 15 July 2014: <http://www.mass.gov/eohhs/docs/dph/regs/105cmr168.pdf>.

¹⁴ National Association of Alcoholism and Drug Addiction Counselors (NAADAC): NAADAC/NCC AP Code of Ethics. Accessed 15 July 2014: <http://www.naadac.org/code-of-ethics>.

Sections of the NAADAC Code of Ethics include: I. The Counseling Relationship; II. Evaluation, Assessment and Interpretation of Client Data; III. Confidentiality/Privileged Communication and Privacy; IV. Professional Responsibility; V. Working in a Culturally Diverse World; VI. Workplace Standards; VII. Supervision and Consultation; VIII. Resolving Ethical Issues; IX. Communication and Published Works; X. Policy and Political Involvement.

¹⁵ Email communication with Department of Public Health, Bureau of Substance Abuse Services, 9 July 2014.

¹⁶ Survey of Massachusetts insurance carriers, distributed by Massachusetts Center for Health Information and Analysis, 27 August 2014.

¹⁷ *Op. cit.* Survey of Massachusetts insurance carriers, distributed by Massachusetts Center for Health Information and Analysis, 27 August 2014.

¹⁸ Phone interviews by Compass staff conducted July and August 2014 with provider staff from: AdCare, High Point Treatment Centers, Spectrum Health Systems.

¹⁹ U.S. Department of Health and Human Services, National Institutes of Health, National Institute on Drug Abuse (NIDA). Principles of drug addiction treatment: A research-based guide. Third edition, NIH Publication No. 12–4180. Revised December 2012; accessed 15 July 2014: http://www.drugabuse.gov/sites/default/files/podat_1.pdf.

²⁰ U.S. Department of Health and Human Services, National Institutes of Health, National Institute on Drug Abuse (NIDA). Principles of drug addiction treatment: A research-based guide. Third edition, NIH Publication No. 12–4180. Revised December 2012; accessed 15 July 2014: http://www.drugabuse.gov/sites/default/files/podat_1.pdf. NIDA describes the goals of individualized drug counseling as: focusing on reducing or stopping illicit drug or alcohol use; addressing a patient's motivation to change as well as areas of impaired functioning, including employment, family/social relations, and illegal activity; creating and managing the content and structure of a patient's recovery program; developing short-term behavioral goals, including coping strategies and tools to maintain abstinence, and new recreational and social activities and networks; and referring patients for additional medical, psychiatric, vocational, and social services as needed.

²¹ Counseling is defined by the American Counseling Association as “a collaborative effort between the counselor and client. Professional counselors help clients identify goals and potential solutions to problems which cause emotional turmoil; seek to improve communication and coping skills; strengthen self-esteem; and promote behavior change and optimal mental health.” American Counseling Association: What is Professional Counseling? Accessed 15 July 2014: <http://www.counseling.org/aca-community/learn-about-counseling/what-is-counseling/overview>.

²² U.S. Substance Abuse and Mental Health Services Administration, Center for Substance Abuse Treatment. (SAMHSA/CSAT). Treatment Improvement Protocol (TIP) 43: Medication-Assisted Treatment for Opioid Addiction in Opioid Treatment Programs. Report No.: (SMA) 05-4048. Released 2005; accessed 15 July 2014: <http://www.ncbi.nlm.nih.gov/books/NBK64168/>.

²³ McLellan AT, Arndt IO, Metzger DS, et. al. The effects of psychosocial services in substance abuse treatment. *JAMA*. 1993 Apr 21;269(15):1953-9. Accessed 21 July 2014: <http://informahealthcare.com/doi/abs/10.3109/10884609309149701>.

²⁴ Woody GE, Luborsky L, McLellan AT, et. al. Psychotherapy for opiate addicts. Does it help? *Arch Gen Psychiatry*. 1983 Jun;40(6):639-45. Accessed 21 July 2014: <http://www.ncbi.nlm.nih.gov/pubmed/6847332>.

²⁵ Fiorentine R, Anglin MD. More is better: counseling participation and the effectiveness of outpatient drug treatment. *J Subst Abuse Treat*. 1996 Jul-Aug;13(4):341-8. Accessed 21 July 2014: <http://www.sciencedirect.com/science/article/pii/S0740547296001092>.

²⁶ Fiorentine R. Counseling frequency and the effectiveness of outpatient drug treatment: revisiting the conclusion that “more is better.” *Am J Drug Alcohol Abuse*. 2001 Nov;27(4):617-31. Accessed 21 July 2014: http://www.researchgate.net/publication/11627778_Counseling_frequency_and_the_effectiveness_of_outpatient_drug_treatment_revisiting_the_conclusion_that_more_is_better.

²⁷ U.S. Department of Health and Human Services (US-DHHS), Substance Abuse and Mental Health Administration (SAMSHA), National Registry of Evidence-Based Programs and Practices. Updated 10 July 2014; accessed 21 July 2014: <http://www.nrepp.samhsa.gov/SearchResultsNew.aspx?s=v&q=counseling>. Search criteria: Substance abuse treatment, Residential, Outpatient, Correctional, Home, School, Workplace, Other community settings, counseling.

²⁸ Intervention Summary: Service Outreach and Recovery (SOAR). SAMSHA National Registry of Evidence-Based Programs and Practices. Accessed 3 October: <http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=164>.

²⁹ Institute for Clinical and Economic Review. Management of Patients with Opioid Dependence: A Review of Clinical, Delivery System, and Policy Options; Final Report 2014. The New England Comparative Effectiveness Public Advisory Council. Released 20 June 2014; accessed 19 September 2014: <http://cepac.icer-review.org/wp-content/uploads/2014/04/CEPAC-Opioid-Dependence-Final-Report-For-Posting-July-211.pdf>.

³⁰ *Ibid.*

MANDATED BENEFIT REVIEW OF CHAPTER 258 OF THE ACTS OF 2014: AN ACT TO INCREASE OPPORTUNITIES FOR LONG-TERM SUBSTANCE ABUSE RECOVERY

Acute Treatment and Clinical Stabilization Services and Substance Abuse Treatment Preauthorization: Provision Overview

WHAT DO THESE PROVISIONS DO?

Chapter 258 of the Massachusetts Acts of 2014ⁱ in part places restrictions on the ability of health insurance carriers to manage utilization of substance abuse treatment (SAT) services. It eliminates insurer pre-authorization requirements for the full spectrum of substance abuse services, and for two intensive facility-based services – acute treatment services (ATS) and clinical stabilization services (CSS) – eliminates carriers’ ability to terminate authorization for a treatment episode shorter than 14 days. Specifically, the law restricts:

- Pre-authorization for substance abuse treatment: Health insurance plans shall “not require a member to obtain preauthorization for substance abuse treatment if the provider is certified or licensed by the department of health.”
- Pre-authorization and concurrent review for ATS/CSS: Health insurance plans shall cover “medically necessary acute treatment servicesⁱⁱ and medically necessary clinical stabilization servicesⁱⁱⁱ for up to a total of 14 days and shall not require preauthorization prior to obtaining acute treatment services or clinical stabilization services....” Furthermore, medical necessity “shall be determined by the treating clinician in consultation with the patient....”

SUBSTANCE ABUSE TREATMENT

Substance use disorder is a “cluster of cognitive, behavioral, and physiological symptoms indicating that the individual continues using the substance despite significant substance-related problems.”^{iv} Substance abuse is dangerous and sometimes fatal; in 2012, the leading cause of injury death in the U.S. was drug overdoses; more people aged 25 to 64 died from overdoses in that year than from car

ⁱ Massachusetts Acts of 2014, Chapter 258, “An Act to Increase Opportunities for Long-Term Substance Abuse Recovery.” Accessed 2 October 2014: <https://malegislature.gov/Laws/SessionLaws/Acts/2014/Chapter258>.

ⁱⁱ “Acute treatment services,” as defined in Chapter 258: “24-hour medically supervised addiction treatment for adults or adolescents provided in a medically managed or medically monitored inpatient facility....”

ⁱⁱⁱ “Clinical stabilization services,” as defined in Chapter 258: “24-hour clinically managed post detoxification treatment for adults or adolescents ... usually following acute treatment services for substance abuse”

^{iv} American Psychiatric Association (APA). Diagnostic and Statistical Manual of Mental Disorders (Fifth edition, text review; DSM-V). 2013.

accidents.^v However, most substance abuse goes untreated; of those with drug dependence or abuse in Massachusetts in 2008 to 2012, an estimated 86 percent did not receive treatment.^{vi}

The spectrum of substance abuse services is broad and any individual’s treatment must reflect her or his specific needs. The American Society of Addiction Medicine (ASAM) emphasizes that length of service in any level of care “varies with the severity of the patient’s illness and his or her response to treatment.”^{vii} Services for a given individual may include detoxification, but detoxification is only one element in the full spectrum of substance abuse services; treatment should be focused on long-term sustained abstinence and recovery.

Treatment for substance abuse and addiction can be effective when it recognizes the chronic nature of the illness, the likelihood of relapse, and the social factors affecting the progression of the disease and recovery. Furthermore, better treatment is individualized along the spectrum of services, with consideration given to the patient’s individual characteristics, to the physical, social, emotional, and behavioral health of the patient, and to the patient’s social support system.

HOW CHAPTER 258 ALTERS INSURANCE COVERAGE FOR SUBSTANCE ABUSE TREATMENT

Before implementation of the benefit mandate provisions of Chapter 258 in October 2015, private insurers in Massachusetts may require prior authorization for substance abuse services.^{viii} For patients who receive prior authorization for treatment or admission, insurers most often provide preliminary approval for a set number of treatment days. If a provider determines that treatment needs to extend beyond this initially-approved timeframe, the insurer conducts a utilization review to determine if a longer stay or additional treatment is medically necessary. The insurer both defines the medical necessity criteria used and determines whether a patient meets the criteria outlined for treatment.

Chapter 258 shifts the balance of decision-making about admission to substance abuse services from the insurer to the provider; under the new law, the provider will determine into which level of service a patient is admitted without need for prior authorization from the insurer. For ATS/CSS services specifically, the law goes further and transfers to the provider the ability to both define and determine the medical necessity of treatment for the first 14 days of a treatment episode. This is a significant change as the definitions of medical necessity held by commercial insurers and substance abuse providers often differ;

^v U.S. Centers for Disease Control and Prevention (US-CDC): Home & Recreational Safety, Prescription Drug Overdose in the United States Fact Sheet. Updated 17 October 2014; accessed 12 November 2014: <http://www.cdc.gov/homeandrecreationsafety/overdose/facts.html>.

^{vi} Substance Abuse and Mental Health Services Administration (SAMHSA). Behavioral Health Barometer: Massachusetts, 2013. HHS Publication No. SMA-13-4796MA. Past-Year Illicit Drug Use Treatment among Persons Aged 12 or Older with Illicit Drug Dependence or Abuse in Massachusetts (2008-2012). Published 2013; accessed 23 September 2014: http://samhsa.gov/data/StatesInBrief/2k14/Massachusetts_BHBarometer.pdf.

^{vii} Mee-Lee D, Shulman GD, Fishman MJ, et. al., eds. The ASAM Criteria: Treatment Criteria for Addictive, Substance-Related, and Co-Occurring Conditions, Third Edition. Carson City, NV: The Change Companies, 2013.

^{viii} Phone interviews conducted July and August 2014 with staff from sample Massachusetts providers.

criteria used by providers to set treatment are generally broader, focusing not only on detoxification and stabilization, but often also on the patient's readiness to change and on his or her living environment.

EFFECT OF THE PROVISIONS ON CARE

If the shift from insurer to provider for determining the necessity of treatment increases access to appropriate and adequate individually-targeted services, then Chapter 258 should positively affect outcomes for privately-insured patients with these illnesses. Note that the law does not eliminate the possibility of overutilization of ATS and CSS services specifically. If, for example, overly-long stays restrict access to a broader set of services, or treatment plans do not consider a patient's entire medical and social condition, the result may be continued relapses and repeated utilization of certain services without related recovery (e.g., readmission for detoxification). Improvements in outcomes will depend on provider decisions about care for privately-insured patients, and whether or not these decisions improve on those currently made by carriers.

At the same time, if the law drives improvement in appropriate access to the full spectrum of treatment for the commercial fully-insured population, demand for provider resources (across all payment sources, including public) might exceed system capacity. At that point, if the supply of accessible providers or beds does not grow, increased use by commercial patients might displace other patients – such as Medicaid patients – from tight resources, particularly ATS and CSS beds, potentially harming the effectiveness of services provided outside the commercial fully-insured population.

COST OF IMPLEMENTING THE PROVISIONS

The impact on premiums of these provisions derives almost entirely from inpatient services, i.e., the provision related to ATS/CSS. Restricting fully-insured health plans' ability to manage utilization of these services is likely to result in a utilization increase that would in turn result in an average annual increase in the typical member's monthly premiums of between \$0.04 (0.01%) and \$0.10 (0.02%) per year, from 2015 to 2019. See the actuarial estimate for the effect on self-insured GIC plans. See the actuarial estimate for the effect on self-insured and fully-insured GIC plans.

In contrast, the overall expected impact for non-inpatient services is small and assumed to be zero. To the extent that actual events lead to increased outpatient use, it will likely occur in scenarios in which inpatient use is lower than projected in the actuarial estimate, and vice versa, washing out within the degree of precision in those estimates. The estimated impact of the provision prohibiting preauthorization for non-inpatient substance abuse treatment is interdependent with the ATS/CSS provision's estimate's assumptions and results. That is, both the positive impact ATS/CSS and the zero impact of substance abuse treatment (non-ATS/CSS) services depend on the inherent interaction between these levels of care as implementation of Chapter 258 proceeds.

Acute Treatment and Clinical Stabilization Services and Substance Abuse Treatment Preauthorization: Medical Efficacy Assessment

Among the provisions of Chapter 258 of the Massachusetts Acts of 2014, two place restrictions on the ability of health insurance carriers to require authorization for substance abuse services. Carriers generally require providers to obtain preauthorization (prior authorization) for substance abuse services or the carrier will deny payment. In addition, for facility services, the carrier may review the necessity of continuing the treatment (in a “concurrent review”) and may sometimes terminate authorization for an ongoing stay. Chapter 258 eliminates preauthorization across the spectrum of substance abuse services, and for two intensive facility-based services, eliminates carriers’ ability to terminate authorization for the first 14 days of a treatment episode involving those two services. Specifically, these provisions of the law require:

- Pre-authorization for substance abuse treatment: “Any [health insurance] coverage...shall not require a member to obtain preauthorization for substance abuse treatment if the provider is certified or licensed by the department of public health.” The law further defines substance abuse treatment to include “early intervention services for substance use disorder treatment; outpatient services including medically assisted therapies; intensive outpatient and partial hospitalization services; residential or inpatient services, not covered [elsewhere in the law]; and medically managed intensive inpatient services, not covered [elsewhere in the law].”¹
- Pre-authorization and concurrent review for acute treatment services (ATS) and crisis stabilization services (CSS): Health insurance plans “shall provide...coverage for medically necessary acute treatment services^{ix} and medically necessary clinical stabilization services^x for up to a total of 14 days and shall not require preauthorization prior to obtaining acute treatment services or clinical stabilization services; provided that the facility shall provide the carrier both notification of admission and the initial treatment plan within 48 hours of admission; provided further, that utilization review procedures may be initiated on day 7. Medical necessity shall be determined by the treating clinician in consultation with the patient and noted in the patient’s medical record.”²

These two provisions touch most of the spectrum of substance abuse services, prohibiting prior authorization for all, and prohibiting concurrent review denials within 14 days for ATS/CSS.

^{ix} “Acute treatment services,” as defined in Chapter 258: “24-hour medically supervised addiction treatment for adults or adolescents provided in a medically managed or medically monitored inpatient facility, as defined by the department of public health, that provides evaluation and withdrawal management and which may include biopsychosocial assessment, individual and group counseling, psychoeducational groups and discharge planning.”

^x “Clinical stabilization services,” as defined in Chapter 258: “24-hour clinically managed post detoxification treatment for adults or adolescents, as defined by the department of public health, usually following acute treatment services for substance abuse, which may include intensive education and counseling regarding the nature of addiction and its consequences, relapse prevention, outreach to families and significant others and aftercare planning, for individuals beginning to engage in recovery from addiction.” CSS may be used without detoxification, for example for cocaine addiction.

M.G.L. c. 3 § 38C charges the Massachusetts Center for Health Information and Analysis (CHIA) with reviewing the medical efficacy of proposed mandated health insurance benefits. Medical efficacy reviews summarize current literature on the effectiveness and use of the mandated treatment or service, and describe the potential impact of a mandated benefit on the quality of patient care and the health status of the population.

This brief review assesses the medical efficacy of these two provisions, and will:

- Review the nature and scope of the relevant medical problem: substance abuse and addiction
- Summarize treatment for substance abuse and addiction
- Summarize research on the medical efficacy of substance abuse treatment
- Describe the effect of Chapter 258 on insurers' requirements for prior authorization and medical necessity
- Summarize the medical efficacy of these provisions

SUBSTANCE ABUSE, DEPENDENCE, AND ADDICTION

According to the Diagnostic and Statistical Manual of Mental Disorders (DSM), published by the American Psychiatric Association to describe mental disorders, “substance use disorder” is a “cluster of cognitive, behavioral, and physiological symptoms indicating that the individual continues using the substance despite significant substance-related problems.”³ Symptoms may include some combination of “impaired control, social impairment, risky use and [tolerance and/or withdrawal].”⁴ While not applied as a diagnostic term in the DSM, substance addiction as defined by the National Institute of Drug Abuse (NIDA) is a chronic illness affecting “multiple brain circuits, including those involved in reward and motivation, learning and memory, and inhibitory control over behavior.”⁵ The likelihood of relapse for someone with this chronic illness is similar to that of other medical illnesses that involve both behavioral and physiological components.⁶

In 2012, the leading cause of injury death in the United States was drug overdoses; more people aged 25 to 64 died from drug overdoses in that year than from car accidents.⁷ Between 1999 and 2012, the death rate from drug overdoses in the U.S. rose 117 percent.⁸ Of overdose deaths, 80 percent were unintentional; 53 percent of these were related to pharmaceuticals, with 72 percent of pharmaceutical deaths caused by opioids.⁹

The rate of abuse and dependence in Massachusetts is near the national average. In 2012, 2.5 percent of Massachusetts residents aged 12 or older abused or were dependent on illicit drugs, compared to 2.7 percent nationally.¹⁰ Over 4 percent had used pain relievers for nonmedical reasons between 2010 and 2012.¹¹ However, young people aged 12 to 17 in Massachusetts were more likely to use drugs for non-prescribed purposes when compared to the national average, with 12.3 percent reporting illicit drug use in 2012, compared to 9.8 percent nationally.¹² Between 2008 and 2012, the average ages of first use in Massachusetts were 14.1 for marijuana, 13.5 for alcohol, and 13.3 for illicit psychotherapeutics.¹³

Since 1990, the number of drug overdose deaths in Massachusetts has nearly tripled, from 3.7 to 11 per 100,000 people in 2010, with the majority attributable to prescription drug abuse.¹⁴ A 2014 national report on drug abuse patterns and trends found an 11-year peak for unintentional drug overdoses for the Greater Boston area, with a 40 percent increase from 780 patients in 2010 to 1,089 in 2012.¹⁵ Over time, the number of people seeking treatment in Massachusetts continues to rise. Based on point-in-time measurements in 2008 and then again in 2012, enrollments in:

- Treatment for drug abuse rose from 40,600 to 45,700, an increase of 12.6 percent¹⁶
- Methadone treatment increased over 61 percent, rising from 9,600 in 2008 to 15,500 in 2012¹⁷
- Buprenorphine treatment (another drug used to treat opioid dependence not approved by the FDA until 2002) rose almost 400 percent, from about 860 people in 2008 to 4,250 by 2012¹⁸

Despite this large increase in individuals treated, most substance abuse goes untreated. Of those with drug dependence or abuse in Massachusetts in 2008 to 2012, an estimated 86 percent did not receive treatment.¹⁹ For those who did enroll in treatment, almost 49 percent were treated for a drug problem only, 37 percent for both drug and alcohol problems, and the remaining 14 percent for an alcohol problem only.²⁰

TREATMENT FOR SUBSTANCE ABUSE

Summarizing treatment for substance abuse is challenging, in that the spectrum of services is broad and the variables that affect an individual's treatment are multifaceted. Chapter 258 includes the following service categories in its definitions of substance abuse services:

- Early intervention
- Outpatient
- Intensive outpatient and partial hospitalization
- Residential or inpatient (including clinical stabilization services or CSS)
- Medically managed intensive inpatient (including acute treatment services or ATS)

Treatment can begin anywhere within this spectrum of services, depending in large part on the individual and on the substance that has been abused. For cases that are immediately life-threatening, patients often enter services in detoxification (acute treatment services – ATS). It is important to distinguish between detoxification^{xi,21} and substance abuse treatment,^{xii,22} as “[d]etoxification, in and of itself, does not constitute complete substance abuse treatment.”²³ The process of detoxification focuses on helping a patient to withdraw safely from acute intoxication or dependency, and includes evaluation, stabilization,

^{xi} Detoxification is a set of interventions aimed at managing acute intoxication and withdrawal. It denotes clearing toxins from the body of the patient who is acutely intoxicated and/or dependent on an abused substance.

^{xii} Treatment/rehabilitation... involves a constellation of ongoing therapeutic services ultimately intended to promote recovery for substance abuse patients.

and preparation for entry into treatment, but does not necessarily wholly encompass substance abuse treatment.²⁴ According to the NIDA, however, in current practice:

[t]hird party payors sometimes prefer to manage payment for detoxification separately from other phases of substance abuse treatment, thus treating detoxification as if it occurred in isolation from that treatment. This “unbundling” of services can result in the separation of services into scattered segments. In other instances, reimbursement and utilization policies dictate that only detoxification can be authorized. This detoxification often does not cover the nonmedical counseling that is an integral part of substance abuse treatment.²⁵

Comprehensive, effective treatment provides appropriate access to the whole spectrum of services. Appendix A contains more detailed information and definitions of the levels of care in SAT as defined in Chapter 258.

According to a report from NIDA, substance abuse is a chronic condition requiring a long-term holistic approach across and beyond service definitions. From the report, “[e]ffective treatment attends to multiple needs of the individual, not just his or her drug abuse,”²⁶ and further:

Addiction treatment must help the individual stop using drugs, maintain a drug-free lifestyle, and achieve productive functioning in the family, at work, and in society. Because addiction is a disease, most people cannot simply stop using drugs for a few days and be cured. Patients typically require long-term or repeated episodes of care to achieve the ultimate goal of sustained abstinence and recovery of their lives. Indeed, scientific research and clinical practice demonstrate the value of continuing care in treating addiction, with a variety of approaches having been tested and integrated in residential and community settings.²⁷

Given the chronic nature of substance addiction, studies have found that “a longer-term perspective on treatment utilization is needed to more fully address chronic substance abuse and the problems typically associated with it.”²⁸ Generally speaking, in its *Principles of Drug Addiction Treatment*, NIDA summarizes that:

According to research that tracks individuals in treatment over extended periods, most people who get into and remain in treatment stop using drugs, decrease their criminal activity, and improve their occupational, social, and psychological functioning....However, individual treatment outcomes depend on the extent and nature of the patient’s problems, the appropriateness of treatment and related services used to address those problems, and the quality of interaction between the patient and his or her treatment providers.²⁹

Experts also emphasize the importance of tailoring treatment approach and duration to the needs of the individual patient. The American Society of Addiction Medicine (ASAM) emphasizes that length of service in any level of care “varies with the severity of the patient’s illness and his or her response to treatment,” and “always depends on individual progress and outcome.”³⁰ ASAM guidelines consistently call for individual treatment plans with flexible lengths of stay or treatment, cautioning against mandated lengths of stay.³¹ They further advise that “[p]rograms that have predetermined lengths of stay or overall program lengths of stay that must be achieved in order for a patient to ‘complete treatment’ or ‘graduate’ are inconsistent with an individualized and outcomes-driven system of care.”³² The U.S. Substance Abuse

and Mental Health Services Administration (SAMHSA) stresses that patients should be treated in the least restrictive setting.³³ In its guidelines, ASAM also supports individualized treatment in “the most efficient and effective level of service.”³⁴ Moreover, according to its outlined Principles of Effective Treatment, NIDA states that “[n]o single treatment is appropriate for everyone.”³⁵ (See Appendix B for an outline of NIDA’s Principles of Effective Treatment.)

In summary, national authorities on substance abuse recommend that treatment should be individualized along a spectrum of services and focused on long-term sustained abstinence and recovery, a position supported by the efficacy research reviewed next.

MEDICAL EFFICACY OF SUBSTANCE ABUSE TREATMENT

Substance abuse treatment has been evaluated and found overall to be effective compared to non-treatment. A meta-analysis combined the effects of 78 studies of drug treatment and “...analyses indicated that drug abuse treatment has both a statistically significant and a clinically meaningful effect in reducing drug use and crime.”³⁶ There is also an extensive literature on the characteristics of treatment that are most effective, including treatment duration, treatment continuity, and patient-specific characteristics related to health and living situation.

Duration and continuity of treatment are associated with patient outcome. Overall, studies have found that clients retained for longer periods in substance abuse treatment have better outcomes than those with shorter treatment duration.^{37,38} One study found that longer residential stays resulted in lower readmission rates for substance abuse treatment. These researchers concluded that their “findings highlight the value of providing adequate amounts of residential and outpatient care for patients in substance abuse treatment...”³⁹ Research has shown that continuing treatment along the spectrum of services, individualized to a patient’s specific needs, is beneficial, finding that “retention, duration, and increased aftercare” were important to the effectiveness of inpatient substance abuse treatment.⁴⁰ The benefit of continuing treatment from inpatient to outpatient was reinforced in another study which found that, especially for patients with both mental health and substance abuse issues (dual-diagnosis), those entering outpatient care directly have “somewhat worse outcomes” than those who enter treatment directly from “an immediately prior episode of inpatient care.”⁴¹ And a study of residential treatment programs for patients with both substance abuse and mental health diagnoses cited program flexibility and duration of treatment as “critical features of successful treatment...”⁴²

There is also clear evidence that patient characteristics are an important aspect of appropriate treatment, with effectiveness depending in part on the individual patient’s overall health and social support system.^{43,44} In general, patients with more problems at the start of treatment, including co-occurring psychiatric and substance abuse diagnoses and/or psychosocial problems, have been found to experience better outcomes with longer and more intensive treatment.⁴⁵ Other research found that “[p]atients with high psychiatric severity and/or a poor social support system are predicted to have a better outcome in inpatient treatment, while patients with low psychiatric severity and/or a good social support system may do well as outpatients without incurring the higher costs of inpatient treatment.”⁴⁶ These findings highlight the importance of an individualized approach to treatment.

In summary, evidence indicates that effective treatment for substance abuse and addiction must recognize the chronic nature of the illness, the likelihood of relapse, and the social factors affecting the progression of the disease and recovery. Furthermore, it suggests that better treatment is individualized along a spectrum of services, with consideration given to the patient’s individual characteristics, to co-occurring psychiatric and medical conditions, to the social, emotional, and behavioral health of the patient, and to the social support system in which the patient must pursue recovery.

Understanding how general findings on the efficacy of substance abuse treatment inform the efficacy of Chapter 258’s provisions limiting care management requires understanding current insurance coverage and management for substance abuse services and how Chapter 258 will alter them.

HOW CHAPTER 258 CHANGES INSURANCE COVERAGE

Current coverage

While, historically, treatment for substance abuse services was restricted for many patients based on coverage and administration for mental health and substance abuse disorders in their insurance policies,⁴⁷ over the past two decades federal and state laws have increasingly come to mandate insurance coverage of, and access to, mental health and substance abuse treatments. The federal Mental Health Parity Act of 1996 (MHPA) and Mental Health Parity and Addiction Equity Act of 2008 (MHPAEA) requires that patient cost-sharing requirements and treatment limits applied by insurers to coverage for mental health and substance use disorders are no more restrictive than those for medical/surgical benefits.⁴⁸ The Massachusetts mental health parity law went further, requiring insurers to provide benefits “on a nondiscriminatory basis” for substance abuse disorders, including “a range of inpatient, intermediate, and outpatient services...in the least restrictive clinically appropriate setting.”⁴⁹

Parity laws have expanded the benefits available for substance abuse, but insurers also limit access to benefits using preauthorization and continuing authorization requirements. Before implementation of Chapter 258, private insurers in Massachusetts could require prior authorization for substance abuse services under most circumstances.^{xiii,50} According to some providers, patients would generally not be admitted for these types of treatments unless an insurer approved the treatment or stay prior to admission, based on the insurer’s medical necessity criteria and determination. According to providers of inpatient services as well as a survey of Massachusetts insurance carriers, acute treatment service (ATS) stays were much more likely to be approved by private insurers than crisis stabilization service (CSS) admissions.⁵¹ (See Appendix A for definitions of levels of care.) Some insurers would not admit patients to the CSS level of care regardless of circumstances, while others would not admit to CSS directly;⁵² i.e., they would allow CSS care only as a step-down from ATS, or after outpatient treatment was attempted and proven inadequate. Analysis of claims in the Massachusetts All Payer Claim Database confirms very small amounts of CSS were paid for under fully-insured commercial insurance plans.

^{xiii} Exceptions are made by some insurers for after-hours and weekend admissions.

Until implementation of Chapter 258, for patients who receive prior authorization for treatment or admission, insurers most often provide preliminary approval for a set number of treatment days. If a provider determines that treatment needs to extend beyond this initially-approved timeframe, the insurer may conduct a utilization review (UR) to determine if a longer stay or additional treatment is medically necessary. The insurer both defines the medical necessity criteria used, and determines whether a patient meets the criteria outlined for a longer stay or treatment.^{xiv} A survey of carriers found that preauthorization is also required for other levels of service, including intensive outpatient day treatment and outpatient treatment.

Chapter 258 and access to treatment for substance abuse

Chapter 258 expands existing laws not only by requiring certain group health insurance plans to include a range of treatment options, but also by enabling providers to control initial access to these benefits and limiting the ability of insurers to restrict access with prior authorization requirements or medical necessity review. The primary effect of these specific sections of Chapter 258 is to shift the balance of decision-making about admission to various levels of substance abuse services from the insurer to the provider; under the new law, the provider will determine into which level of service a patient is admitted without need for prior authorization from an insurer. For ATS and CSS services, the law goes further and transfers to the provider the ability to both define and determine the medical necessity of treatment for the first 14 days of a treatment episode.⁵³ If the shift from insurer to provider for determining the necessity of treatment increases access to appropriate and adequate services, then Chapter 258 should positively affect outcomes for privately-insured patients with these illnesses. It is also possible that utilization for some services will increase beyond appropriate levels, though the use of standardized criteria would encourage appropriate decisions regarding utilization of services at the least restrictive level of care.

Changes in determining medical necessity

As noted, implementation of Chapter 258 will prohibit insurers from requiring providers to obtain prior authorization before admitting patients to substance abuse services, shifting initial medical necessity determination from carriers to providers. This is a significant change as the respective definitions of

^{xiv} Health plan utilization management practices and the development of medical necessity guidelines are governed by standards developed by the Division of Insurance (DOI) and the Office of Patient Protection (OPP) and by national accreditation bodies, including the National Committee for Quality Assurance (NCQA). M.G.L. Chapter 176O governs these practices and the Division of Insurance oversees health plan implementation of utilization review practices and monitors health plan compliance with the provisions of Chapter 176O. Section 16 of M.G.L. Chapter 176O governs the development of health plan medical necessity guidelines and requires that such guidelines be: “(i) developed with input from practicing physicians in the carrier’s or utilization review organization’s service area; (ii) developed in accordance with the standards adopted by national accreditation organizations; (iii) updated at least biennially or more often as new treatments, applications and technologies are adopted as generally accepted professional medical practice; and (iv) evidence-based, if practicable.” Finally Section 16 requires that health plans “consider the individual health care needs of the insured” when applying such guidelines. The DOI and OPP have promulgated regulations (211 CMR 52.00, and 958 CMR 3.00) that provide further guidance in implementing Chapter 176O. NCQA requires compliance with similar requirements for health plan accreditation.

medical or treatment necessity held by commercial insurers and substance abuse treatment providers are often different. According to survey responses of Massachusetts private insurers, most define their own medical necessity criteria, some of which are proprietary. In commercial insurance, medical necessity criteria commonly dictate not only whether treatment is necessary, but at what level of care the services are provided.⁵⁴ According to the American College of Medical Quality, “[m]edical necessity is defined as accepted health care services and supplies provided by health care entities, appropriate to the evaluation and treatment of a disease, condition, illness or injury and consistent with the applicable standard of care.”⁵⁵ Services are generally determined based on diagnosis, and are intended to restore an individual to a level of functioning present prior to an acute episode, illness, or injury. In the case of substance abuse services, most often authorization for admission, or continuation of treatment after utilization review, is determined by a patient’s withdrawal symptoms and severity, as well as the severity of co-occurring biomedical conditions, such as psychiatric disorders and/or other acute or chronic medical disorders. In some cases, serious emotional, behavioral, or cognitive conditions and complications may be considered. These medical necessity criteria, then, are focused on a patient’s acute detoxification, withdrawal, and medical stabilization.

For providers, one widely-used standard set of criteria for service placement, continued stay, and patient transfer/discharge is published by ASAM (ASAM criteria), which recommends a much broader set of assessment parameters to determine treatment services needed by an individual.⁵⁶ Six “dimensions” are included in this assessment “to create a holistic, biopsychosocial assessment of an individual.”⁵⁷ The Massachusetts Department of Public Health refers to these criteria in its regulations for certain services within the spectrum of care for substance abuse programs.⁵⁸ The six dimensions include not only medical conditions,⁵⁹ but also an individual’s readiness to change (Dimension 4); relapse, continued use, or continued problem potential (Dimension 5); and the recovery/living environment (Dimension 6). Aligned with this point of view, one of the three “essential components” of the detoxification process as defined by SAMHSA, “patient readiness for and entry into treatment,” affects whether a patient is discharged from a given level of care into another type of service or treatment.⁶⁰ How these arguably broader criteria are interpreted by providers and applied to commercially-insured patients with substance use disorders will play an important role in determining the impact of Chapter 258 provisions regarding access to the various levels of treatment.

MEDICAL EFFICACY OF CHANGES TO COVERAGE

As discussed, there is clear evidence that substance abuse treatment can be effective when appropriately delivered. While this review did not identify studies specifically measuring the effectiveness of ATS or CSS, there is evidence that sufficient duration of and retention in treatment, in settings tailored to the individual’s needs, including inpatient, residential, and/or outpatient services, were found to be important indicators of improved outcomes. The law is presumably based on a belief that, for commercially-insured patients, adequate access to effective substance abuse services, including flexible and sufficient treatment options across the spectrum of services, is not currently available in optimal amounts. These sections of the law, then, presume that by reducing existing insurance restrictions to care, additional

effective care will be delivered. And while no research has measured the impact of removing prior authorization and concurrent review requirements such as those found in these provisions of Chapter 258, it is possible to summarize the factors upon which that result will depend, based on the general evidence of SAT effectiveness.

To the extent that Chapter 258 promotes individualized treatment regimens that consider a broader set of patient assessment parameters, appropriately use services across the spectrum of substance abuse treatment, and account for the patient's medical and psychosocial conditions as well as recovery support system, the results of the cited studies suggest the law will enhance treatment results for the fully-insured population. Whether the specific mechanisms found in the law – the removal of prior authorization requirements, and the transfer of initial medical necessity definition and determination to the provider for ATS and CSS – will drive that improvement in efficacy depends on whether current carrier-driven decisions result in treatment that meets this standard, and on the manner in which the mechanism will be implemented in practice by providers with the discretion the law provides to them. Removing carrier utilization review increases the possibility of overutilization of ATS and CSS services, especially if providers standardize lengths of stay beyond an individual patient's need (which can be detrimental to the patient). However, removing the carrier utilization review simultaneously reduces the possibility of underutilization to the extent that existing carrier policies are inappropriately restrictive. If overly long stays restrict access to a broader set of services, or treatment plans do not consider a patient's entire medical and social condition, the result may be continued relapses and repeated utilization of certain services without related recovery (e.g., readmission for detoxification). Therefore, any improvements in outcomes will depend on provider decisions about adequate and appropriate care for privately-insured patients, and whether or not these decisions improve on decisions currently made by carriers.

Finally, it is worth noting that gains made in effectiveness of care in the commercial population could result in some loss of effectiveness in the Medicaid population. If the law drives improvement in appropriate access to the full spectrum of treatment for the commercial fully-insured population, demand for provider resources (across all payment sources, including public) might exceed system capacity. At that point, if the supply of accessible providers or beds is not expanded, increased use by commercial patients (for which higher payment rates are sometimes available⁶¹) might displace other patients – such as Medicaid patients – from tight resources, particularly ATS and CSS beds, thereby affecting services provided outside the commercial fully-insured population. See the actuarial analysis for detail on the economic forces driving the shift.

APPENDIX A: SUBSTANCE ABUSE LEVELS OF CARE SPECTRUM AND DESCRIPTION

Chapter 258 defines substance abuse treatment similarly to the spectrum of services outlined by ASAM.⁶² In the new law, substance abuse treatment includes early intervention, outpatient, intensive outpatient and partial hospitalization, residential or inpatient, and medically-managed intensive inpatient services. Chapter 258 also includes specific provisions regarding crisis stabilization services and acute treatment services.

The following is a general mapping of the levels of care described in Chapter 258 cross-referenced to the ASAM criteria, provided as an aid to the reader not familiar with substance abuse treatment. This is not intended as a definitive or detailed explanation or reconciliation of the two sources.

Chapter 258 Substance Abuse Services ⁶³	ASAM Levels of Care ⁶⁴	Additional Legislative Definition
Early Intervention	Level 0.5 Early Intervention	
Outpatient	Level 1 Outpatient	
Intensive Outpatient and Partial Hospitalization	Level 2.1 Intensive Outpatient	
	Level 2.5 Partial Hospitalization	
	Level 3.1 Clinically Managed Low-Intensity Residential Services	
	Level 3.3 Clinically Managed Population-Specific High-Intensity Residential Services (Adults only)	
	Level 3.5 Clinically Managed High-Intensity Residential Services (Adults)	Clinical Stabilization Services
	Clinically Managed Medium-Intensity Residential Services (Adolescents)	
Residential or Inpatient	Level 3.7 Medically Monitored Intensive Inpatient Services (Adults)	Acute Treatment Services
	Medically Monitored High-Intensity Inpatient Services (Adolescents)	
	Level 4 Medically Managed Intensive Inpatient Services	

Early intervention services are not defined in the Massachusetts Department of Public Health Licensure of Substance Abuse Treatment Programs (Licensure of SATP) regulations. Clarification of services in the legislation is made for “Acute treatment services” and “Clinical stabilization services.” According to officials at the Massachusetts Department of Health Bureau of Substance Abuse Services (BSAS), the

state agency that licenses substance abuse treatment programs and facilities, “Acute treatment services” (ATS) are equivalent to ASAM Levels of Care 3.7 and 4.0, while “Clinical stabilization services” (CSS) are equivalent to ASAM Level of Care 3.5.⁶⁵ Licensing regulations term these services differently than both Chapter 258 and the ASAM Criteria.⁶⁶ All programs are required to provide Minimum Treatment Services (Appendix C) in addition to those specified for each level of care.

Service	ASAM Level	MA DPH Regulations: 105 CMR 164 ⁶⁷	
Outpatient	1	121	Outpatient Detoxification
		200	Outpatient Services
		221	Outpatient Counseling
		300	Opioid Treatment
Intensive Outpatient	2.1		
Partial Hospitalization	2.5	231	Day Treatment
Residential	3.1, 3.3	400	Residential Rehabilitation
Clinical Stabilization	3.5	133(A)(1)(c)	Clinically Managed Detoxification
Acute Treatment	3.7	133(A)(1)(b)	Medically Monitored Inpatient Detoxification
	4	133(A)(1)(a)	Medically Managed Intensive Inpatient Detoxification

EARLY INTERVENTION

Early intervention, ASAM Level of Care 0.5, is for individuals who are at specific risk of developing substance abuse problems, but whose behaviors have not reached the level sufficient to diagnose an addictive disorder.⁶⁸ Individuals have no risk of withdrawal symptoms, and have either no or stable co-occurring biomedical, emotional, behavioral or cognitive conditions. The goal is to help the individual gain an understanding of high-risk behaviors related to substance abuse, as well as the skills needed to change.⁶⁹ Services can be offered in a variety of settings, including primary care physician offices or hospital emergency room, as well as schools, work sites, and community centers.⁷⁰

One form of early intervention is known as Screening, Brief Intervention, and Referral to Treatment (SBIRT). This service is intended to intervene early with those who are not yet addicted but who exhibit risky behaviors, and to identify those who do have a substance abuse disorder and need referral to more formal treatment.⁷¹

OUTPATIENT SERVICES

Outpatient services are categorized by ASAM as Level 1, and are delivered in a variety of settings to patients whose illness severity and level of function do not warrant more intensive levels of treatment.⁷² Patients may enter directly into outpatient treatment, may step down from more intensive care levels, may use outpatient treatment for chronic disease management for their substance abuse disorder, or may be unwilling or unable to accept placement into a more intensive level of care.⁷³ Following a “defined set of policies and procedures or clinical protocols,” ASAM advises that [s]uch services are provided in regularly scheduled sessions of (usually) fewer than nine contact hours a week for adults and fewer than six hours for adolescents.⁷⁴ Services include individual and group counseling, psychotherapy, motivation

enhancement, family and occupational therapy, educational groups, and medication management, among others.⁷⁵

According to Licensure of SATP regulations,

Outpatient Services encompass levels of care to persons not at risk of suffering withdrawal symptoms, and who can participate in organized ambulatory services including intensive day treatment services, counseling, and educational services....⁷⁶

Outpatient services licensed in Massachusetts include several different types of treatment:

- Outpatient Detoxification is for patients whose current and potential withdrawal symptoms are not severe enough to require inpatient detoxification (Acute Treatment Services or Clinical Stabilization Services), but who “need a structured program with frequent contact in order to engage in treatment,” and for whom an assessment disproves that “the community in which the client resides poses a threat to the client’s abstinence.”⁷⁷ Regulations specify that treatment in these programs includes at least nine hours of service programming each week.⁷⁸
- Outpatient counseling is for patients who are found to have no withdrawal symptoms, who have the ability to engage and remain in treatment, and for whom community support for withdrawal is available.⁷⁹ Treatment is to include individual, group, couple, and family therapy as needed.^{80,81}
- Opioid treatment comprises both detoxification and maintenance for opioid addicted individuals.⁸² Regulations state that opioid agonist treatment medication and counseling services must both be provided.⁸³ According to ASAM, individuals in opioid treatment programs are “[r]eady to change the negative effects of opioid use, but [are] not ready for total abstinence...”⁸⁴

INTENSIVE OUTPATIENT/PARTIAL HOSPITALIZATION

Defined in Licensure of SATP regulations as a type of outpatient services known as Day Treatment, intensive outpatient or partial hospitalization are for patients for whom there exists the “presence of substantial relapse risk and need for a structured program in order to engage and remain in treatment.”⁸⁵ Regulations outline that treatment must include 3½ hours of services daily in programs that must be open and available to deliver services up to five days per week (client treatment plans may not recommend or reflect participation five days per week), including “counseling, psychoeducational groups, and family counseling,” as well as case management to include referrals and aftercare service planning.⁸⁶

ASAM defines intensive outpatient treatment as Level 2.1, providing between 9 to 19 hours per week of structured programming for adults and between 6 and 19 hours for adolescents.⁸⁷ Services include individual and group counseling, family and occupational therapy, educational groups, and medication management.⁸⁸ Patients admitted to this level of care have a minimal risk of severe withdrawal, and either do not experience co-occurring biomedical complications and conditions, or these conditions are manageable.⁸⁹ Emotional, behavioral or cognitive complications and conditions are mild for these

patients, but need to be monitored.⁹⁰ Patients admitted to intensive outpatient treatment have variably engaged in their treatment, and are often ambivalent about change, or “lack awareness of the substance use or mental health problem.”⁹¹

Partial hospitalization, ASAM Level 2.5, provides 20 or more hours of weekly “clinically intensive programming” which is similar in scope to that described for intensive outpatient treatment.⁹² When compared to intensive outpatient, partial hospitalization programs have increased capability to treat patients with unstable physical or psychiatric problems which require daily monitoring and management through direct access to psychiatric, hospital, and laboratory services.⁹³ Patients admitted to this level of care have a moderate risk of withdrawal, and either do not experience co-occurring biomedical complications and conditions, or these conditions are manageable.⁹⁴ Emotional, behavioral or cognitive complications and conditions may be moderate for these patients, and must be stabilized.⁹⁵ Patients admitted to partial hospitalization programs have “poor engagement in treatment,” are significantly ambivalent toward change, or “lack awareness of the substance use or mental health problem.”⁹⁶

Settings vary for intensive outpatient and partial hospitalization programs, with some providing overnight housing for patients with problematic home environments or transportation needs.⁹⁷ However, this differs from residential rehabilitation in that the living environment is not necessarily supervised 24 hours per day.⁹⁸

RESIDENTIAL REHABILITATION

The Massachusetts Department of Public Health licenses four different types of residential rehabilitation service programs, including: adult individuals,⁹⁹ adults with their families,¹⁰⁰ adolescents,¹⁰¹ and operating under the influence second offenders.¹⁰² Each of these types offers “organized substance abuse treatment and education services” through structured and supportive programs in permanent, 24-hour residential facilities where clients reside temporarily to develop recovery skills in “safe and stable living environments.”¹⁰³

According to ASAM, residential services are generally provided in community-based facilities to patients whose living/recovery “environment is dangerous,” but for whom recovery is possible with 24-hour structure and supervision.¹⁰⁴ Programs are geared to demonstrate to patients “aspects of a positive recovery environment,” and to help them to apply recovery, relapse, and coping skills while promoting “personal responsibility and reintegration...into...work, education, and family life.”¹⁰⁵

Designated as ASAM Level 3.1, or Clinically Managed Low-Intensity Residential Services, residential rehabilitation is “qualitatively different in that it is a 24-hour supportive living environment whereas the other sublevels¹⁰⁶ [CSS and ATS] are 24-hour treatment settings.”¹⁰⁷ Comparatively, ASAM requires Level 3.1 programs to provide at minimum only 5 hours of treatment per week.¹⁰⁸ Admitted patients have no or minimal withdrawal risk, and either no co-occurring biomedical conditions or complications, or they are receiving medical monitoring for stable conditions, such that on-site medical services are not required at this level of care.¹⁰⁹ According to ASAM criteria, patients admitted to residential rehabilitation most often have emotional, behavioral or cognitive conditions that are either absent, minimal or stabilized.¹¹⁰

While no length of stay recommendation is made by ASAM for Level 3.1 residential treatment, guidelines state that stays “tend to be longer than in more intensive residential levels of care. Longer exposure to monitoring, supervision, and low-intensity treatment interventions is necessary for patients to practice basic living skills and to master the application of coping and recovery skills.”¹¹¹

Level 3.3 patients may have mild to moderate emotional, behavioral or cognitive conditions, and “have little awareness and need interventions available only at Level 3.3 to engage and stay in treatment.”¹¹²

According to the ASAM description of this level of care,

[f]or the typical patient...the effects of substance use or other addictive disorder or a co-occurring disorder resulting in cognitive impairment on the individual’s life are so significant, and the level of impairment so great, that outpatient motivational and/or relapse prevention strategies are not feasible or effective. Similarly, the patient’s cognitive limitations make it unlikely that he or she could benefit from other levels of residential care.¹¹³

CLINICAL STABILIZATION SERVICES

As described in a recent Request for Response (RFR) document prepared by BSAS¹¹⁴:

CSS services are designed to stabilize clients and increase their retention in treatment. CSS programs can include adults, who have completed a medical detoxification, as well as adults who do not meet criteria for medical detoxification but have other substance use disorders and other, current, related complications. The goal of the CSS is to provide the needed service interventions and program supports to enable clients to engage in a structured process and to plan and implement any services needed for a successful transition to the next level of substance use disorder treatment or other care, based on an assessment process tailored to each client. CSS services enable clients to focus on recovery, increase treatment acceptance and readiness to change, and identify skills and strategies to prevent continued use and/or to reduce risk of harm due to continued use... The CSS recovery oriented services and supports can help transition the client to appropriate next step care in the substance use disorder treatment continuum.

In CSS, defined as Clinically Managed Detoxification by state licensing regulations, patients admitted to this level of care do not have severe withdrawal symptoms, are supervised for 24-hours per day in a “non-medical setting,” with at least four hours of daily nursing care, along with other services as described in Appendix C.¹¹⁵ There are currently 11 providers managing 297 licensed adult beds in the state at this level of service¹¹⁶, with an additional 32 beds currently under licensing review by the state.¹¹⁷

ASAM’s criteria outline counseling as the primary treatment at this level of care, which is designed to serve patients who “need safe and stable living environments in order to develop...sufficient recovery skills so that they do not immediately relapse or continue to use.... [CSS] assists individuals whose addiction is currently [such] that they need a 24-hour supportive treatment environment to initiate or continue a recovery process that has failed to progress.”¹¹⁸ Patients admitted to this level of care are at minimal risk for severe withdrawal symptoms, and either have no or stable co-occurring biomedical conditions, or these are sufficiently monitored.¹¹⁹ However, patient’s emotional, behavioral or cognitive conditions may demonstrate the patient’s

“inability to control impulses, or [their] unstable and dangerous signs/symptoms require stabilization.”¹²⁰ The recovery/living environment may also be found to be dangerous, and the patient lacks the skills to prevent relapse outside of a “highly structured 24-hour setting.”¹²¹

The focus of the treatments offered through CSS is on a patient’s social, emotional, behavioral, cognitive, and living conditions.¹²² ASAM further states that a patient’s “limitations require comprehensive, multifaceted treatment that can address all of the patient’s interrelated problems.”¹²³ For such patients, “standard rehabilitation methods are inadequate.”¹²⁴ Goals of CSS treatment include substance use abstinence, improvement of other addictive or antisocial behaviors, and creating positive change in other elements of patients’ “lifestyles, attitudes, and values.”¹²⁵ CSS is designed to foster and reinforce “prosocial” values and skill development in a supportive and stable living environment in order to ensure successful “reintegration into family living,” especially when a patient’s current living situation is not entirely supportive of recovery.¹²⁶

According to interviews with several CSS providers throughout the state, depending on their insurance coverage, some privately-insured patients are currently admitted to this level of care as a “step-down” from more intensive detoxification treatments, or as a “step-up” when outpatient rehabilitation treatments prove inadequate to help patients achieve and sustain sobriety and abstinence.¹²⁷

ACUTE TREATMENT SERVICES

ATS are inpatient detoxification services spanning two different levels of care. The lower level of ATS, defined in state regulations as Medically Monitored Inpatient Detoxification Services, is provided in a freestanding medical (as opposed to hospital) setting and includes 24-hour nursing care and medical supervision, in addition to those services outlined in Appendix C.¹²⁸ Patients are admitted to this level of care when their health and well-being are at risk, and when withdrawal symptoms require medical monitoring.¹²⁹ Different from the Medically Managed level of ATS, physician care is not required 24-hours per day, but must be available as needed. There are currently 20 providers managing 704 licensed adult beds in the state at this level of service,¹³⁰ with an additional 32 beds currently under licensing review by the state.¹³¹

According to ASAM, this level of care is appropriate “for patients whose subacute biomedical and emotional, behavioral, or cognitive problems are so severe that they require inpatient treatment, but who do not need the full resources of an acute care general hospital or a medically managed inpatient treatment program.”¹³² Services are focused on withdrawal, co-occurring biomedical conditions, or emotional, behavioral, or cognitive complications.¹³³ Patients admitted to this level of care may have poor impulse control and a low interest in treatment, may be “[u]nable to control use, with imminently dangerous consequences,” and their living/recovery environment may be dangerous.¹³⁴

The higher level of ATS, defined by state licensing regulations as Medically Managed Intensive Inpatient Detoxification Services, is provided in an acute care hospital setting and includes daily physician medical management and nursing care 24 hours per day, in addition to the services outlined in Appendix C.¹³⁵ Patients are admitted when their health and well-being are at risk, and when withdrawal symptoms are

severe enough to require “frequent medical attention.”¹³⁶ There are currently five providers managing 164 licensed adult beds in Massachusetts at this level of service.^{137,138}

As Medically Managed Intensive Inpatient Services are delivered in an acute care hospital setting with all of its available resources, ASAM has defined it as an appropriate level of care “for patients whose acute biomedical, emotional, and cognitive problems are so severe that they require primary medical and nursing care.”¹³⁹ The patient’s readiness to change, relapse risk or living environment are not considered as part of the criteria for entry to this level of service; rather, patients require 24 hour medical and nursing care for their biomedical and or psychiatric problems. According to ASAM, as the length of stay for these services “typically is sufficient only to stabilize the patient’s acute signs and symptoms, a primary focus... is case management and coordination...to continuing treatment at another level of care.”¹⁴⁰

APPENDIX B: PRINCIPLES OF EFFECTIVE TREATMENT

National Institute of Drug Abuse, National Institutes of Health, U.S. Department of Health and Human Services (NIDA). Principles of Drug Addiction Treatment: A Research-Based Guide, Third Edition. NIH Publication No. 12–4180.

1. Addiction is a complex but treatable disease that affects brain function and behavior.
2. No single treatment is appropriate for everyone.
3. Treatment needs to be readily available.
4. Effective treatment attends to multiple needs of the individual, not just his or her drug abuse.
5. Remaining in treatment for an adequate period of time is critical.
6. Behavioral therapies – including individual, family, or group counseling – are the most commonly used forms of drug abuse treatment.
7. Medications are an important element of treatment for many patients, especially when combined with counseling and other behavioral therapies.
8. An individual’s treatment and services plan must be assessed continually and modified as necessary to ensure that it meets his or her changing needs.
9. Many drug-addicted individuals also have other mental disorders.
10. Medically assisted detoxification is only the first stage of addiction treatment and by itself does little to change long-term drug abuse.
11. Treatment does not need to be voluntary to be effective.
12. Drug use during treatment must be monitored continuously, as lapses during treatment do occur.
13. Treatment programs should test patients for the presence of HIV/AIDS, hepatitis B and C, tuberculosis, and other infectious diseases, as well as provide targeted risk-reduction counseling, linking patients to treatment if necessary.

APPENDIX C: MINIMUM TREATMENT SERVICE REQUIREMENTS

Massachusetts Department of Health, Licensure of Substance Abuse Treatment Programs (105 CMR 164.074). Applicable to all licensees, in addition to services described for specific levels of service.

Provided directly by licensee:

- Substance abuse therapies, counseling, and education which conform to accepted standards of care
- Tobacco education and counseling
- Case management including referrals based on continuum of care and client educational, vocational, financial, legal, and housing needs
- Relapse prevention and recovery maintenance counseling and education
- Planning for client's completion of treatment provided by licensee, and identification of transitional, discharge, and aftercare supports the client may require

Provided directly by licensee or through Qualified Service Organization Agreement:

- HIV education and counseling
- TB screening, education, and treatment
- Mental health services, including psychopharmacological services, for individuals with co-occurring disorders
- Health services, including family planning services requested by the client
- Services for individuals with compulsive behaviors such as compulsive gambling

ENDNOTES: ATS/CSS AND SAT PREAUTHORIZATION

¹ Massachusetts Acts of 2014, Chapter 258, “An Act to Increase Opportunities for Long-Term Substance Abuse Recovery,” Sections 9, 21, 23, 25, and 27. Accessed 2 October 2014: <https://malegislature.gov/Laws/SessionLaws/Acts/2014/Chapter258>.

² *Op. cit.* Acts 2014 c. 258. Sections 9, 21, 23, 25, and 27.

³ American Psychiatric Association (APA). Diagnostic and Statistical Manual of Mental Disorders (Fifth edition, text review; DSM-V). 2013.

⁴ *Op. cit.* APA. Diagnostic and Statistical Manual of Mental Disorders – Fifth Edition (DSM-V).

⁵ National Institute of Drug Abuse, National Institutes of Health, U.S. Department of Health and Human Services (NIDA). Principles of Drug Addiction Treatment: A Research-Based Guide, Third Edition. NIH Publication No. 12–4180. Printed 1999, revised December 2012; accessed 29 August 2014: http://www.drugabuse.gov/sites/default/files/podat_1.pdf.

⁶ *Op. cit.* NIDA: Principles of Drug Addiction Treatment: A Research-Based Guide, Third Edition.

Comparison of Relapse Rates	
Chronic Illness	% Patients Who Relapse
Type 1 Diabetes	30%-50%
Substance Abuse	40%-60%
Hypertension	50%-70%
Asthma	50%-70%

⁷ U.S. Centers for Disease Control and Prevention (US-CDC): Home & Recreational Safety, Prescription Drug Overdose in the United States Fact Sheet. Updated 17 October 2014; accessed 12 November 2014: <http://www.cdc.gov/homeandrecreationalafety/overdose/facts.html>.

⁸ *Op. cit.* US-CDC: Home & Recreational Safety, Prescription Drug Overdose in the United States Fact Sheet.

⁹ *Op. cit.* US-CDC: Home & Recreational Safety, Prescription Drug Overdose in the United States Fact Sheet.

¹⁰ Substance Abuse and Mental Health Services Administration (SAMHSA). Behavioral Health Barometer: Massachusetts, 2013. HHS Publication No. SMA-13-4796MA. Past-Year Illicit Drug Dependence or Abuse among Persons Aged 12 or Older in Massachusetts and the United States (2008-2012). Published 2013; accessed 23 September 2014: http://samhsa.gov/data/StatesInBrief/2k14/Massachusetts_BHBarometer.pdf.

¹¹ SAMHSA: Substate Estimates of Substance Use and Mental Illness from the 2010-2012, National Surveys on Drug Use and Health: Results and Detailed Tables. Table 22.3: Marijuana Use in the Past Year, Cocaine Use in the Past Year, and Nonmedical Use of Pain Relievers in the Past Year in Massachusetts among Persons Aged 12 or Older, by Substate Region: Percentages, Annual Averages Based on 2010, 2011, and 2012 NSDUHs. Accessed 23 September 2014: <http://www.samhsa.gov/data/NSDUH/substate2k12/NSDUHsubstateStateTabsMA2012.pdf>.

Illicit Drugs Other Than Marijuana include cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used non-medically.

¹² Substance Abuse and Mental Health Services Administration (SAMHSA). Behavioral Health Barometer: Massachusetts, 2013. HHS Publication No. SMA-13-4796MA. Past-Month Illicit Drug Use among Persons Aged 12-17 in Massachusetts and the United States (2008-2012). Published 2013; accessed 23 September 2014: http://samhsa.gov/data/StatesInBrief/2k14/Massachusetts_BHBarometer.pdf.

¹³ Substance Abuse and Mental Health Services Administration (SAMHSA). Behavioral Health Barometer: Massachusetts, 2013. HHS Publication No. SMA-13-4796MA. Mean Age of First Use of Selected Substances among Persons Aged 12-17 in Massachusetts (2008-2012). Published 2013; accessed 23 September 2014: http://samhsa.gov/data/StatesInBrief/2k14/Massachusetts_BHBarometer.pdf.

¹⁴ Levi J, Segal LM, Fuchs Miller A. Prescription Drug Abuse: Strategies to Stop the Epidemic, 2013. Trust for America's Health. Released October 2013; accessed 3 November 2014: <http://www.rwjf.org/content/dam/farm/reports/reports/2013/rwjf408045>. State information from Robert Wood Johnson Foundation (RWJF), Interactive: Prescription Drug Abuse. Accessed 3 November 2014: <http://www.rwjf.org/en/about-rwjf/newsroom/newsroom-content/2013/09/interactive--prescription-drug-abuse.html>.

¹⁵ Dooley DP. Drug Abuse Patterns and Trends in Greater Boston—Update: January 2014. NIDA Community Epidemiology Work Group (CEWG): Greater Boston, Massachusetts. Revised February 2014; accessed 3 November 2014: <http://www.drugabuse.gov/about-nida/organization/workgroups-interest-groups-consortia/community-epidemiology-work-group-cewg/meeting-reports/highlights-summaries-january-2014-1>.

¹⁶ Substance Abuse and Mental Health Services Administration (SAMHSA). Behavioral Health Barometer: Massachusetts, 2013. HHS Publication No. SMA-13-4796MA. Enrollment in Substance Use Treatment in Massachusetts: Single-Day Counts (2008-2012). Published 2013; accessed 23 September 2014: http://www.samhsa.gov/data/sites/default/files/Massachusetts_BHBarometer.pdf.

Single-day counts reflect the number of persons who were enrolled in substance use treatment on March 31, 2008 and March 30, 2012.

¹⁷ Substance Abuse and Mental Health Services Administration (SAMHSA). Behavioral Health Barometer: Massachusetts, 2013. HHS Publication No. SMA-13-4796MA. Persons Enrolled in Substance Use Treatment in Massachusetts Receiving Methadone: Single-Day Counts (2008-2012). Published 2013; accessed 23 September 2014: http://samhsa.gov/data/StatesInBrief/2k14/Massachusetts_BHBarometer.pdf.

Single-day counts reflect the number of persons who were enrolled in substance use treatment on March 31, 2008 and March 30, 2012.

¹⁸ Substance Abuse and Mental Health Services Administration (SAMHSA). Behavioral Health Barometer: Massachusetts, 2013. HHS Publication No. SMA-13-4796MA. Persons Enrolled in Substance Use Treatment in Massachusetts Receiving Buprenorphine: Single-Day Counts (2008-2012). Published 2013; accessed 23 September 2014: http://samhsa.gov/data/StatesInBrief/2k14/Massachusetts_BHBarometer.pdf.

Single-day counts reflect the number of persons who were enrolled in substance use treatment on March 31, 2008 and March 30, 2012.

¹⁹ Substance Abuse and Mental Health Services Administration (SAMHSA). Behavioral Health Barometer: Massachusetts, 2013. HHS Publication No. SMA-13-4796MA. Past-Year Illicit Drug Use Treatment among Persons Aged 12 or Older with Illicit Drug Dependence or Abuse in Massachusetts (2008-2012). Published 2013; accessed 23 September 2014: http://samhsa.gov/data/StatesInBrief/2k14/Massachusetts_BHBarometer.pdf.

²⁰ Substance Abuse and Mental Health Services Administration (SAMHSA). Behavioral Health Barometer: Massachusetts, 2013. HHS Publication No. SMA-13-4796MA. Substance Use Problems among Persons Enrolled in Substance Use Treatment in Massachusetts: Single-Day Count (2012). Published 2013; accessed 23 September 2014: http://samhsa.gov/data/StatesInBrief/2k14/Massachusetts_BHBarometer.pdf.

Single-day counts reflect the number of persons who were enrolled in substance use treatment on March 31, 2008 and March 30, 2012.

²¹ SAMHSA: Detoxification and Substance Abuse Treatment: Treatment Improvement Protocol (TIP) Series, No. 45. HHS Publication No. (SMA) 134131. Released 2006; accessed 4 September 2014: <http://store.samhsa.gov/shin/content//SMA13-4131/SMA13-4131.pdf>.

²² *Op. cit.* SAMHSA. Detoxification and Substance Abuse Treatment: Treatment Improvement Protocol (TIP) Series, No. 45.

²³ *Op. cit.* SAMHSA. Detoxification and Substance Abuse Treatment: Treatment Improvement Protocol (TIP) Series, No. 45.

²⁴ *Op. cit.* SAMHSA. Detoxification and Substance Abuse Treatment: Treatment Improvement Protocol (TIP) Series, No. 45.

- ²⁵ *Op. cit.* SAMHSA. Detoxification and Substance Abuse Treatment: Treatment Improvement Protocol (TIP) Series, No. 45.
- ²⁶ NIDA DrugFacts: Treatment Approaches for Drug Addiction. Revised September 2009; accessed 29 August 2014: <http://www.drugabuse.gov/publications/drugfacts/treatment-approaches-drug-addiction>.
- ²⁷ *Op. cit.* NIDA: Principles of Drug Addiction Treatment: A Research-Based Guide, Third Edition.
- ²⁸ Grella CE, Hser YI, Hsieh SC. Predictors of drug treatment re-entry following relapse to cocaine use in DATOS. *J Subst Abuse Treat.* 2003 Oct;25(3):145-54. Accessed 3 September 2014: [http://www.journalofsubstanceabusetreatment.com/article/S0740-5472\(03\)00128-4/abstract](http://www.journalofsubstanceabusetreatment.com/article/S0740-5472(03)00128-4/abstract).
- ²⁹ *Op. cit.* NIDA: Principles of Drug Addiction Treatment: A Research-Based Guide, Third Edition.
- ³⁰ Mee-Lee D, Shulman GD, Fishman MJ, et. al., eds. *The ASAM Criteria: Treatment Criteria for Addictive, Substance-Related, and Co-Occurring Conditions*, Third Edition. Carson City, NV: The Change Companies, 2013.
- ³¹ *Op. cit.* The ASAM Criteria.
- ³² *Op. cit.* The ASAM Criteria.
- “Outcomes research in addiction treatment has not yet provided a scientific basis for determining precise lengths of stay for optimum results. Thus, addiction treatment professionals recognize that length of stay must be individualized, based on the severity of the patient’s illness and the patient’s level of functioning at the point of service entry, as well as based on their response to treatment, progress and outcomes. At the same time, research does show a positive correlation between longer participation in the continuum of care and better outcomes.”
- ³³ *Op. cit.* SAMHSA. Detoxification and Substance Abuse Treatment: Treatment Improvement Protocol (TIP) Series, No. 45.
- ³⁴ *Op. cit.* The ASAM Criteria.
- ³⁵ *Op. cit.* NIDA: Principles of Drug Addiction Treatment: A Research-Based Guide, Third Edition.
- ³⁶ Prendergast ML, Podus D, Chang E, et. al. The effectiveness of drug abuse treatment: a meta-analysis of comparison group studies. *Drug Alcohol Depend.* 2002 Jun 1;67(1):53-72. Accessed 14 November 2014: [http://www.drugandalcoholdependence.com/article/S0376-8716\(02\)00014-5/abstract](http://www.drugandalcoholdependence.com/article/S0376-8716(02)00014-5/abstract).
- ³⁷ Simpson DD, Joe GW, Brown BS. Treatment retention and follow-up outcomes in the Drug Abuse Treatment Outcome Study (DATOS). *Psychol Addict Behav.* Vol 11(4), Dec 1997, 294-307. Accessed 3 September 2014: <http://psycnet.apa.org/journals/adb/11/4/294/>.
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- ⁴⁰ Peterson KA, Swindle RW, Phibbs CS, et. al. Determinants of readmission following inpatient substance abuse treatment: a national study of VA programs. *Med Care.* 1994 Jun;32(6):535-50. Accessed 3 September 2014: http://journals.lww.com/lww-medicalcare/abstract/1994/06000/determinants_of_readmission_following_inpatient.1.aspx.
- ⁴¹ Moos RH, Finney JW, Moos BS. Inpatient substance abuse care and the outcome of subsequent community residential and outpatient care. *Addiction.* 2000 Jun;95(6):833-46. Accessed 3 September 2014: <http://onlinelibrary.wiley.com/doi/10.1046/j.1360-0443.2000.9568332.x/abstract>.
- ⁴² Brunette MF, Drake RE, Woods M, et. al. A comparison of long-term and short-term residential treatment programs for dual diagnosis patients. *Psychiatr Serv.* 2001 Apr;52(4):526-8. Accessed 4 September 2014: <http://ps.psychiatryonline.org/article.aspx?articleid=85785>.
- ⁴³ Simpson DD, Joe GW, Brown BS. Treatment retention and follow-up outcomes in the Drug Abuse Treatment Outcome Study (DATOS). *Psychol Addict Behav.* Vol 11(4), Dec 1997, 294-307. Accessed 3 September 2014: <http://psycnet.apa.org/journals/adb/11/4/294/>.

- ⁴⁴ Hubbard RL, Craddock SG, Anderson J. Overview of 5-year followup outcomes in the drug abuse treatment outcome studies (DATOS). *J Subst Abuse Treat.* 2003 Oct;25(3):125-34. Accessed 3 September 2014: [http://www.journalofsubstanceabusetreatment.com/article/S0740-5472\(03\)00130-2/abstract](http://www.journalofsubstanceabusetreatment.com/article/S0740-5472(03)00130-2/abstract).
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- ⁴⁷ Barry CL, Huskamp HA, Goldman HH. A Political History of Federal Mental Health and Addiction Insurance Parity. *Milbank Q.* Sep 2010; 88(3): 404–433. Accessed 3 November 2014: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2950754/>.
- ⁴⁸ U.S. Department of Labor (DOL), Employment Benefits Security Administration. Mental Health Parity. Accessed 21 October 2014: <http://www.dol.gov/ebsa/mentalhealthparity/>.
- ⁴⁹ “Intermediate services shall include, but not be limited to, Level III community-based detoxification, acute residential treatment, partial hospitalization, day treatment and crisis stabilization licensed or approved by the department of public health or the department of mental health.”
- See, for example, M.G.L. c. 176B § 4A, Mental illness expenses; inclusion as benefits; biologically-based mental disorders; rape-related mental disorders; non-biologically-based mental disorders of children and adolescents under age 19. Accessed 21 October 2014: <https://malegislature.gov/Laws/GeneralLaws/PartI/TitleXXII/Chapter176B/Section4A>.
- ⁵⁰ Phone interviews by Compass staff conducted July and August 2014 with Massachusetts provider staff from: AdCare, High Point Treatment Centers, Spectrum Health Systems.
- ⁵¹ Phone interviews by Compass staff conducted July and August 2014 with Massachusetts provider staff from: AdCare, High Point Treatment Centers, Spectrum Health Systems.
- ⁵² Phone interviews by Compass staff conducted July and August 2014 with Massachusetts provider staff from: AdCare, High Point Treatment Centers, Spectrum Health Systems.
- ⁵³ Preliminary interpretation of the law might suggest that provider-defined criteria will be used for determining medical necessity of stays for ATS and/or CSS through the first 14 days of treatment, presuming that the criteria have been formally published and/or adopted by a relevant professional organization such as ASAM. After 14 days of treatment, insurers may define and determine the medical necessity of a continuing stay. Moreover, for levels of service other than ATS or CSS, the definition and determination of the medical necessity of substance abuse treatment remains with the insurer (as defined by contract/policy terms).
- ⁵⁴ For example:
- Medical Necessity Guidelines are developed for selected therapeutic or diagnostic services found to be safe, but proven effective in a limited, defined population of patients or clinical circumstances. They include concise clinical coverage criteria based on current literature review, consultation with practicing physicians in the Plan service area who are medical experts in the particular field, FDA and other government agency policies, and standards adopted by national accreditation organizations... The use of this guideline is not a guarantee of payment or a final prediction of how specific claim(s) will be adjudicated. Claims payment is subject to eligibility and benefits on the date of service, coordination of benefits, referral/authorization, utilization management guidelines when applicable, and adherence to plan policies, plan procedures, and claims editing logic.
- Accessed 16 June 2014: http://www.tuftshealthplan.com/providers/pdf/mng/autism_aba_ri.pdf.
- ⁵⁵ American College of Medical Quality (ACMQ): POLICY 8, Definition and Application of Medical Necessity. Accessed 6 May 2014: <http://www.acmq.org/policies/policy8.pdf>.
- ⁵⁶ *Op. cit.* The ASAM Criteria.
- ⁵⁷ *Op. cit.* The ASAM Criteria.

- ⁵⁸ *Op. cit.* 105 CMR 164.006 Definitions: Continuum of Care.
- ⁵⁹ Acute intoxication and/or withdrawal potential (Dimension 1); biomedical conditions and complications (Dimension 2); and emotional, behavioral, or cognitive conditions and complications (Dimension 3).
- ⁶⁰ *Op. cit.* SAMHSA. Detoxification and Substance Abuse Treatment: Treatment Improvement Protocol (TIP) Series, No. 45.
- ⁶¹ Calculated and confirmed in the Massachusetts All-Payer Claims Database.
- ⁶² *Op. cit.* The ASAM Criteria.
- ⁶³ *Op. cit.* Bill S. 2341: An Act to increase opportunities for long-term substance abuse recovery.
- ⁶⁴ *Op. cit.* The ASAM Criteria.
- ⁶⁵ Email correspondence with Massachusetts Department of Public Health, Bureau of Substance Abuse Services, Quality Assurance & Licensing, 4 August 2014.
- ⁶⁶ 105 CMR 164.000: Department of Public Health, Licensure of Substance Abuse Treatment Programs. Accessed 26 August 2014: https://www.sec.state.ma.us/reg_pub/pdf/100/105164.pdf.
- ⁶⁷ 105 CMR 164.000: Department of Public Health, Licensure of Substance Abuse Treatment Programs. Accessed 26 August 2014: https://www.sec.state.ma.us/reg_pub/pdf/100/105164.pdf. MA DPH Regulation number listed refers to first section relevant to specific treatment or level of care.
- ⁶⁸ *Op. cit.* The ASAM Criteria, Level 0.5.
- ⁶⁹ *Op. cit.* The ASAM Criteria, Level of Care Placement.
- ⁷⁰ *Op. cit.* The ASAM Criteria, Level 0.5.
- ⁷¹ *Op. cit.* The ASAM Criteria, Level 0.5.
- ⁷² *Op. cit.* The ASAM Criteria, Level 1.
- ⁷³ *Op. cit.* The ASAM Criteria, Level 1.
- ⁷⁴ *Op. cit.* The ASAM Criteria, Level 1.
- ⁷⁵ *Op. cit.* The ASAM Criteria, Level 1, Therapies.
- ⁷⁶ *Op. cit.* 105 CMR 164.200: Outpatient Services.
- ⁷⁷ *Op. cit.* 105 CMR 164.123(A): Outpatient Detoxification, Provision of Services, Admission.
- ⁷⁸ *Op. cit.* 105 CMR 164.123(C): Outpatient Detoxification, Provision of Services, Treatment.
- ⁷⁹ *Op. cit.* 105 CMR 164.221(A): Outpatient Counseling, Provision of Services, Admission.
- ⁸⁰ *Op. cit.* 105 CMR 164.221(c): Outpatient Counseling, Provision of Services, Treatment.
- ⁸¹ Separate provisions are in place for First Offender Driver Alcohol Education (105 CMR 164.211), and for those Operating Under the Influence Second and Multiple Offenders for Aftercare Treatment Services (105 CMR 164.223).
- ⁸² To be admitted, individuals must consent to treatment, and have been addicted for at least one year, or are pregnant, seeking opioid detoxification, or have been released from prison within the previous six months or discharged from opioid treatment within the past two years. *Op. cit.* 105 CMR 164.302(A): Opioid Treatment, Provision of Services – All Opioid Treatment Programs, Admission.
- ⁸³ *Op. cit.* 105 CMR 164.300: Opioid Treatment.
- ⁸⁴ *Op. cit.* ASAM Criteria, Level of Care Placement.
- ⁸⁵ *Op. cit.* 105 CMR 164.232(A): Day Treatment, Provision of Services, Admission.
- ⁸⁶ *Op. cit.* 105 CMR 164.232(C): Day Treatment, Provision of Services, Treatment.
- ⁸⁷ *Op. cit.* The ASAM Criteria, Level 2.1.
- ⁸⁸ *Op. cit.* The ASAM Criteria, Level 2.1, Therapies.
- ⁸⁹ *Op. cit.* The ASAM Criteria, Level of Care Placement.
- ⁹⁰ *Op. cit.* The ASAM Criteria, Level of Care Placement.

⁹¹ *Op. cit.* The ASAM Criteria, Level of Care Placement.

⁹² *Op. cit.* The ASAM Criteria, Level 2.5, Therapies.

⁹³ *Op. cit.* The ASAM Criteria, Level 2.5.

⁹⁴ *Op. cit.* The ASAM Criteria, Level of Care Placement.

⁹⁵ *Op. cit.* The ASAM Criteria, Level of Care Placement.

⁹⁶ *Op. cit.* The ASAM Criteria, Level of Care Placement.

⁹⁷ *Op. cit.* The ASAM Criteria, Level 2.

⁹⁸ *Op. cit.* The ASAM Criteria, Level 2.

⁹⁹ Admission to programs for individual adults is open to those age 18 and older who are “open to recovery and can understand relapse” but whose “home, community or social environment...is unsupportive of recovery or constitutes a risk to maintenance of abstinence.” (105 CMR 164.422) Daily clinical services are provided to “improve residents’ ability to structure and organize the tasks of daily living and recovery...” as well as advocacy and ombudsman services. (105 CMR 164.423) Four different models of treatment are included within programs for individual adults, including Transitional Support Services (105 CMR 164.423(B)), Social Model Recovery Homes (105 CMR 164.423(C)), Recovery Homes (105 CMR 164.423(D)) and Therapeutic Communities (105 CMR 164.423(E)). Transitional Support Services is the only model to require medical services, in that four hours of nursing services are available daily (105 CMR 164.423(B) and 164.424). Adult individual programs may also have approval to provide services to pregnant and post-partum women and infants.

¹⁰⁰ Programs for adults with their families admit parents age 18 or older who are pregnant, have custody of at least one child, or for whom reunification is planned within 30 days of admission; further, the family must be homeless or living in an environment that constitutes a risk to abstinence or does not support recovery (105 CMR 164.432(A)). Services must include 24 hour a day crisis intervention, and treatment plans must in part address domestic violence, child welfare, parent-child relationships and family life (105 CMR 164.432(C)). Specific services must also be provided to children residing in the program (105 CMR 164.432(H)).

¹⁰¹ Residential Rehabilitation programs for Adolescents admit patients between 13 and 17 years old who do not require 24-hour daily nursing care, when consent for service is given by both patients and their parents; this level of care explicitly references patient placement criteria defined by ASAM for Clinically Managed Residential Treatment for adolescents (105 CMR 164.442(A)). Programs must provide developmentally appropriate services which include components focused on education as well as family involvement in treatment (105 CMR 164.442(E) and (F)).

¹⁰² Programs for Operating Under the Influence Second Offenders are provided to those referred by the court (105 CMR 164.452(A)). Structured for at least 14 consecutive days of programming, services are more strictly defined in the state regulations, including the type, number and length of individual and group counseling sessions, written curriculum and physical education (105 CMR 164.452(B) and (C)).

¹⁰³ *Op. cit.* 105 CMR 164.400: Residential Rehabilitation.

¹⁰⁴ *Op. cit.* ASAM Criteria, Level of Care Placement.

¹⁰⁵ *Op. cit.* ASAM Criteria, Level 3.

¹⁰⁶ Within Level 3, Residential/Inpatient (Non-acute care hospital) Services. *Op. cit.* ASAM Criteria, Level 3.

¹⁰⁷ *Op. cit.* ASAM Criteria, Level 3.

¹⁰⁸ *Op. cit.* ASAM Criteria, Level 3.1.

¹⁰⁹ *Op. cit.* ASAM Criteria, Level of Care Placement.

¹¹⁰ *Op. cit.* ASAM Criteria, Level of Care Placement.

¹¹¹ Guidelines further state that although treatment is focused on re-integration into the community and a transition to a lower level of care, “[i]n some situations, there may initially be no effective substitute for residential secure placement and support as reliable protection from the toxic influences of substance exposure, problematic or substance-infested environments, or the cultures of substance-involved and antisocial behaviors.” *Op. cit.* ASAM Criteria, Level 3.1.

- ¹¹² *Op. cit.* ASAM Criteria, Level of Care Placement.
- ¹¹³ *Op. cit.* ASAM Criteria, Level of Care Placement.
- ¹¹⁴ Massachusetts Department of Public Health, Bureau of Substance Abuse Services. Request for Response. Document Title: Clinical Stabilization Services – Franklin County. DPH RFR Document Number: 501123. 21 July 2014; received by email 17 November 2014.
- ¹¹⁵ *Op. cit.* 105 CMR 164.133(A)(1)(c): Clinically Monitored Detoxification.
- ¹¹⁶ Email correspondence, 22 August 2014, Quality Assurance and Licensing, Bureau of Substance Abuse Services, Massachusetts Department of Public Health (QAL, BSAS, MA-DPH).
- ¹¹⁷ Email correspondence, 21 October 2014, Quality Assurance and Licensing, Bureau of Substance Abuse Services, Massachusetts Department of Public Health (QAL, BSAS, MA-DPH).
- ¹¹⁸ *Op. cit.* The ASAM Criteria, Level 3.5.
- ¹¹⁹ *Op. cit.* ASAM Criteria, Level of Care Placement.
- ¹²⁰ *Op. cit.* ASAM Criteria, Level of Care Placement.
- ¹²¹ *Op. cit.* ASAM Criteria, Level of Care Placement.
- ¹²² *Op. cit.* The ASAM Criteria, Level 3.5.
- ¹²³ *Op. cit.* The ASAM Criteria, Level 3.5.
- ¹²⁴ *Op. cit.* The ASAM Criteria, Level 3.5.
- ¹²⁵ *Op. cit.* The ASAM Criteria, Level 3.5.
- ¹²⁶ *Op. cit.* The ASAM Criteria, Level 3.5.
- ¹²⁷ Phone interviews by Compass staff conducted July and August 2014 with Massachusetts provider staff from: AdCare, High Point Treatment Centers, Spectrum Health Systems.
- ¹²⁸ *Op. cit.* 105 CMR 164.133(A)(1)(b)1: Medically Monitored Inpatient Detoxification Services.
- ¹²⁹ *Op. cit.* 105 CMR 164.133(A)(1)(b)2.
- ¹³⁰ *Op. cit.* Email correspondence, 22 August 2014, QAL, BSAS, MA-DPH.
- ¹³¹ *Op. cit.* Email correspondence, 21 October 2014, QAL, BSAS, MA-DPH.
- ¹³² *Op. cit.* The ASAM Criteria, Level 3.7.
- ¹³³ *Op. cit.* The ASAM Criteria, Level 3.7.
- ¹³⁴ *Op. cit.* ASAM Criteria, Level of Care Placement.
- ¹³⁵ *Op. cit.* 105 CMR 164.133(A)(1)(a)1: Medically Managed Intensive Inpatient Detoxification Services.
- ¹³⁶ *Op. cit.* 105 CMR 164.133(A)(1)(a)2.
- ¹³⁷ *Op. cit.* Email correspondence, 22 August 2014, QAL, BSAS, MA-DPH.
- ¹³⁸ ATS and CSS licensed beds are combined for adolescents in the state. Currently 2 providers manage 48 licensed beds. *Op. cit.* Email correspondence, 22 August 2014, QAL, BSAS, MA-DPH.
- ¹³⁹ *Op. cit.* The ASAM Criteria, Level 4.
- ¹⁴⁰ *Op. cit.* The ASAM Criteria, Level 4.

**Actuarial Assessment of
Chapter 258 of the Acts of 2014:
“An Act to increase opportunities for
long-term substance abuse recovery”
Abuse-Deterrent Opioids**

Prepared for
Commonwealth of Massachusetts
Center for Health Information and Analysis

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Prepared by
Compass Health Analytics, Inc.



Actuarial Assessment of Chapter 258 of the Acts of 2014: “An Act to increase opportunities for long-term substance abuse recovery” Abuse-Deterrent Opioids

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Actuarial Assessment of Chapter 258 of the Acts of 2014: “An Act to increase opportunities for long-term substance abuse recovery” Abuse-Deterrent Opioids

Executive Summary

Massachusetts Chapter 258 of the Acts of 2014 (Chapter 258) requires in part that health insurance plans “shall provide coverage for abuse-deterrent opioid drug products...on a basis not less favorable than non-abuse-deterrent opioid drug products that are covered.... An increase in patient cost sharing shall not be allowed to achieve compliance with this section.” In addition, it requires pharmacists to substitute abuse-deterrent opioids for non-abuse-deterrent opioids based on a state-defined formulary of equivalent products when the prescribing practitioner does not specify that substitution is not allowed. Massachusetts General Laws (M.G.L.) c. 3 § 38C charges the Massachusetts Center for Health Information and Analysis (CHIA) with reviewing the potential impact of proposed mandated health care insurance benefits on the premiums paid by businesses and consumers. CHIA has engaged Compass Health Analytics, Inc. to provide an actuarial estimate of the effect the law will have on the cost of health care insurance in Massachusetts.

Background

Opioids are drugs that reduce pain signals to the brain.¹ Medications in the opioid class include morphine, codeine, oxycodone (including brand names OxyContin® and Percocet®), hydrocodone (including brand name Vicodin®), methadone, buprenorphine, and fentanyl, among others.² When properly used they can be safe and effective tools to manage pain, but they can be abused by individuals seeking their euphoric effect, sometimes leading to addiction, a chronic illness. An abuse-deterrent drug product is manufactured with physical, chemical, or other barriers that make abuse more difficult or less attractive or rewarding.³

Chapter 258 amends previous statutes establishing the drug formulary commission in the Department of Public Health (DPH) and charges it with two duties: first, identifying drugs with a heightened public health risk due to their potential for abuse, and second, identifying formulations of abuse-deterrent drugs that may be substituted for these risky drugs. It also requires that, when a prescriber writes a prescription for an opioid with heightened risk, the pharmacist must dispense an interchangeable abuse-deterrent product from the formulary, if one exists, except when the prescriber indicates “no substitution.”

The largest insurance carriers in Massachusetts all report coverage for abuse-deterrent opioids. But many abuse-deterrent formulations are relatively new and more expensive than interchangeable non-abuse-deterrent formulations and carriers often assign them to classes (tiers) that require higher copayments. Chapter 258 requires health insurance plans to cover abuse-deterrent opioids on the formulary on a cost-sharing basis not less favorable than they do non-abuse-deterrent opioids, that is, with equivalent copayments. The effect of this requirement, on top

of the changes to pharmacy substitution procedure, is to encourage a shift to abuse-deterrent opioids but to insulate patients from the increased cost.

Analysis

Compass estimated the impact of Chapter 258's abuse-deterrent opioid (ADO) provisions by performing the following steps. Steps 1-6 below model developments in the national opioid pharmaceutical market in 2019 as applied to the fully-insured commercial health insurance market in Massachusetts, and create a baseline projection without consideration of Chapter 258. Steps 7-12 model the impact of responses by prescribers and dispensers to Chapter 258 for the same time period. Values are interpolated backwards from the 2019 projections to the 2012 base period to complete the five-year baseline ("pre-Chapter 258") and Chapter 258 projections for 2015 to 2019. The impact of Chapter 258 is determined by subtracting the baseline's projected costs from the Chapter 258 projected costs.

1. Measure unit costs: Using the Massachusetts All Payer Claim Database (APCD), measure the cost and number of prescriptions (scripts) for non-abuse-deterrent opioids (NADOs), with separate measures for brand and generic products, and for ADOs, and calculate the average cost per script and the average patient out-of-pocket cost per script for each category
2. ADO/NADO split: Estimate the proportion of opioid products on the market that will shift to abuse-deterrent formulations, for both branded and generic categories
3. FDA generic removals: Estimate the proportion of ADOs for which the FDA will remove the equivalent generic product, for those that have one (as was done with OxyContin)
4. Switching behavior: Where manufacturers have developed an ADO equivalent to an existing NADO, estimate the proportion of scripts which will continue to specify a NADO vs. the proportion switching to the ADO (prior to implementation of Chapter 258), allowing for inability or difficulty switching where the equivalent NADO has been removed from the market
5. ADO and NADO script counts: Using the proportions/probabilities from the previous steps, estimate the proportions of scripts that will be for ADO products and for NADO products, both generic and branded
6. Costs pre-Chapter 258: Apply the ADO and NADO (generic and branded) script counts to the average unit costs for each category to get total projected cost before consideration of the Chapter 258 changes
7. Behavioral response to Chapter 258 – revised switching behavior: Starting with the industry baseline counts of scripts by category from above, estimate the proportion of NADO scripts for which the prescription will be shifted to an ADO as a result of Chapter 258 provisions – including the state's formulary definition, pharmacist requirements, and behavior of prescribers and patients – and calculate the number of scripts in the ADO and NADO categories (for both generic and brand name drugs)

8. Post-Chapter 258 costs: Apply the average unit costs to the post-behavioral shift script profile to determine total costs post-Chapter 258, including increases in the carrier component of payment related to lower member cost sharing
9. Incremental claim cost: Subtract the baseline estimate of total opioid costs from the post-Chapter 258 estimate of total costs to determine the incremental claim cost of the ADO provisions
10. Retention: Estimate the percentage impact on premiums of insurers' retention (administrative costs and profit) and add it to incremental claim cost
11. Population: Estimate the fully-insured Massachusetts population under age 65, projected for the next five years (2015 to 2019)
12. Projection for five years: Interpolate the results backwards from 2019 to 2015 to create five- year estimates, and calculate the estimated dollar impact by multiplying the per-member per-month incremental cost projections by the population projections

Factors affecting the analysis include a reliance on assumptions about future events that include:

- The degree to which the current pipeline of ADOs complete the development process, and the degree to which new products are introduced into the pipeline
- Decisions by the FDA about whether the pipeline products can be deemed ADOs, and whether or not the generic equivalents are removed from the market
- Development of the still undetermined formulary by the formulary commission, and the narrowness with which equivalence definitions are established

We address this uncertainty by modeling a range of plausible assumptions, which creates estimates with a wide range of potential impacts.

Summary results

Table ES-1 summarizes the effect of Chapter 258 on premium costs for fully-insured plans, averaged over five years. Note that the effective date of the relevant provisions is October 1, 2015.

The low scenario impact on premiums is relatively small at \$3.0 million per year on average, and represents future events in which abuse-deterrent formulations dominate the national market for opioid pharmaceuticals even without Chapter 258's provisions, and formulary equivalence definitions are narrow, creating fewer situations in which the pharmacist's substitution and the "not less favorable than" cost-sharing provisions apply. The high scenario has an average premium impact of \$35.4 million per year, and reflects future events in which ADOs are a smaller proportion of opioids on the market, few decisions to remove generics are made by the FDA, and the formulary has looser equivalence definitions. This creates a larger number of situations in which the pharmacist's substitution and "not less favorable than" cost sharing provisions apply. The mid-scenario has average annual impact of \$17.8 million, or an average of 0.11 percent of premium.

The impact of the law on any one individual, employer-group, or carrier may vary from the overall results depending on the current level of benefits each receives or provides, and on how the benefits will change under the mandate.

**Table ES-1:
Summary Results**

	Q4 2015	2016	2017	2018	2019	Weighted Average	5 Yr Total
Members (000s)	2,144	2,121	2,096	2,071	2,045		
Medical Expense Low (\$000s)	\$36	\$1,918	\$2,420	\$2,940	\$3,476	\$2,680	\$10,790
Medical Expense Mid (\$000s)	\$213	\$11,259	\$14,206	\$17,262	\$20,405	\$15,736	\$63,345
Medical Expense High (\$000s)	\$424	\$22,417	\$28,282	\$34,368	\$40,625	\$31,330	\$126,116
Premium Low (\$000s)	\$41	\$2,167	\$2,734	\$3,322	\$3,927	\$3,029	\$12,192
Premium Mid (\$000s)	\$241	\$12,722	\$16,052	\$19,505	\$23,057	\$17,781	\$71,577
Premium High (\$000s)	\$479	\$25,329	\$31,958	\$38,834	\$45,904	\$35,401	\$142,503
PMPM Low	\$0.06	\$0.09	\$0.11	\$0.13	\$0.16	\$0.11	\$0.28
PMPM Mid	\$0.37	\$0.50	\$0.64	\$0.78	\$0.94	\$0.64	\$0.64
PMPM High	\$0.73	\$1.00	\$1.27	\$1.56	\$1.87	\$1.28	\$1.28
Estimated Monthly Premium	\$512	\$537	\$564	\$592	\$622	\$566	\$566
Premium % Rise Low	0.01%	0.02%	0.02%	0.02%	0.03%	0.02%	0.02%
Premium % Rise Mid	0.07%	0.09%	0.11%	0.13%	0.15%	0.11%	0.11%
Premium % Rise High	0.14%	0.19%	0.23%	0.26%	0.30%	0.23%	0.23%

Executive Summary Endnotes

¹ National Institutes of Health, National Institute on Drug Abuse (NIH-NIDA): Prescription Drug Abuse, What are opioids? Accessed 2 July 2014: <http://www.drugabuse.gov/publications/research-reports/prescription-drugs/opioids/what-are-opioids>.

² *Op. cit.* NIH-NIDA: What are opioids?

³ US-FDA: Guidance for Industry Abuse-Deterrent Opioids — Evaluation and Labeling. Released January 2013; accessed 18 June 2014: <http://www.fda.gov/downloads/Drugs/GuidanceComplianceRegulatoryInformation/Guidances/UCM334743.pdf>.

Actuarial Assessment of Chapter 258 of the Acts of 2014: “An Act to increase opportunities for long-term substance abuse recovery” Abuse-Deterrent Opioids

1. Introduction

Massachusetts Chapter 258 of the Acts of 2014¹ requires in part that commercial health insurance plans “shall provide coverage for abuse-deterrent opioid drug products ...on a basis not less favorable than non-abuse-deterrent opioid drug products that are covered.... An increase in patient cost sharing shall not be allowed to achieve compliance with this section.” In addition, it requires pharmacists to substitute abuse-deterrent opioids for non-abuse-deterrent opioids based on a state-defined formulary of equivalent products when the prescribing practitioner does not specify that substitution is not allowed. Massachusetts General Laws (M.G.L.) c. 3 § 38C charges the Massachusetts Center for Health Information and Analysis (CHIA) with reviewing the potential impact of proposed mandated health care insurance benefits on the premiums paid by businesses and consumers. CHIA has engaged Compass Health Analytics, Inc. to provide an actuarial estimate of the effect the law will have on the cost of health care insurance in Massachusetts.

Assessing the impact of this law entails analyzing the incremental effect of the law on spending by insurance plans. This in turn requires comparing spending under the provisions of the law to spending under current statutes and current benefit plans for the relevant services.

Section 2 of this analysis outlines the provisions of the law. Section 3 summarizes the methodology used for the estimate. Section 4 discusses important considerations in translating the law’s language into estimates of its incremental impact on health care costs and steps through the calculations. Section 5 summarizes the results.

2. Interpretation of Chapter 258

The following subsections describe the provisions of Chapter 258 related to coverage for abuse-deterrent opioids.

2.1. Plans affected by the Chapter 258 mandates

Chapter 258 amends the statutes that regulate insurers providing health insurance in Massachusetts. The following five sections of the law address existing statutes dealing with a particular type of health insurance policy:²

- Section 9: Insurance for persons in service of the Commonwealth (creating M.G.L. c. 32A, § 17L)
- Section 21 Accident and sickness insurance policies (creating M.G.L. c. 175, § 47EE)

- Section 23: Contracts with non-profit hospital service corporations (creating M.G.L. c. 176A, § 8GG)
- Section 25 Certificates under medical service agreements (creating M.G.L. c. 176B, § 4GG)
- Section 27: Health maintenance contracts (creating M.G.L. c. 176G, § 4Y)

The law requires coverage for members under the relevant plans, regardless of whether they reside within the Commonwealth or merely have their principal place of employment in the Commonwealth.

Self-insured commercial plans are subject to federal law and, with the exception of those operated by the Group Insurance Commission (GIC), not to state-level health insurance benefit mandates. State mandates do not apply to Medicare, and this analysis assumes that this mandate does not affect Medicare extension/supplement plans even to the extent they are regulated by state law. This analysis does not apply to Medicaid/MassHealth.

The provisions apply to policies from fully-insured commercial insurance plans issued or renewed on or after October 1, 2015, and apply to both fully-insured and self-insured plans operated for state and local employees by the GIC, with an effective date for all GIC policies of October 1, 2015.

2.2. Opioid abuse and abuse-deterrent formulations

Opioids are drugs that reduce pain signals to the brain, decreasing one's perception of and reaction to pain, and increasing pain tolerance.³ They may be prescribed to alleviate pain from injuries, surgeries, dental procedures, and acute and chronic illnesses.⁴ These drugs may also produce a euphoric reaction in some users.⁵ Medications in the opioid class include morphine, codeine, oxycodone (including brand names OxyContin® and Percocet®), hydrocodone (including brand name Vicodin®), methadone, buprenorphine, and fentanyl, among others.⁶

When properly prescribed and used, opioids can be safe and effective tools to manage pain. When used regularly or over a longer period of time, opioids can lead to physical dependence, meaning the user's body develops a tolerance for the medication and needs an increased dose to achieve the same effect, and a gradual reduction in dosage is necessary to avoid withdrawal symptoms when stopping use. Substance addiction is a chronic illness, in which the use of drugs or alcohol physically changes the structure and function of the brain.⁷ Addiction "is distinguished by compulsive drug seeking and use despite sometimes devastating consequences."⁸

Abuse occurs when individuals use opioids outside of legitimate medical purposes to achieve the euphoric effect of the drug. According to the American Psychiatric Association, "substance use disorder" is a "cluster of cognitive, behavioral, and physiological symptoms indicating that the individual continues using the substance despite significant substance-related problems."⁹ Symptoms may include some combination of "impaired control, social impairment, risky use and [tolerance and/or withdrawal]."¹⁰ While the most common way to abuse opioids is to swallow multiple pills or tablets, the drugs are often physically manipulated for abuse purposes.¹¹ Among

other methods, pills can be crushed and either swallowed, snorted, smoked, or dissolved and injected.

An abuse-deterrent drug is one manufactured with one or more physical, chemical, or other barriers to abuse. In general, the goal of these abuse-deterrent technologies is “to make product manipulation more difficult or to make abuse of the manipulated product less attractive or rewarding.”¹²

2.3. Pharmacy procedures and opioid coverage requirements

Chapter 258 has two key provisions regarding abuse-deterrent opioids. First, it establishes a formulary and related requirement that pharmacists substitute abuse-deterrent opioids (ADOs) for non-abuse-deterrent opioids (NADOs) unless directed by the prescriber that no substitution is allowed. Second, it requires commercial health insurance plans to provide coverage for ADO drug products on a basis not less favorable than coverage for NADO drug products covered by the plan.

The effect of Chapter 258 on pharmacy substitution procedures

Chapter 258 amends the statutes establishing the drug formulary commission in the Department of Public Health (DPH)¹³ to charge the commission with identifying drugs with a heightened level of public health risk due to their potential for abuse and with identifying formulations of abuse-deterrent drugs that may be appropriately substituted for these risky drugs. It also amends the statutes controlling the procedures a pharmacist follows when he or she fills a prescription and determines whether to substitute a generic alternative.¹⁴ Upon implementation of Chapter 258, when a practitioner writes a prescription for an opioid identified on the formulary as one with a heightened level of risk, the pharmacist must dispense an interchangeable abuse-deterrent product from the formulary, if one exists, except when the prescriber indicates “no substitution.” If the prescriber indicates “no substitution,” the exact product prescribed must be dispensed.

Therefore, if a practitioner prescribes an opioid, Chapter 258 requires the pharmacist to substitute an abuse-deterrent version by default if one exists on the formulary. Consequently, the frequency with which substitution occurs, and the impact of this provision on insurance premiums, will depend on the number and types of drugs placed on the formulary. At the time of this analysis, those drugs and the drug equivalences for substitution have not been identified. Chapter 258 does contain standards for the commission to follow in identifying appropriate drug equivalences, including requirements that abuse-deterrent formulations be available and effective, and, notably, that the substitute drug is not “cost prohibitive.”

Cost-sharing parity

Chapter 258 requires health insurance plans to provide coverage for abuse-deterrent opioid drug products “on a basis not less favorable” than coverage for non-abuse-deterrent opioid drug products covered by the plan. This analysis assumes the primary focus of that language is to require insurers to offer the same cost-sharing terms to members for covered ADOs and their covered NADO equivalents, meaning that copayments and co-insurance percentages for ADO

formulations are no greater than those for their NADO equivalents. This analysis assumes that as long as co-insurance percentages are equal for ADO and NADO products, the law allows a patient to bear higher costs, measured in dollars, if the ADO product cost more than the NADO product. Patients with policies with deductibles may also experience higher cost sharing in those instances.

Because typical ADO formulations are relatively new and under patent protection, in many cases they are more expensive than NADO formulations that might be older and available in generic form. Carriers often assign expensive drugs to classes (tiers) that require higher copayments. Chapter 258 would forbid carriers from assigning ADOs to higher copayment tiers. The law further provides that to achieve compliance an insurance plan may not increase patient cost sharing for NADO products.

The effect of this parity requirement, in conjunction with the changes to the default pharmacy substitution procedures described above, is to encourage a shift in patient use to abuse-deterrent opioids defined in the formulary while insulating patients from the increased cost of doing so.

2.4. Current coverage

In a recent survey of ten of the largest insurance carriers in Massachusetts, all report coverage for abuse-deterrent opioids. They reported most abuse-deterrent opioids are brand name drugs and would fall on a more expensive tier. Any generic versions would be covered on the generic (less expensive) tier.

3. Methodology

3.1. Overview

Analyzing the impact on premiums of the provisions of Chapter 258 related to ADOs requires estimating what the baseline profile of ADO/NADO use will be over the five-year timeframe of the analysis, and then estimating the same five-year profile with the provisions of the law in place.

This estimation includes an unusually high number of uncertain factors, and as a result the estimates produced cover a wide range of potential outcomes. Uncertainty in the baseline estimate stems from the need to make assumptions about the development of the national market for NADOs/ADOs, which will be influenced by the degrees to which:

- 1) pharmaceutical firms will develop ADO equivalents for currently-prescribed NADOs,
- 2) the FDA will approve applications by pharmaceutical firms to have new formulations deemed ADOs, and
- 3) the FDA will or will not take the equivalent NADO medication off the market for approved ADOs (as it did with OxyContin).

In addition to these pharmaceutical marketplace factors, there is also uncertainty related to state-level decisions to be made in implementing the law which will have significant effect on the cost impact, including:

- 4) the products placed on the formulary,
- 5) the equivalence assignments made by the formulary commission, i.e., which NADOs are linked with which ADOs, determining what product pharmacists must dispense when the prescriber has not indicated “no substitution,” and
- 6) whether the absence of an ADO on the commission’s formulary (in cases where it determines there is no NADO equivalent) allows insurers to charge the brand name price for the ADO (this analysis assumes it does).

It is not feasible to make specific assumptions about the large number of interacting and highly uncertain variables underlying these factors. Making this analysis tractable requires dividing it into two main segments: the “industry trends” that will occur regardless of whether the law had been passed (items 1 to 3 above); and the “behavioral response” issues (items 4 to 6) which consist of responses by regulators, physicians, and patients to Chapter 258’s provisions. The incremental cost of the behavioral response over and above the costs of the industry trend baseline estimates form the basis of an estimate of the impact of the ADO mandate on premiums.

3.2. Steps in the analysis

The general approach outlined above was executed in the following steps.

Baseline based on current industry trends

The following calculations assume Chapter 258 is not in place, providing a baseline against which to apply calculations in the next section that assume implementation of Chapter 258.

1. Measure unit costs: Using the Massachusetts All Payer Claim Database (APCD), measure the cost and number of prescriptions (scripts) for NADOs (with separate measures for brand name and generic products) and for ADOs, and calculate the average cost per script and the average patient out of pocket cost per script for each category
2. ADO/NADO split: Estimate the proportion of products on the market that will move to ADO for both brand name and generic categories
3. FDA generic removals: Estimate the proportion of ADOs for which the FDA will remove the equivalent generic product, for those that have one (as was done with OxyContin)
4. Switching behavior: Where manufacturers have developed an ADO equivalent to an existing NADO, estimate the proportion of scripts which will continue to specify a NADO vs. the proportion switching to the ADO (prior to implementation of Chapter 258), allowing for inability or difficulty switching where the equivalent NADO has been removed from the market

5. ADO and NADO script counts: Using the proportions/probabilities from the previous steps, estimate the proportions of scripts that will be for ADO products and for NADO products, both generic and branded
6. Costs pre-Chapter 258: Apply the ADO and NADO (generic and brand name) script counts to the average unit costs for each category to get total cost pre-Chapter 258

Behavioral response and costs post-Chapter 258

Chapter 258 will reduce cost-sharing requirements for ADOs, and will require pharmacists to substitute ADOs when the prescriber has not indicated “no substitution” on a NADO prescription based on a formulary to be defined. These steps will reduce costs for many patients receiving prescription opioids, and these cost savings will be paid for by carriers, increasing their medical expense and thus premiums. The following steps estimate the claim costs incurred after Chapter 258 provisions are included.

7. Behavioral response to Chapter 258 – revised switching behavior: Starting with the industry baseline counts of scripts by category from above, estimate the proportion of NADO scripts for which the prescription will be shifted to an ADO as a result of Chapter 258 provisions – including the state’s formulary definition, pharmacist requirements, and behavior of prescribers and patients – and calculate the number of scripts in the ADO and NADO categories (both generic and brand name)
8. Post-Chapter 258 costs: Apply the average unit costs to the post-behavioral shift script profile to determine total costs post-Chapter 258, including increases in the carrier component of payment related to lower member cost sharing
9. Incremental claim cost: Subtract the baseline estimate of total opioid costs from the post-Chapter 258 estimate of total costs to determine the incremental claim cost of the ADO provisions
10. Retention: Estimate the percentage impact on premiums of insurers’ retention (administrative costs and profit) and add it to incremental claim cost
11. Population: Estimate the fully-insured Massachusetts population under age 65, projected for the next five years (2015 to 2019)
12. Projection for five years: Interpolate the results backwards from 2019 to 2015 to create five- year estimates, and calculate the estimated dollar impact by multiplying the per-member per-month incremental cost projections by the population projections

Three scenarios are constructed using different assumptions for these steps, producing estimates with low, mid, and high impacts on premiums corresponding to the three scenarios. The mid estimate corresponds to the best estimate while low and high define a likely range around the best estimate. Section 4 describes these specific steps in more detail.

3.3. Perspective on cost impact results of the analysis

Because ADOs are a relatively new drug technology, they will be “brand name” products with patent protection, and thus tend to be expensive. The cost associated with moving from less expensive generic products to more expensive brand name ADO products will be borne in some way by insurers, translating to higher premiums, and by patients in the form of higher cost sharing. Chapter 258 seeks to encourage use of ADOs and to make them as affordable to insured patients as current generic opiate pain killers. In estimating the impact on premiums under different assumptions, it is important to understand that the more the law reaches its intended goals of encouraging ADO use and low cost sharing, the higher the estimated impact on premiums will be.

To illustrate, the narrowness or expansiveness of the formulary commission’s equivalence determination (item 5 in Section 3.1) will have several implications with a very large impact on the cost of the mandate. In essence, the more narrow the commission’s equivalence definition, the lower the cost impact will be, and correspondingly, the lower the number of ADO prescriptions for which out-of-pocket costs will be reduced to the lower amounts typical of generics. To expand on the effect of the equivalence definition on the law’s potential impact on premiums:

- Because the impact on premiums of the law’s impetus toward ADOs will depend on the cost difference between the ADO (which is assumed to be new and thus a high-cost brand product) and the equivalent NADO, the degree to which NADOs deemed to be equivalent are brand name (generally expensive but less so than ADOs) or generic (far cheaper) is key. An expansive equivalence definition will make it more likely that generics are deemed equivalent, thus increasing the cost impact on carriers by lowering member cost sharing for more ADO prescriptions.
- If the formulary commission makes a narrow definition of equivalence based on chemical equivalence, it will decrease the likelihood that there is a generic equivalent, thus reducing the cost impact for two reasons. First, a narrow interpretation makes it more likely that there is only one directly equivalent product, a branded product, therefore decreasing the cost difference between the ADO and NADO (and making cost sharing for the member higher since the equivalent branded product has cost sharing at a level similar to that of the ADO). Second, a narrow definition will make it more likely that there are no equivalent products, particularly if the FDA removes the chemically equivalent products from the market. When no chemical equivalent exists the higher ADO price would not be deemed an impact of the law, since its use would not occur as a result of the movement from a cheaper equivalent. Again, this lower premium impact means higher out of pocket costs for consumers using ADOs.

In the low, middle, and high cost scenarios this analysis models different degrees of equivalence to be defined in the formulary.

3.4. Data sources

The primary data sources used in the analysis were:

- Information from clinical providers and billing staff
- Information from a survey of private health insurance carriers in Massachusetts
- Academic literature, published reports, and population data, cited as appropriate
- Massachusetts insurer claim data from CHIA's Massachusetts All Payer Claim Database (APCD) for calendar years 2009 to 2012, for plans covering the majority of the under-65 fully insured population subject to the mandate.

The more detailed step-by-step description of the estimation process described below addresses limitations in some of these sources and uncertainties they contribute to the cost estimate.

3.5. Limitations

This analysis relies primarily on a careful assessment of the basic cost-driving mechanism related to the ADO provisions of Chapter 258. The estimates draw on 2012 state-wide data on prescription (script) counts of the relevant opioids and average unit costs paid. As noted in the overview above, the parameters associated with the subsequent forces that will drive costs from 2015-2019 require assumptions about future events including growth in development of ADO products, FDA decisions, state decisions related to the formulary and interpretation of the law, and behavior on the part of prescribers and patients. This uncertainty is addressed by modeling a range of assumptions within reasonable judgment-based ranges.

4. Analysis

This section describes the actual calculations outlined in the previous section in more detail. The analysis includes development of a best estimate “mid-level” scenario, as well as a low-level scenario using assumptions that produced a lower estimate, and a high-level scenario using more conservative assumptions that produced a higher estimated impact.

Sections 4.1 to 4.6 below describe the steps used to calculate the industry trends baseline projection for 2015 to 2019. These steps all assume Chapter 258 is not in effect and model changes occurring in product offerings in the national pharmaceutical market applied to Massachusetts fully-insured prescription data. Sections 4.7 to 4.12 describe the additional steps necessary to recalculate the estimates assuming Chapter 258 is in effect. Finally, the industry baseline projection is subtracted from the Chapter 258 projection to yield the estimate of the incremental effect of Chapter 258 on premiums.

The analysis requires a projection over the 2015-2019 period. It draws on actual script counts and average prices for ADOs and NADOs from 2012 data, and develops assumptions and calculations for the 2019 market, as described in the sub-sections that follow. From these 2019 results, values for

2015 to 2018 were interpolated to complete the 2015-2019 projection. The interpolated values include a smooth build up with a 1 percent annual increase in total opioid script counts from the base period to 2019. The baseline total opioid spending (before shifts in ADO/NADO mix) was projected for the study period of October 1, 2015 to December 31, 2019 using an annual pharmacy inflation rate from a CMS study,¹⁵ and trends are in the range of 0.0 percent to 7.6 percent, averaging 4.5 percent.

4.1. Baseline: Average unit costs and average cost sharing

ADOs are generally brand-name products with patent protection that are expensive relative to generic NADOs, which in turn increases patient cost sharing when there are deductibles, co-insurance, or tiered copayments. Estimating the differences in cost per script and in patient cost sharing per script is a fundamental building block in estimating the impact of Chapter 258’s ADO provisions.

Using the APCD, the number and average cost of prescriptions (scripts) for NADOs was measured separately for brand name and generic drugs.ⁱ Also using the APCD, the cost of ADOs (all are brand name drugs) was measured. Table 1 shows the cost of NADO paid claims, the number of scripts, and the resulting cost per script. Table 2 shows the cost of the ADO scripts, the number of scripts, and the resulting cost per script.

**Table 1:
Unit Cost of Non Abuse-Deterrent Opioids**

	<u>Paid Claims</u>	<u># of Scripts</u>	<u>Cost per Script</u>
Brand	\$1,830,276	8,572	\$213.52
Generic	\$5,733,774	580,637	\$9.87

**Table 2:
Unit Cost of Abuse-Deterrent Opioids**

	<u>Paid Claims</u>	<u># of Scripts</u>	<u>Cost per Script</u>
Abuse-deterrent	\$7,166,468	17,909	\$400.16

Average out of pocket costs were also calculated. By summing cost-sharing data and dividing by the number of scripts the average cost sharing per script was measured. These calculations were done for generic and brand name NADOs and overall for ADOs. The difference in the average cost sharing per script between ADO and NADOs was calculated. Table 3 displays the results.ⁱⁱ

ⁱ The cost and script count data used for the report relies on a subset of carriers for which pharmacy data was deemed to be reliable. The subset accounts for 76% of commercial FI membership. The PMPM impact numbers developed with this subset are multiplied times the entire FI membership in Section 5 to determine the overall dollar impact of the mandate.

ⁱⁱ Table 3 has slightly lower script counts than Tables 1 and 2, as it includes only scripts under policies with a pharmacy co-payment. In the APCD data used, 99.5% of scripts were written under policies with co-pays.

**Table 3:
Difference in Cost per Script for Abuse-Deterrent Opioids**

	<u>Cost Share</u>	<u># of Scripts</u>	<u>Avg. Cost Share</u>	<u>Difference vs. ADO</u>
Brand NADO	\$236,626	8,562	\$27.64	\$1.41
Generic NADO	\$4,560,257	565,742	\$8.06	\$20.99
ADO	\$519,856	17,895	\$29.05	

The cost impact of Chapter 258 stems primarily from the higher unit cost (\$400.16 vs. \$9.87) to be paid by carriers for the additional ADO prescriptions encouraged by the law, and only secondarily by the reduced patient cost sharing to be paid by carriers for those scripts.

4.2. Baseline: Project abuse-deterrent and non-abuse-deterrent scripts

Using the APCD, the 2012 counts and proportions of opioid products subdivided into ADO/NADO and brand name/generic were measured. Script counts are shown in Table 4.

**Table 4:
ADO and NADO Counts**

	<u># of Scripts</u>
Branded NADO	8,572
Generic NADO	580,637
ADO	17,909

In 2012, ADOs only accounted for 3 percent of opioid scripts. To project these product shares into the 2015-2019 period, we reviewed the industry pipeline and considered the FDA approval process as depicted in industry market forecasts. To estimate how much opioid utilization would move to ADOs through application to the FDA for abuse-deterrent formulations, we reviewed industry reports analyzing expected abuse-deterrent opioid products that will be coming onto the market.^{16,17,18,19,20} Using the APCD, we mapped current NADOs that have an abuse-deterrent formulation to the pipeline ADO drug. To estimate the number of scripts that would shift to abuse-deterrent formulation the scripts that were mapped to an abuse-deterrent drug in the pipeline were totaled for brand name and generic drugs. In each case the numbers of mapped scripts were calculated as a percent of the total branded and generic (respectively) NADO prescriptions. Approximately 40 percent of the future scripts are estimated to be abuse-deterrent based upon what is currently in the pipeline.

The projection period for the analysis is 2015 to 2019, during which some additional ADO development is likely. For the mid-level cost impact estimate we assumed that by the end of the projection period all of the pipeline drugs plus an additional 10 percent initiated beyond the current pipeline would move to a new abuse-deterrent formulation, for a total of 50 percent.

We assume the formulary commission will generally identify as candidates for ADO substitution formulations approved and designated as abuse-deterrent by the FDA, even though the language of

Chapter 258 may allow it more latitude.²¹ Allowing for uncertainty in both the pipeline and the FDA approval process, we set the ADO percentage assumption at 30 percent for the low scenario and 70 percent for the high scenario.

4.3. Baseline: FDA generic removals

In addition to granting approval to market a drug, the FDA also determines whether a drug can be labeled abuse-deterrent. Based on a risk assessment and the availability and effectiveness of the new ADO formulation, the FDA will consider withdrawing approval for the original or existing NADO drug product and in that case any brand name or generic NADO formulations of the same chemical would no longer be available. This was the case when the FDA approved an ADO formulation of OxyContin®. The FDA may also decide to allow NADO formulations of a product to stay on the market. This occurred when the FDA approved a new formulation of Opana ER® but found “insufficient evidence that the original formulation poses an increased risk of abuse compared to reformulated Opana ER®.” Therefore, the original formulation and any generic equivalents continue to be available.

While the FDA is likely to want to remove old formulations when possible, it will base these decisions on case-by-case assessments. We assigned a 50 percent probability that the FDA would remove old formulations of approved ADOs for the middle scenario. More generics removed from the market will result in fewer opportunities for practitioners to prescribe a generic, decreasing the frequency of Chapter 258’s mandatory move from generic to ADO. Consequently, a higher proportion of generics removed by the FDA results in a lower cost impact estimate for Chapter 258. We varied the industry baseline projection of the generic approval ratio from 70 percent for the low scenario to 30 percent for the high scenario.

4.4. Baseline: Switching behavior

As the process of bringing ADOs onto the market and removing generics from the market plays out, there will be changes in how drugs are prescribed even without consideration of Chapter 258. The available mix of products will increasingly consist of (brand name) ADOs and fewer generic NADOs. The change in available drugs will cause changes in prescribing patterns, resulting in shifts from NADO generics to brand name ADOs. This analysis requires projecting these patterns, and we capture the effects by projecting the proportions of opioid products sold that are ADO and NADO (including both brand name drugs and generics).

For those products having an ADO formulation and a NADO formulation, we estimate the proportion of scripts remaining in the NADO and the proportion switching to an ADO. Consideration was given to the low likelihood of switching to another NADO when the same formulation NADO has been removed from the market. Prior to implementing Chapter 258, there is a financial disincentive for patients to switch to a new ADO product. In particular, for the prevalent generic formulations cost sharing is significantly higher for the brand name ADO formulations (see Section 4.1), which would cause some switching behavior to remaining NADO products, particularly generic NADOs.

This analysis assumes that, in cases for which the NADO formulations were not removed, in the mid-level scenario 50 percent of the population will remain on the NADO formulations, varying to 25 percent and 75 percent in the low and high scenarios. For the small percentage of products with brand name NADOs, these switching percentages are assumed to be 20 percent, 30 percent, and 40 percent, as the financial incentive to remain on the NADO is smaller with the more expensive brand name product.

4.5. Baseline: Projected ADO and NADO script counts

Using the proportions/probabilities discussed in the previous steps, the proportions of scripts that will be in ADO products and in NADO products for both generic and branded scripts were calculated. Probabilities were calculated for generic scripts both for cases with the old NADO formulations removed and for cases in which the old formulations were not removed. The corresponding probabilities were also calculated for branded scripts. The probabilities were applied to total script counts to develop the estimated number of scripts in each category. The projected numbers of ADO scripts (prior to enactment of c. 258) are displayed in Table 5.

**Table 5:
Projected Count of ADO Scripts for ADOs
With and Without Old Formulations**

	<u>Generic</u> <u>NADO</u> <u>Removed</u>	<u>Generic</u> <u>NADO Not</u> <u>Removed</u>	<u>Brand</u> <u>NADO</u> <u>Removed</u>	<u>Brand</u> <u>NADO Not</u> <u>Removed</u>
Low Scenario	269,634	115,557	1,706	3,980
Mid Scenario	108,449	108,449	1,601	1,601
High Scenario	24,143	56,333	832	356

Given a particular level of ADO development and approval in the pharmaceutical market, the smaller the number of NADOs removed by the FDA, the smaller the number of cases in which the market moves to ADOs in the absence of Chapter 258, increasing the number of cases that can be affected by the law’s provisions about ADOs.

4.6. Baseline: Pre-Chapter 258 costs

The ADO and NADO script count projections developed in the preceding steps were applied to the trended unit cost information to produce an estimate of total opioid prescription costs for the baseline pre-Chapter 258. These calculations included breakdowns into brand names and generics for NADO products. This cost projection forms the baseline which will be subtracted from the total post-Chapter 258 cost projections to arrive at the incremental cost estimate of Chapter 258’s provisions.

4.7. Chapter 258: Behavioral response on prescribing and ADO/NADO Split

In the preceding sections we developed the baseline projection using national trends in the opioid market applied to data from the fully-insured commercial market in Massachusetts. Chapter 258's impact on spending by carriers will be realized through the effect that it has on switching behavior from NADOs to ADOs. As discussed in Section 3, this will depend on the decisions made by the formulary commission, on the requirement that pharmacists switch to the formulary's equivalent ADO unless "no substitution" is indicated by the prescriber, and on changes in prescribing decisions made by practitioners in response to the formulary requirements.

To estimate this behavioral change, we developed assumptions about proportions of NADO opioid scripts for which the prescriptions shift to an ADO as a result of the Chapter 258 provisions, and calculated the number of scripts in the ADO and NADO categories (for both generic and brand). Determining the assumptions for these shifts took into account differences in the likelihood of shifting for four scenarios where an ADO has been developed:

- *Generic drug removed from the market.* We assume that when the generic equivalent drug is removed, the carrier can charge the higher cost sharing, since there is nothing to be "less favorable than." In this case, we assume that the only option for the prescriber other than the ADO would be to prescribe a different generic or brand name NADO, specifically indicating "no substitution." It is not clear whether the formulary equivalence definitions would allow such "cross-substitutions" as equivalent, though we believe it is unlikely. If not deemed equivalent, with the large price and cost sharing advantage of the generic (\$29.05 ADO cost sharing vs. \$8.06 for generics, see Section 4.1), it was assumed that the cost difference would lead to another product being prescribed to a small degree, but that the ADO would be dispensed from 90 (low) to 99.7 (high) percent of the time in the different scenarios.
- *Brand drug removed from the market.* Here again, the only choice would be for the prescriber to prescribe another brand name or generic NADO with "no substitution" rather than the ADO. In this case it was assumed that the ADO drug would be dispensed 100 percent of the time, as the branded product imposes a much smaller price difference on the patient (cost sharing of \$27.61 vs. \$29.05 for the ADO).
- *Generic drug remaining on the market.* In this case, the "not less favorable" clause applies, and the cost sharing for the ADO would be on par with the generic. The ADO was assumed to be dispensed between 82.5 and 87.5 percent of the time from the low to high scenarios.
- *Brand name drug remaining on the market.* In this case, too, the "not less favorable" clause applies, and the cost sharing for the ADO would be on par with the generic. The ADO was assumed to be dispensed between 85 and 90 percent of the time from low to high scenarios.

Based on these assumptions, Table 6 displays the projected number of ADO scripts after the effect of Chapter 258.

**Table 6:
Count of ADO Scripts for ADOs With and Without Old Formulations,
After Chapter 258**

	<u>Generic</u> <u>NADO</u> <u>Removed</u>	<u>Generic</u> <u>NADO Not</u> <u>Removed</u>	<u>Brand</u> <u>NADO</u> <u>Removed</u>	<u>Brand</u> <u>NADO Not</u> <u>Removed</u>
Low Scenario	280,953	120,408	1,778	4,148
Mid Scenario	137,182	137,182	2,025	2,025
High Scenario	48,754	113,759	1,679	720

Table 7 displays the estimated incremental script counts relative to the baseline projection, that is, the additional movement toward ADOs resulting from Chapter 258.

**Table 7:
Change in ADO Scripts, After Chapter 258**

	<u>Generic</u> <u>NADO</u> <u>Removed</u>	<u>Generic</u> <u>NADO Not</u> <u>Removed</u>	<u>Brand</u> <u>NADO</u> <u>Removed</u>	<u>Brand</u> <u>NADO Not</u> <u>Removed</u>
Low Scenario	11,319	4,851	72	167
Mid Scenario	28,734	28,734	424	424
High Scenario	24,611	57,427	848	363

4.8. Chapter 258: Post-Chapter 258 costs

The incremental volume moving to ADOs away from NADOs results in shifts in spending, with decreased spending on NADOs and increased spending on ADOs. By applying the average unit costs (taking into account how the “not less favorable than” increases carrier unit costs for ADOs) to the post-behavioral shift script profile we can determine total costs post-Chapter 258, including increases in the carrier component of payment related to lower member cost sharing.

4.9. Incremental cost calculation

The incremental cost was derived by subtracting the baseline estimate of ADO costs from the post-Chapter 258 estimate of the cost of ADOs to determine the incremental claim cost of the ADO provisions of Chapter 258. The total cost was then divided by the total members (member months) in our 2012 base data, yielding the incremental per-member per-month (PMPM) cost. Results are displayed in Table 8.

**Table 8:
Estimate of Increase in Carrier Prescription Spending**

Low Scenario	\$0.14
Mid Scenario	\$0.83
High Scenario	\$1.66

4.10. Carrier retention and increase in premium

Assuming an average insurer retention rate of 11.5 percent (the portion of premiums absorbed by insurer administrative costs and profit), based on CHIA’s analysis of administrative costs and profit in Massachusetts,²² the increase in medical expense was adjusted upward to approximate the total impact on premiums. Table 9 shows the result.

**Table 9:
Estimate of Increase in Prescription Spending with Retention**

Low Scenario	\$0.16
Mid Scenario	\$0.94
High Scenario	\$1.87

4.11. Projected fully-insured population in Massachusetts

Table 10 shows the fully-insured population in Massachusetts ages 0 to 64 projected for the next five years. Appendix A describes the sources of these values.

**Table 10:
Projected Fully-Insured Population in Massachusetts, Ages 0-64**

<u>Year</u>	<u>Total (0-64)</u>
2015	2,144,066
2016	2,120,558
2017	2,096,250
2018	2,071,138
2019	2,045,433

4.12. Projection

The calculated incremental PMPM premiums from Section 4.10 were multiplied by the member months from Section 4.11 to get projected incremental costs. The results of these calculations are presented in the next section.

5. Results

The results of the estimated impact of the mandate are outlined below. The analysis includes development of a best estimate “mid-level” scenario, as well as a low-level scenario using assumptions that produced a lower estimate, and a high-level scenario using more conservative assumptions that produced a higher estimated impact.

5.1. Five-year estimated impact

For each year in the five-year analysis period, Table 11 displays the projected net impact of the mandate on medical expense and premiums using a projection of Massachusetts fully-insured membership. Note that the relevant provisions of Chapter 258 are effective October 1, 2015.²³

The low scenario impact is relatively small at \$3.0 million per year on average, and represents future events in which abuse-deterrent formulations dominate the national market for opioid pharmaceuticals even without Chapter 258’s provisions and formulary equivalence definitions are narrow, creating fewer situations in which the pharmacist’s substitution and the “not less favorable than” cost sharing provisions apply. The high scenario has an average cost of \$35.4 million per year, and reflects future events in which ADOs are a smaller proportion of opioids on the market, few decisions to remove generics are made by the FDA, and the formulary has looser equivalence definitions. This creates a larger number of situations in which the pharmacist’s substitution and “not less favorable than” cost sharing provisions apply. The middle scenario has average annual costs of \$17.8 million, or an average of 0.11 percent of premium.

Finally, the impact of the law on any one individual, employer-group, or carrier may vary from the overall results depending on the current level of benefits each receives or provides, and on how the benefits will change under the mandate.

Table 11: Summary Results

	Q4 2015	2016	2017	2018	2019	Weighted Average	5 Yr Total
Members (000s)	2,144	2,121	2,096	2,071	2,045		
Medical Expense Low (\$000s)	\$36	\$1,918	\$2,420	\$2,940	\$3,476	\$2,680	\$10,790
Medical Expense Mid (\$000s)	\$213	\$11,259	\$14,206	\$17,262	\$20,405	\$15,736	\$63,345
Medical Expense High (\$000s)	\$424	\$22,417	\$28,282	\$34,368	\$40,625	\$31,330	\$126,116
Premium Low (\$000s)	\$41	\$2,167	\$2,734	\$3,322	\$3,927	\$3,029	\$12,192
Premium Mid (\$000s)	\$241	\$12,722	\$16,052	\$19,505	\$23,057	\$17,781	\$71,577
Premium High (\$000s)	\$479	\$25,329	\$31,958	\$38,834	\$45,904	\$35,401	\$142,503
PMPM Low	\$0.06	\$0.09	\$0.11	\$0.13	\$0.16	\$0.11	\$0.28
PMPM Mid	\$0.37	\$0.50	\$0.64	\$0.78	\$0.94	\$0.64	\$0.64
PMPM High	\$0.73	\$1.00	\$1.27	\$1.56	\$1.87	\$1.28	\$1.28
Estimated Monthly Premium	\$512	\$537	\$564	\$592	\$622	\$566	\$566
Premium % Rise Low	0.01%	0.02%	0.02%	0.02%	0.03%	0.02%	0.02%
Premium % Rise Mid	0.07%	0.09%	0.11%	0.13%	0.15%	0.11%	0.11%
Premium % Rise High	0.14%	0.19%	0.23%	0.26%	0.30%	0.23%	0.23%

5.2. Impact on the GIC

Chapter 258 applies to both fully-insured and self-insured plans operated for state and local employees by the Group Insurance Commission (GIC), with an effective date for all GIC policies on October 1, 2015.

Benefit offerings of GIC plans are generally similar to those of most other commercial plans in Massachusetts. However, based on data from the 2012 Massachusetts APCD, the GIC's utilization (per thousand members) of prescriptions for opioid pain medication is about 28 percent higher than that of the general fully-insured population. As a result, the estimated effect of the mandate on GIC PMPM medical expense is expected to be about 28 percent higher than that calculated for the other fully-insured plans in Massachusetts. It is important to note that approximately 30 percent of the GIC membership was cleanly identifiable in the APCD, and the utilization estimate assumes the available portion represents a reasonable sample of the overall GIC membership. To calculate the incremental medical expense for the GIC, the incremental medical expense PMPM for the general fully-insured population was applied to the GIC membership and increased by 28 percent.

Table 12 breaks out the GIC-only fully-insured membership and the GIC self-insured membership. Note that the total medical expense and premium values for the general fully-insured membership displayed in Table 11 also include the GIC fully-insured membership. Finally, the law requires the GIC to implement the provisions fully on October 1, 2015; therefore, the fourth quarter of 2015 represents approximately one quarter of an annual value.

**Table 12:
GIC Summary Results**

	Q4 2015	2016	2017	2018	2019	Weighted Average	5 Yr Total
GIC Fully-Insured							
Members (000s)	57	57	57	57	57		
Medical Expense Low (\$000s)	\$12	\$66	\$84	\$104	\$124	\$92	\$390
Medical Expense Mid (\$000s)	\$71	\$388	\$495	\$608	\$726	\$538	\$2,288
Medical Expense High (\$000s)	\$142	\$773	\$985	\$1,210	\$1,446	\$1,072	\$4,555
Premium Low (\$000s)	\$14	\$75	\$95	\$117	\$140	\$104	\$440
Premium Mid (\$000s)	\$81	\$438	\$559	\$687	\$820	\$608	\$2,585
Premium High (\$000s)	\$161	\$873	\$1,113	\$1,367	\$1,634	\$1,211	\$5,147
GIC Self-Insured							
Members (000s)	259	259	259	258	258		
Medical Expense Low (\$000s)	\$55	\$300	\$382	\$469	\$561	\$416	\$1,768
Medical Expense Mid (\$000s)	\$324	\$1,760	\$2,244	\$2,756	\$3,294	\$2,442	\$10,379
Medical Expense High (\$000s)	\$645	\$3,504	\$4,468	\$5,488	\$6,557	\$4,862	\$20,663

Appendix A: Membership Affected by the Mandate

Membership potentially affected by a mandate may include Massachusetts residents with fully-insured employer-sponsored health insurance (including through the GIC), non-residents with fully-insured employer-sponsored insurance issued in Massachusetts, Massachusetts residents with individual (direct) health insurance coverage, and, in some cases, lives covered by GIC self-insured coverage. Membership projections for 2015 to 2019 are derived from the following sources.

Total Massachusetts population estimates for 2012 and 2013 from U. S. Census Bureau data²⁴ form the base for the projections. Distributions by gender and age, also from the Census Bureau,²⁵ were applied to these totals. Projected growth rates for each gender/age category were calculated from Census Bureau population projections to 2030.²⁶ The resulting growth rates were then applied to the base amounts to project the total Massachusetts population for 2015 to 2019.

The number of Massachusetts residents with employer-sponsored or individual (direct) health insurance coverage was estimated using Census Bureau data on health insurance coverage status and type of coverage²⁷ applied to the population projections.

To estimate the number of Massachusetts residents with fully-insured employer-sponsored coverage, projected estimates of the percentage of employer-based coverage that is fully-insured were developed using historical data from the Medical Expenditure Panel Survey Insurance Component Tables.²⁸

To estimate the number of non-residents covered by a Massachusetts policy – typically cases in which a non-resident works for a Massachusetts employer offering employer-sponsored coverage – the number of lives with fully-insured employer-sponsored coverage was increased by the ratio of the total number of individual tax returns filed in Massachusetts by residents²⁹ and non-residents³⁰ to the total number of individual tax returns filed in Massachusetts by residents.

The number of residents with individual (direct) coverage was adjusted further to subtract the estimated number of people previously covered by Commonwealth Care who moved into MassHealth due to expanded Medicaid eligibility under the Affordable Care Act.³¹

Projections for the GIC self-insured lives were developed using GIC base data for 2012³² and 2013³³ and the same projected growth rates from the Census Bureau that were used for the Massachusetts population. Breakdowns of the GIC self-insured lives by gender and age were based on the Census Bureau distributions.

Endnotes

- ¹ Massachusetts Acts of 2014, Chapter 258, “An Act to Increase Opportunities for Long-Term Substance Abuse Recovery”. Accessed 2 October 2014: <https://malegislature.gov/Laws/SessionLaws/Acts/2014/Chapter258>.
- ² Meeting with sponsor and legislative, CHIA, and Compass staff 10 December 2013.
- ³ National Institutes of Health, National Institute on Drug Abuse (NIH-NIDA): Prescription Drug Abuse, What are opioids? Accessed 2 July 2014: <http://www.drugabuse.gov/publications/research-reports/prescription-drugs/opioids/what-are-opioids>.
- ⁴ *Op. cit.* NIH-NIDA: What are opioids?
- ⁵ NIH-NIDA: Prescription Drug Abuse, How do opioids affect the brain and body? Accessed 2 July 2014: <http://www.drugabuse.gov/publications/research-reports/prescription-drugs/opioids/how-do-opioids-affect-brain-body>.
- ⁶ *Op. cit.* NIH-NIDA: What are opioids?
- ⁷ National Institute of Drug Abuse, National Institutes of Health, U.S. Department of Health and Human Services (NIDA). Principles of Drug Addiction Treatment: A Research-Based Guide, Third Edition. NIH Publication No. 12–4180. Printed 1999, revised December 2012; accessed 29 August 2014: http://www.drugabuse.gov/sites/default/files/podat_1.pdf.
- ⁸ *Op. cit.* NIH-NIDA: How do opioids affect the brain and body?
- ⁹ American Psychiatric Association (APA). Diagnostic and Statistical Manual of Mental Disorders (Fifth edition, text review; DSM-V). 2013.
- ¹⁰ *Op. cit.* APA. Diagnostic and Statistical Manual of Mental Disorders – Fifth Edition (DSM-V).
- ¹¹ *Op. cit.* US-FDA: Guidance for Industry Abuse-Deterrent Opioids — Evaluation and Labeling.
- ¹² *Op. cit.* US-FDA: Guidance for Industry Abuse-Deterrent Opioids — Evaluation and Labeling.
- ¹³ M.G.L. c. 17, § 13. <https://malegislature.gov/Laws/GeneralLaws/PartI/TitleII/Chapter17/Section13>.
- ¹⁴ M.G.L. c. 112, § 12D. <https://malegislature.gov/Laws/GeneralLaws/PartI/TitleXVI/Chapter112/Section12D>.
- ¹⁵ Centers for Medicare and Medicaid Services (CMS), The Office of the Actuary in the Centers for Medicare & Medicaid Services annually produces projections of health care spending for categories within the National Health Expenditure Accounts, which track health spending by source of funds (for example, private health insurance, Medicare, Medicaid), by type of service (hospital, physician, prescription drugs, etc.), and by sponsor (businesses, households, governments). Accessed 14 September 2014: <http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsProjected.html>
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- ¹⁷ U.S. National Library of Medicine National Institutes of Health, A Review of Abuse Deterrent Opioids for Chronic Nonmalignant Pain, Accessed 11 July 2012: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3411218/>
- ¹⁸ U.S. Pharmacist, Legislative Initiatives and Review of Abuse-Deterrent Opioid Formulations, Accessed 18 October 2013: <http://www.uspharmacist.com/content/c/44472>
- ¹⁹ Pain Therapeutics Inc., Pain Therapeutics Expands Pipeline With FENROCK(TM), an Abuse-Deterrent Pain Patch, Accessed 26 September 2014: <http://investor.paintrials.com/releasedetail.cfm?ReleaseID=873225>
- ²⁰ Pfizer, FDA Approves Abuse Deterrent Labeling for EMBEDA® (morphine sulfate and naltrexone hydrochloride) Extended-Release (ER) Capsules CII, Accessed 17 October 2014: <http://www.uspharmacist.com/content/c/44472>
- ²¹ Section 4 of Chapter 258 appears to give the Commission some latitude in identifying drugs for which substitution will occur and not to link the process rigidly to the FDA’s identification of ADOs, saying: “In preparing the formulary, the commission shall consider information contained in drug applications approved by the United

States Food and Drug Administration and other regulatory and guidance documents distributed by the United States Food and Drug Administration.... Inclusion of a drug on the formulary shall not be the basis for a labeling or marketing claim of abuse deterrence potential, unless the United States Food and Drug Administration authorizes such a claim. In considering whether a drug is a chemically equivalent substitution the commission shall consider: the accessibility of the drug and its proposed substitute; whether the drug's substitute is cost prohibitive; the effectiveness of the substitution; and whether, based upon the current patterns of abuse and misuse, the drug's substitute incorporates abuse deterrent technology that will be an effective deterrent to such abuse and misuse." Massachusetts Acts of 2014, Chapter 258, "An Act to Increase Opportunities for Long-Term Substance Abuse Recovery". Accessed 8 December 2014: <https://malegislature.gov/Laws/SessionLaws/Acts/2014/Chapter258>.

²² Massachusetts Center for Health Information and Analysis. Annual Report on the Massachusetts Health Care Market, August 2013. Accessed 17 March 2014: <http://www.mass.gov/chia/docs/r/pubs/13/ar-ma-health-care-market-2013.pdf>.

²³ With a start date of October 1, 2015 dollars were estimated at only 2.5% of the annual cost, based upon an assumed renewal distribution by month (Oct through Dec) by market segment and the Massachusetts market segment composition.

²⁴ U.S. Census Bureau. Annual Estimates of the Population for the United States, Regions, States, and Puerto Rico: April 1, 2010 to July 1, 2013. Accessed 23 January 2014: <http://www.census.gov/popest/data/state/totals/2013/index.html>.

²⁵ U.S. Census Bureau. Annual Estimates of the Resident Population by Single Year of Age and Sex for the United States, States, and Puerto Rico Commonwealth: April 1, 2010 to July 1, 2012. Accessed 23 January 2014: <http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk>.

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²⁷ U.S. Census Bureau. Table HIB-4. Health Insurance Coverage Status and Type of Coverage by State All People: 1999 to 2012. Accessed 23 January 2014: http://www.census.gov/hhes/www/hlthins/data/historical/HIB_tables.html.

²⁸ Agency for Healthcare Research and Quality. Percent of private-sector enrollees that are enrolled in self-insured plans at establishments that offer health insurance by firm size and State (Table II.B.2.b.1), years 1996-2012: 1996 (Revised March 2000), 1997 (March 2000), 1998 (August 2000), 1999 (August 2001), 2000 (August 2002), 2001 (August 2003), 2002 (July 2004), 2003 (July 2005), 2004 (July 2006), 2005 (July 2007), 2006 (July 2008), 2008 (July 2009), 2009 (July 2010), 2010 (July 2011), 2011 (July 2012), 2012 (July 2013). Medical Expenditure Panel Survey Insurance Component Tables. Generated using MEPSnet/IC. Accessed 31 January 2014: http://www.meps.ahrq.gov/mepsweb/data_stats/MEPSnetIC.jsp.

²⁹ IRS. Table 2. Individual Income and Tax Data, by State and Size of Adjusted Gross Income, Tax Year 2010. Accessed 6 March 2014: <http://www.irs.gov/uac/SOI-Tax-Stats---Historic-Table-2>.

³⁰ Massachusetts Department of Revenue. Massachusetts Personal Income Tax Paid by Non-Resident by State for TY2010. Accessed 23 January 2014: <http://www.mass.gov/dor/tax-professionals/news-and-reports/statistical-reports/>.

³¹ Massachusetts Budget and Policy Center. THE GOVERNOR'S FY 2014 HOUSE 1 BUDGET PROPOSAL. Accessed 5 March 2014: http://www.massbudget.org/reports/pdf/mmpi_gov_14.pdf.

³² Group Insurance Commission. Group Insurance Commission Fiscal Year 2012 Annual Report. Accessed 14 March 2014: <http://www.mass.gov/anf/docs/gic/annual-report/arfy2012.pdf>.

³³ Group Insurance Commission. GIC Health Plan Membership by Insured Status FY2013. Accessed 22 January 2014: <http://www.mass.gov/anf/employee-insurance-and-retirement-benefits/annual-reports/annual-report-fy-2013-financial-and-trend.html>.

**Actuarial Assessment of
Chapter 258 of the Acts of 2014:
“An Act to increase opportunities for
long-term substance abuse recovery”
Licensed Alcohol and Drug Counselor I**

Prepared for
Commonwealth of Massachusetts
Center for Health Information and Analysis

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Prepared by
Compass Health Analytics, Inc.



Actuarial Assessment of Chapter 258 of the Acts of 2014: “An Act to increase opportunities for long-term substance abuse recovery”

Licensed Alcohol and Drug Counselor I

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Actuarial Assessment of Chapter 258 of the Acts of 2014: “An Act to increase opportunities for long-term substance abuse recovery” Licensed Alcohol and Drug Counselor I

Executive Summary

The Massachusetts mental health parity statutes require insurers to cover mental health services delivered by designated “licensed mental health professionals” on a non-discriminatory basis for biologically-based mental disorders, including substance abuse disorders.¹ Massachusetts Chapter 258 of the Acts of 2014 (Chapter 258) expands the list of licensed mental health professionals that insurers must reimburse under the mental health parity statutes to include “licensed alcohol and drug counselor I.”²

Massachusetts General Laws (M.G.L.) c. 3 § 38C charges the Massachusetts Center for Health Information and Analysis (CHIA) with reviewing the potential impact of proposed mandated health care insurance benefits on the premiums paid by businesses and consumers. CHIA has engaged Compass Health Analytics, Inc. to provide an actuarial estimate of the effect the law will have on the cost of health care insurance in Massachusetts.

Assessing the impact of this law entails analyzing its incremental effect on spending by insurance plans. This in turn requires comparing spending under the provisions of the law to spending under current statutes and current benefit plans for the relevant services.

Background

Unlike many benefit mandates that require coverage of specific services, Chapter 258 amends the mental health parity statutes so that coverage for medically necessary services already required by the parity statutes extends to those services when delivered by licensed alcohol and drug counselors I (LADC-Is). In Massachusetts, an LADC-I is permitted to provide alcohol and drug counseling independently, without supervision and/or apart from a licensed facility, and to supervise other alcohol and drug counselors.³ The full scope of practice for LADC-Is is not statutorily defined,⁴ but Massachusetts LADC-Is are required to have education and experience focused on “the full range of knowledge, skills, and professional techniques related to alcohol and drug counseling.”⁵

LADC-Is are not currently contracted with, or reimbursed by, Massachusetts insurers as independent practitioners.⁶ While some practice independently and are reimbursed directly by patients, most are contracted or employed to provide services in other settings, such as licensed substance abuse and/or mental health treatment programs and facilities, or in other healthcare, governmental, or educational programs or settings. According to a recent survey of Massachusetts carriers, a few insurers do pay for care delivered by LADC-Is as part of package or per-diem payments contracted with facilities.⁷ Chapter 258 requires insurers to reimburse LADC-Is as

mental health professionals, including through independent practice, if the insurers credential (admit) these practitioners into their networks.

Responses to a recent carrier survey indicate some insurers do not reimburse for care provided by LADC-Is even when those services are in a clinic or facility setting.⁸ In response to a recent survey of ten of the largest insurance carriers in Massachusetts, plans reported one of the following policies governing their coverage for LADC-Is:

- The plan does not reimburse LADC-Is who practice privately and only reimburses for LADC-I services when they are working under a facility or clinical license
- The plan does not credential LADC-Is at all

Chapter 258 requires insurers to reimburse clinics and facilities for (non-bundled) LADC-I services if the insurers credential these practitioners. However, the law does not explicitly remove insurers' ability to determine whom they will credential, and insurers might choose to impose credentialing requirements (such as a master's degree) that will exclude some LADC-Is from reimbursement.

Analysis

A simple way to begin estimating the potential cost of this mandate is to calculate the total amount that all current LADC-Is could bill if they worked a typical level of clinical service hours at an hourly billing rate paid by insurers for similarly qualified staff. However, this maximum potential cost scenario would greatly over-estimate the cost for several reasons:

- 1.) *Credentialing.* Some carriers may decide not to credential some LADC-Is. The law does not explicitly remove insurers' ability to determine whom they will credential.
- 2.) *Medicaid.* LADC-Is are currently occupied for much of their time delivering services for Medicaid patients, under which reimbursement for direct, supervised services is allowed.
- 3.) *Current commercial services.* Some commercial carriers (but not all) currently credential LADC-Is and allow them to bill as team members in care delivery.

To estimate the likely increase in commercial spending, the analysis addressed these factors and the degree to which they would reduce additional time spent on commercially-insured patients by proceeding as follows:

- Estimate the current number of licensed alcohol and drug counselors (LADC-Is) in Massachusetts
- Estimate the number of LADC-Is who will be credentialed
- Estimate the proportion of time that LADC-Is will engage in directly billed service to fully-insured commercial patients
- Adjust the number of billable hours for the proportion of time when a member fails to attend his or her scheduled appointment (adjust for "no shows")

- Using the All Payer Claim Database (APCD), calculate the average amount paid per hour for clinicians performing work similar to that of LADC-Is
- Using the estimated number of billable hours and the average cost per hour for LADC-Is, calculate the mandate’s incremental effect on carrier medical expense
- Estimate the impact of insurer’s retention (administrative costs and profit) on premiums
- Estimate the fully-insured Massachusetts population under age 65, projected for the next five years (2015 to 2019)
- Project the impact on premiums over the next five years

Summary results

For each year in the five-year analysis period, Table ES1 displays the projected net impact of the mandate on medical expense and premiums using a projection of Massachusetts fully-insured membership. Note that Chapter 258 is effective on October 1, 2015; therefore the impact in 2015 is for a small number of policies renewing in the 4th quarter.

By the last year of the projection period this analysis estimates that the mandate, if enacted, would increase fully-insured premiums by as much as 0.06 percent; a more likely increase is in the range of 0.02 percent.

The impact of the law on any one individual, employer-group, or carrier may vary from the overall results depending on the current level of benefits each receives or provides, and on how the benefits will change under the mandate.

Table ES1: Summary Results

	2015	2016	2017	2018	2019	Average	5 Yr Total
Members (000s)	2,144	2,121	2,096	2,071	2,045		
Medical Expense Low (\$000s)	\$4	\$165	\$340	\$527	\$726	\$438	\$1,762
Medical Expense Mid (\$000s)	\$16	\$646	\$1,349	\$2,112	\$2,939	\$1,755	\$7,063
Medical Expense High (\$000s)	\$37	\$1,560	\$3,325	\$5,315	\$7,551	\$4,419	\$17,789
Premium Low (\$000s)	\$5	\$186	\$385	\$596	\$820	\$495	\$1,991
Premium Mid (\$000s)	\$18	\$730	\$1,524	\$2,387	\$3,321	\$1,983	\$7,980
Premium High (\$000s)	\$42	\$1,763	\$3,757	\$6,006	\$8,532	\$4,993	\$20,100
PMPM Low	\$0.01	\$0.01	\$0.02	\$0.02	\$0.03	\$0.02	\$0.02
PMPM Mid	\$0.03	\$0.03	\$0.06	\$0.10	\$0.14	\$0.07	\$0.07
PMPM High	\$0.06	\$0.07	\$0.15	\$0.24	\$0.35	\$0.17	\$0.17
Estimated Monthly Premium	\$512	\$537	\$564	\$592	\$622	\$566	\$566
Premium % Rise Low	0.00%	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%
Premium % Rise Mid	0.01%	0.01%	0.01%	0.02%	0.02%	0.01%	0.01%
Premium % Rise High	0.01%	0.01%	0.03%	0.04%	0.06%	0.03%	0.03%

Executive Summary Endnotes

¹ M.G.L. c.32A §22, c.175 §47B, c.176A §8A, c.176B §4A, c.176G §4M.

² Massachusetts Acts of 2014, Chapter 258, “An Act to Increase Opportunities for Long-Term Substance Abuse Recovery”. Accessed 2 October 2014: <https://malegislature.gov/Laws/SessionLaws/Acts/2014/Chapter258>.

³ 105 CMR 168.004: Licensure of Alcohol and Drug Counselors, Definitions. Accessed 14 July 2014: <http://www.mass.gov/eohhs/docs/dph/regs/105cmr168.pdf>.

⁴ Email communication with Department of Public Health, Bureau of Substance Abuse Services, 15 July 2014.

⁵ 105 CMR 168.006: Licensure of Alcohol and Drug Counselors, Eligibility Requirements. Accessed 15 July 2014: <http://www.mass.gov/eohhs/docs/dph/regs/105cmr168.pdf>.

Specifically, work experience must at a minimum include:

- a) practice in diagnostic assessment, intervention, and alcoholism and/or drug counseling in both individual and group settings;
- b) practice in alcoholism and/or drug counseling to establish and maintain recovery and prevent relapse; and
- c) weekly, on-site and documented clinical experience.

⁶ Email communication with Department of Public Health, Bureau of Substance Abuse Services, 9 July 2014.

⁷ Survey of Massachusetts insurance carriers, distributed by Massachusetts Center for Health Information and Analysis, 27 August 2014.

⁸ *Op. cit.* Survey of Massachusetts insurance carriers, distributed by Massachusetts Center for Health Information and Analysis, 27 August 2014.

Actuarial Assessment of Chapter 258 of the Acts of 2014: “An Act to increase opportunities for long-term substance abuse recovery” Licensed Alcohol and Drug Counselor I

1. Introduction

The Massachusetts mental health parity statutes require insurers to cover mental health services delivered by designated “licensed mental health professionals” on a non-discriminatory basis for biologically-based mental disorders, including substance abuse disorders.¹ Massachusetts Chapter 258 of the Acts of 2014 (Chapter 258) expands the list of licensed mental health professionals that insurers must reimburse under the parity statutes to include licensed alcohol and drug counselor I.²

Massachusetts General Laws (M.G.L.) c. 3 § 38C charges the Massachusetts Center for Health Information and Analysis (CHIA) with reviewing the potential impact of proposed mandated health care insurance benefits on the premiums paid by businesses and consumers. CHIA has engaged Compass Health Analytics, Inc. to provide an actuarial estimate of the effect the law will have on the cost of health care insurance in Massachusetts.

Assessing the impact of this law entails analyzing the incremental effect of the law on spending by insurance plans. This in turn requires comparing spending under the provisions of the law to spending under current statutes and current benefit plans for the relevant services.

Section 2 of this analysis outlines the provisions of the law. Section 3 summarizes the methodology used for the estimate. Section 4 discusses important considerations in translating the law’s language into estimates of its incremental impact on health care costs and steps through the analysis of the calculations. Section 5 summarizes the results.

2. Interpretation of Chapter 258

The following subsections describe the provisions of Chapter 258 related to coverage for licensed alcohol and drug counselors.

2.1. Plans affected by the Chapter 258 mandates

Chapter 258 amends the statutes that regulate insurers providing health insurance in Massachusetts. The following five sections of the law, each addressing existing statutes dealing with a particular type of health insurance policy, were relevant to this analysis:

- Section 10: Insurance for persons in service of the Commonwealth (amending M.G.L. c. 32A, § 22)
- Section 20: Accident and sickness insurance policies (amending M.G.L. c. 175, § 47B)

- Section 22: Contracts with non-profit hospital service corporations (amending M.G.L. c. 176A, § 8A)
- Section 24: Certificates under medical service agreements (amending M.G.L. c. 176B, §4A)
- Section 26: Health maintenance contracts (amending M.G.L. 176G, § 4M)

The law requires coverage for members under the relevant plans, regardless of whether they reside within the Commonwealth or merely have their principal place of employment in the Commonwealth.

Self-insured commercial plans are subject to federal law and, with the exception of those operated by the Group Insurance Commission (GIC), not to state-level health insurance benefit mandates. State mandates do not apply to Medicare, and this analysis assumes that this mandate does not affect Medicare extension/supplement plans even to the extent they are regulated by state law. This analysis does not apply to Medicaid/MassHealth.

The provisions apply to policies from fully-insured commercial insurance plans issued or renewed on or after October 1, 2015, and apply to both fully-insured and self-insured plans operated for state and local employees by the GIC, with an effective date for all GIC policies of October 1, 2015.

2.2. Covered services

Unlike many benefit mandates that require coverage of specific services, Chapter 258 amends the mental health parity statutes so that coverage for medically necessary services already required by the parity statutes extends to those services when delivered by licensed alcohol and drug counselors I (LADC-Is).

Scope of LADC-I services and licensure

In Massachusetts, an LADC-I is permitted to provide alcohol and drug counseling independently, without supervision and/or apart from a licensed facility, and to supervise other alcohol and drug counselors.³ The full scope of practice for LADC-Is is not statutorily defined,⁴ but Massachusetts LADC-Is are required to have education and experience focused on “the full range of knowledge, skills, and professional techniques related to alcohol and drug counseling.”⁵

Core functions of LADC-Is include: screening, intake, patient orientation, assessment, treatment planning, counseling, case management, crisis intervention, client education, referrals, reports and record keeping, and consultation with other professionals.⁶ These services can also be provided by a variety of other professionals identified as mental health practitioners in the parity statutes but not specifically licensed for alcohol and drug counseling, such as clinical psychologists, licensed independent social workers, and marriage and family therapists.⁷

Licensure for Massachusetts LADC-Is is administered by the Bureau of Substance Abuse Services in the Department of Public Health. Applicants for the title “Licensed Alcohol and Drug Counselor I” (LADC) are required to have a masters or doctoral degree in behavioral sciences⁸, to have at least

three years of work experience, and to pass a written examination. However, professionals practicing as alcohol and drug counselors in Massachusetts prior to the issuance of the licensing regulations and who applied for licensure during a defined period were exempt from the current licensure requirements. These counselors received so-called “grandparenting licensure” and were licensed under criteria which did not require a masters or doctoral degree.⁹ Currently, there are approximately 1,071 LADC-Is in Massachusetts, of whom 895 obtained licensure under the grandparenting exemption.¹⁰ Of the grandparented LADC-Is, some have masters or doctoral degrees; however, the exact number is not known.¹¹

Reimbursement for services provided by alcohol and drug counselors

LADC-Is are not currently contracted with, or reimbursed by, Massachusetts commercial insurers as independent practitioners.¹² While some practice independently and are reimbursed directly by patients, most are contracted or employed to provide services in settings such as licensed substance abuse and/or mental health treatment programs and facilities, or in other healthcare, governmental, or educational programs or settings. According to a recent survey of Massachusetts carriers, a few insurers do pay for care delivered by LADC-Is as part of package or per-diem payments contracted with facilities.¹³ Chapter 258 requires insurers to reimburse LADC-Is as mental health professionals, including through independent practice, if the insurers credential (admit) these practitioners into their networks.

Responses to a recent carrier survey indicate some insurers do not reimburse for care provided by LADC-Is even when those services are in a clinic or facility setting.¹⁴ Therefore some facilities that hire LADC-Is, faced with a mix of insurers that may or may not pay for LADC-I services, must limit LADC-I duties and patient mix because of the administrative burden of managing practitioner assignments and reimbursement.¹⁵ Chapter 258 requires insurers to reimburse clinics and facilities for (non-bundled) LADC-I services if the insurers credential these practitioners.

Note that while Chapter 258 requires insurers to reimburse LADC-Is in their networks, the law does not explicitly remove insurers’ ability to determine whom they will credential into those networks, and insurers might choose to impose requirements (such as a master’s degree) that will exclude some LADC-Is from reimbursement.

2.3. Current coverage

In responding to a recent survey of ten of the largest insurance carriers in Massachusetts, plans reported one of the following policies governing their coverage for LADC-Is:

- The plan does not reimburse LADC-Is who practice privately and only reimburses for LADC-I services when they are working under a facility or clinical license
- The plan does not credential LADC-Is at all

Carriers that do not credential LADC-Is reported that they have considered counselors for credentialing if the practitioner holds one or more of the following other licenses: Psychologist, Psychiatric and Mental Health Nurse Practitioner, Psychiatric Clinical Nurse Specialist, LICSW,

LMHC/LMFT, or Psychiatrist. They report that under the new provision of Chapter 258 they will modify their credentialing processes to include review of LADC-Is with criteria to be determined.

2.4. Existing laws affecting the cost of Chapter 258

While various federal and state laws (including the Massachusetts mental health parity statutes) require coverage for substance abuse counseling and other services typically provided by LADC-Is, this analysis uncovered no federal or state laws regarding insurance coverage for services provided specifically by alcohol and drug counselors.

3. Methodology

3.1. Overview

As described above, Chapter 258 expands the list of licensed mental health professionals that insurers must reimburse under the mental health parity statutes to include “licensed alcohol and drug counselor I.” This provision will allow LADC-Is to bill directly, whether as employees of clinics or as independently practicing professionals.

A simple way to begin estimating the potential cost of this mandate is to calculate the total amount that all current LADC-Is could bill if they worked a typical level of clinical service hours at an hourly billing rate paid by insurers for similarly qualified staff. This simple calculation would then have to be projected over the five-year timeframe of this analysis, allowing for growth in the number of LADC-Is at least as fast as the supply has grown historically, and likely somewhat faster, owing to the attraction that independent billing would create for potential practitioners. However, this maximum potential cost scenario would greatly over-estimate the cost for several reasons:

- 1) *Credentialing.* Carriers may decide not to credential LADC-Is. While Chapter 258 requires insurers to reimburse LADC-Is if the insurers credential them, the law does not explicitly remove insurers’ ability to determine whom they will credential, and insurers might choose to impose credentialing requirements (such as a master’s degree) that will exclude some licensed LADC-Is from reimbursement. Some Massachusetts carriers do not currently credential LADC-Is.
- 2) *Medicaid.* LADC-Is are currently occupied for much of their time delivering services for Medicaid patients, under which reimbursement for direct, supervised services is allowed. To the extent LADC-Is continue to spend time delivering service to Medicaid patients, that time will not be available to serve commercially-insured patients.ⁱ
- 3) *Current commercial services.* Some commercial carriers (but not all) currently credential LADC-Is and allow them to bill as team members in care delivery (e.g., for inpatient

ⁱ Provider interviews indicate that Medicaid allows billing of LADC-Is when supervised by a credentialed provider, and that this is the primary role of LADC-Is in clinics. A few commercial carriers responding to a carrier survey allow the same arrangement.

services). To the extent they continue to participate in delivering team services, less than their full time would be available for directly-billed services; the costs associated with LADC-I time in team service are not an incremental result of Chapter 258.

This analysis incorporates the factors above to estimate the total potential incremental hours LADC-Is may bill to fully-insured commercial carriers and multiplies this hour estimate by projected unit costs for similar providers to arrive at a range of incremental costs resulting from Chapter 258's provision. The resulting estimated costs for the baseline period are then divided by the commercial fully-insured enrollment (member months) to develop a per-member per-month (PMPM) cost estimate. That baseline estimate is the starting point for the calculations for the final five-year (2015 to 2019) projections.

3.2. Steps in the analysis

The general approach outlined above was executed in the following steps.

- Estimate the current number of licensed alcohol and drug counselors (LADC-Is) in Massachusetts
- Estimate the number of LADC-Is that will be credentialed
- Estimate the proportion of time that LADC-Is will engage in direct billing service to fully-insured commercial patients
- Adjust the number of billable hours for the proportion of time when a member fails to attend his or her scheduled appointment (i.e., adjust for “no shows”)
- Using the All Payer Claim Database (APCD), calculate the average amount paid per hour for clinicians performing work similar to that of an LADC-I
- Using the estimated number of billable hours and the average cost per hour for LADC-Is, calculate the mandate's incremental effect on carrier medical expense
- Estimate the impact of insurer's retention (administrative costs and profit) on premiums
- Estimate the fully-insured Massachusetts population under age 65, projected for the next five years (2015 to 2019)
- Project the impact on premiums over the next five years

3.3. Data sources

The primary data sources used in the analysis were:

- Information from clinical providers and billing staff
- Information from a survey of private health insurance carriers in Massachusetts
- Academic literature, published reports, and population data, cited as appropriate

- Massachusetts insurer claim data from CHIA’s Massachusetts All Payer Claim Database (APCD) for calendar years 2009 to 2012, for plans covering the majority of the under-65 fully-insured population subject to the mandate

The more detailed step-by-step description of the estimation process described below addresses limitations in some of these sources and the uncertainties they contribute to the cost estimate.

3.4. Limitations

A key assumption of this analysis is the use of current decisions by carriers about whether and how to credential LADC-Is. Significant deviation in either direction (more or less credentialing) will impact carriers’ actual medical expense. In addition, the degree to which the availability of direct billing will attract people into training programs and LADC-I licensure is difficult to predict. These uncertainties are addressed by modeling a range of assumptions within reasonable judgment-based ranges.

4. Analysis

To estimate the impact of the law, the calculations outlined in the previous section were executed; this section describes the calculations in detail. The analysis includes development of a best estimate “mid-level” scenario, as well as a low-level scenario using assumptions that produced a lower estimate, and a high-level scenario using more conservative assumptions that produced a higher estimated impact.

4.1. Number of LADC-Is credentialed

As mentioned previously, licensure for Massachusetts LADC-Is is administered by the Bureau of Substance Abuse Services in the Department of Public Health. LADC-Is licensed under current regulations are required to have a master’s or doctoral degree. However, professionals practicing as alcohol and drug counselors in Massachusetts prior to the issuance of the licensing regulations were exempt from the current licensure requirements. These “grandparented” (grandfathered) counselors were licensed under criteria which did not require a master’s or doctoral degree.¹⁶ Currently, there are approximately 1,071 LADC-Is in Massachusetts, of whom 895 are grandparented; the other 176 have at least a master’s degree. How many of the grandparented LADC-Is are bachelor’s-, master’s-, or doctoral-prepared is unknown. Since reimbursement from the carriers to LADC-Is depends on credentialing, it is a key factor in estimating the incremental impact of this law.

Most of the facts necessary to rigorously confirm the assumption about the proportion of LADC-Is that will be credentialed under Chapter 258 were not available or were conflicting. Significant considerations include the proportion currently in a private practice setting, the proportion with master’s degrees and the specific degrees earned, the proportion who will choose to apply for credentials, and the criteria carriers will apply. Given the likelihood that a master’s degree will be an important consideration for many or most carriers, the mid-level (most likely) estimate assumed

30 percent of LADC-Is would become credentialed. The low-end estimate assumed 10 percent of LADC-Is would be credentialed and a high-end estimate assumed 50 percent. Table 1 displays the estimates of credentialed LADC-Is.

**Table 1:
Estimate of Credentialed Current LADC-Is**

	<u>Total Credentialed LADC-Is</u>
Low Scenario	107
Mid Scenario	321
High Scenario	536

Given the need for additional LADC-Is to meet the demand for treatment, their numbers will likely grow over the projection period. The supply of LADC-Is has grown at a rate of 2.2 percent per year since the current licensing requirements went into effect. Given that LADC-I services will be reimbursable by carriers going forward this analysis assumed that growth rate will double to 4.4 percent per year in the mid-level best-estimate scenario. The low-end scenario assumed the growth rate will increase by half to 3.3 percent per year, and the high (conservative) scenario assumed the growth rate will triple to 6.6 percent per year. Given the assumed growth rates the credentialed numbers of LADC-Is by the end of the projection period are displayed in Table 2.

**Table 2:
Estimate of 2019 Credentialed LADC-Is**

	<u>Total Credentialed LADC-Is</u>
Low Scenario	122
Mid Scenario	381
High Scenario	691

4.2. Proportion of LADC-Is serving the fully-insured population

Estimating the cost of the mandate requires an estimate of the total hours of LADC-I time that would serve the commercial fully-insured population. Discussions with several providers confirmed that this mandate will help LADC-Is working at clinics meet the demand for substance abuse counseling for the commercially-insured population. To determine what portion of credentialed LADC-Is' time would be spent serving the fully-insured commercial population we started with a distribution of the state's population by payer, and determined that the fully-insured population is about 38.3 percent of the Massachusetts population.¹⁷ However, the Medicaid population uses a disproportionately higher share of substance abuse services. Using the APCD we determined that the Medicaid population incurs 14 times as many substance abuse services per member as the commercial population, stemming from both a higher percentage of Medicaid

enrollees receiving substance abuse treatment and a larger number of services per enrollee receiving substance abuse treatment. Data from similar populations in another state validate these findings. Adjusting the 38.3 percent commercial membership share for the far-smaller load of substance abuse services in that population results in LADC-Is serving the commercial fully-insured population with about 9 percent of their time. Given some level of uncertainty in the payer mix of services we forecasted a range of 7 to 12.8 percent of LADC-I time will be spent serving the fully-insured commercial population.

4.3. Net LADC-I billable hours

The average number of annual billable hours charged by LADC-Is was developed assuming a standard 40-hour work week. Separate estimates were made for private practice LADC-Is vs. those working for a clinic; total LADC-I hours were calculated assuming half of the LADC-Is would be in private practice and half would work for a clinic. Both an LADC-I working in a clinic and one practicing privately would provide less than 40 hours of clinical care per week, but LADC-Is working for a clinic would not spend as much time in non-billable administrative hours directly associated with running a private practice.

For LADC-Is working for a clinic and in private practice, billable hours were reduced by 20 percent for no shows, a typical behavioral health “no show” rate;¹⁸ that “lost” time would further absorb some administrative tasks common to clinic and private practice and a small reduction for LADC I team-delivered service (in clinics). This analysis also assumed private practitioners lose an additional 8 hours per week to administrative functions. Billable weeks per year was based on a 52-week calendar year, reduced by 6 weeks for vacation, holidays, and sick time, resulting in an estimate of 46 productive billable weeks per year for full-time providers. Multiplying the number of billable hours per week by the number of productive weeks per year yields an average of 1,334 billable hours per year for full-time providers. Table 3 displays these assumptions and results.

**Table 3:
LADC-I Average Annual Billable Hours**

	<u>Clinic</u> <u>LADC-Is</u>	<u>Private</u> <u>Practice</u>	<u>Weighted</u> <u>Average</u>
Hours per week	40	40	40
Less administrative hours	(0)	(8)	(4)
Net billable hours per week	40	32	36
Adjustment for “No Shows”	0.8	0.8	0.8
Net billable hours	32	26	29
Weeks per year			52
Less non productive weeks			(6)
Net billable weeks per year			46
Billable hours per week			29
Times billable weeks per year			X46
Billable hours per year			1,334

4.4. Hourly reimbursement rate of LADC-Is

To estimate the average cost per treatment, we used claims from the 2012 APCD. No claims were identified as LADC-I claims; instead, claims from other substance abuse provider types with similar training and hourly rates were used to estimate per-procedure costs. Rates from claims for mental health counselors, LCSW’s, LMHC’s, and marriage and family therapists were used as the basis for master’s-prepared providers.

The model assumes 100 percent of LADC-Is who would enter private practice are trained at a master’s degree level. Based on these assumptions, a 2012 average hourly rate for similar practitioners of \$53.49 was calculated from APCD commercial claims for behavioral health counseling.

4.5. Total incremental cost

For each scenario, multiplying the estimated average number of incremental billable hours by the cost per hour and then dividing the result by the projected fully-insured membership yields the medical expense per member per month (PMPM) displayed in Table 4.

**Table 4:
Estimate of Increase in Final-Year Carrier Medical Expense PMPM**

Low Scenario	\$0.03
Mid Scenario	\$0.12
High Scenario	\$0.31

The projected 2019 scenario PMPM of \$0.12 is equivalent to annual medical claims spending of approximately \$2.9 million (45,914 hoursⁱⁱ multiplied by \$64.02/hour, the inflation-adjusted rate). As context, if all the estimated 1,381 2019 LADC-Is served the fully-insured population and delivered 29 hours of service to members of fully-insured commercial plans for 46 weeks per year at \$64.02 per unit, the total additional spending would be approximately \$118 million (1,381 practitioners x 46 working weeks per year x 29 hours per week = 1,842,254 LADC-I hours in 2019. 1,842,254 x \$64.02 = \$118 million). However, the analysis assumes only a small portion of LADC-Is would serve the fully-insured commercial population, and that a significant proportion of their time would continue to go to the Medicaid population, as well as the self-insured commercial population, and would not impact this analysis, producing a much smaller estimate of incremental medical expense.

4.6. Carrier retention and increase in premium

Assuming an average retention rate of 11.5 percent, based on CHIA’s analysis of administrative costs and profit in Massachusetts,¹⁹ the increase in medical expense was adjusted upward to approximate the total impact on premiums. Table 5 shows the result.

**Table 5:
Estimate of Increase in Final-Year Carrier
Premium Expense PMPM**

Low Scenario	\$0.03
Mid Scenario	\$0.14
High Scenario	\$0.35

The mid-level 2019 PMPM premium of \$0.14 results in an annual total of approximately \$3.3 million.

4.7. Projected fully-insured population in Massachusetts

Table 6 shows the fully-insured population in Massachusetts ages 0 to 64 projected for the next five years. Appendix A describes the data sources and methodology for the population projections.

**Table 6:
Projected Fully-Insured Population in Massachusetts, Ages 0-64**

<u>Year</u>	<u>Total (0-64)</u>
2015	2,144,066
2016	2,120,558
2017	2,096,250
2018	2,071,138
2019	2,045,433

ⁱⁱ 381 LADC-Is credentialed by the commercial carriers x 9% of hours spent serving the commercial FI population x 46 working weeks per year x 29 counseling hours per week.

In addition to the membership projection, estimating the five-year cost impact of the law requires projecting the 2012 baseline PMPM cost forward to the same 2015-2019 period.

4.8. Five-year projection

To project over the five-year 2015-2019 period, we draw on the current number of LADC-Is and reimbursement rates from 2012 data, and develop assumptions and calculations for the 2019 market, interpolating values for 2015 to 2018 to complete the 2015-2019 projection. The interpolated values include a steady annual increase of LADC-Is serving the fully-insured commercial market from the beginning of the projection period through 2019. The 2012 base period unit prices are adjusted using an average annual projected physician cost trend of 2.6 percent.

5. Results

The estimated impact of the law is summarized below. The analysis includes development of a best estimate “mid-level” scenario, as well as a low-level scenario using assumptions that produced a lower estimate, and a high-level scenario using more conservative assumptions that produced a higher estimated impact.

5.1. Five-year estimated impact

For each year in the five-year analysis period, Table 7 displays the projected net impact of the mandate on medical expense and premiums using a projection of Massachusetts fully-insured membership. Note that Chapter 258 is effective on October 1, 2015; therefore the impact in 2015 is for a small number of policies renewing in the 4th quarter.²⁰

By the last year of the projection period this analysis estimates that the mandate, if enacted, would increase fully-insured premiums by as much as 0.06 percent; a more likely increase is in the range of 0.02 percent.

Finally, the impact of the law on any one individual, employer-group, or carrier may vary from the overall results depending on the current level of benefits each receives or provides, and on how the benefits will change under the mandate.

Table 7: Summary Results

	2015	2016	2017	2018	2019	Average	5 Yr Total
Members (000s)	2,144	2,121	2,096	2,071	2,045		
Medical Expense Low (\$000s)	\$4	\$165	\$340	\$527	\$726	\$438	\$1,762
Medical Expense Mid (\$000s)	\$16	\$646	\$1,349	\$2,112	\$2,939	\$1,755	\$7,063
Medical Expense High (\$000s)	\$37	\$1,560	\$3,325	\$5,315	\$7,551	\$4,419	\$17,789
Premium Low (\$000s)	\$5	\$186	\$385	\$596	\$820	\$495	\$1,991
Premium Mid (\$000s)	\$18	\$730	\$1,524	\$2,387	\$3,321	\$1,983	\$7,980
Premium High (\$000s)	\$42	\$1,763	\$3,757	\$6,006	\$8,532	\$4,993	\$20,100
PMPM Low	\$0.01	\$0.01	\$0.02	\$0.02	\$0.03	\$0.02	\$0.02
PMPM Mid	\$0.03	\$0.03	\$0.06	\$0.10	\$0.14	\$0.07	\$0.07
PMPM High	\$0.06	\$0.07	\$0.15	\$0.24	\$0.35	\$0.17	\$0.17
Estimated Monthly Premium	\$512	\$537	\$564	\$592	\$622	\$566	\$566
Premium % Rise Low	0.00%	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%
Premium % Rise Mid	0.01%	0.01%	0.01%	0.02%	0.02%	0.01%	0.01%
Premium % Rise High	0.01%	0.01%	0.03%	0.04%	0.06%	0.03%	0.03%

5.2. Impact on the GIC

Chapter 258 applies to both fully-insured and self-insured plans operated for state and local employees by the Group Insurance Commission (GIC), with an effective date for all GIC policies on October 1, 2015.

Benefit offerings of GIC plans are generally similar to those of most other commercial plans in Massachusetts. Because the utilization rate for substance abuse outpatient services for the GIC membership is not materially different than that for general full-insured plans, the estimated effect of the mandate on GIC PMPM medical expense is not expected to differ from that calculated for the other fully-insured plans in Massachusetts. It is important to note that approximately 30 percent of the GIC membership was cleanly identifiable in the APCD, and the utilization estimate assumes the available portion represents a reasonable sample of the overall GIC membership.

Table 8 breaks out the GIC-only fully-insured membership and the GIC self-insured membership. Note that the total medical expense and premium values for the general fully-insured membership displayed in Table 7 also include the GIC fully-insured membership. Finally, the law requires the GIC to implement the provisions fully on October 1, 2015; therefore, the fourth quarter of 2015 represents approximately one quarter of an annual value.

**Table 8:
GIC Summary Results**

	Q4 2015	2016	2017	2018	2019	Weighted Average	5 Yr Total
GIC Fully-Insured							
Members (000s)	57	57	57	57	57		
Medical Expense Low (\$000s)	\$1	\$4	\$9	\$15	\$20	\$12	\$49
Medical Expense Mid (\$000s)	\$4	\$17	\$37	\$58	\$82	\$47	\$198
Medical Expense High (\$000s)	\$10	\$42	\$90	\$146	\$210	\$117	\$498
Premium Low (\$000s)	\$1	\$5	\$10	\$16	\$23	\$13	\$56
Premium Mid (\$000s)	\$5	\$20	\$41	\$66	\$92	\$53	\$224
Premium High (\$000s)	\$11	\$47	\$102	\$165	\$237	\$132	\$563
GIC Self-Insured							
Members (000s)	259	259	259	258	258		
Medical Expense Low (\$000s)	\$5	\$20	\$42	\$66	\$92	\$53	\$224
Medical Expense Mid (\$000s)	\$19	\$79	\$167	\$263	\$371	\$211	\$898
Medical Expense High (\$000s)	\$44	\$191	\$410	\$663	\$952	\$532	\$2,260

Appendix A: Membership Affected by the Mandate

Membership potentially affected by a mandate may include Massachusetts residents with fully-insured employer-sponsored health insurance (including through the GIC), non-residents with fully-insured employer-sponsored insurance issued in Massachusetts, Massachusetts residents with individual (direct) health insurance coverage, and, in some cases, lives covered by GIC self-insured coverage. Membership projections for 2015 to 2019 are derived from the following sources.

Total Massachusetts population estimates for 2012 and 2013 from U. S. Census Bureau data²¹ form the base for the projections. Distributions by gender and age, also from the Census Bureau,²² were applied to these totals. Projected growth rates for each gender/age category were calculated from Census Bureau population projections to 2030.²³ The resulting growth rates were then applied to the base amounts to project the total Massachusetts population for 2015 to 2019.

The number of Massachusetts residents with employer-sponsored or individual (direct) health insurance coverage was estimated using Census Bureau data on health insurance coverage status and type of coverage²⁴ applied to the population projections.

To estimate the number of Massachusetts residents with fully-insured employer-sponsored coverage, projected estimates of the percentage of employer-based coverage that is fully-insured were developed using historical data from the Medical Expenditure Panel Survey Insurance Component Tables.²⁵

To estimate the number of non-residents covered by a Massachusetts policy – typically cases in which a non-resident works for a Massachusetts employer offering employer-sponsored coverage – the number of lives with fully-insured employer-sponsored coverage was increased by the ratio of the total number of individual tax returns filed in Massachusetts by residents²⁶ and non-residents²⁷ to the total number of individual tax returns filed in Massachusetts by residents.

The number of residents with individual (direct) coverage was adjusted further to subtract the estimated number of people previously covered by Commonwealth Care who moved into MassHealth due to expanded Medicaid eligibility under the Affordable Care Act.²⁸

Projections for the GIC self-insured lives were developed using GIC base data for 2012²⁹ and 2013³⁰ and the same projected growth rates from the Census Bureau that were used for the Massachusetts population. Breakdowns of the GIC self-insured lives by gender and age were based on the Census Bureau distributions.

Endnotes

¹ M.G.L. c.32A §22, c.175 §47B, c.176A §8A, c.176B §4A, c.176G §4M.

² Massachusetts Acts of 2014, Chapter 258, “An Act to Increase Opportunities for Long-Term Substance Abuse Recovery”. Accessed 2 October 2014: <https://malegislature.gov/Laws/SessionLaws/Acts/2014/Chapter258>.

³ 105 CMR 168.004: Licensure of Alcohol and Drug Counselors, Definitions. Accessed 14 July 2014: <http://www.mass.gov/eohhs/docs/dph/regs/105cmr168.pdf>.

⁴ Email communication with Department of Public Health, Bureau of Substance Abuse Services, 15 July 2014.

⁵ 105 CMR 168.006: Licensure of Alcohol and Drug Counselors, Eligibility Requirements. Accessed 15 July 2014: <http://www.mass.gov/eohhs/docs/dph/regs/105cmr168.pdf>.

Specifically, work experience must at a minimum include:

- a) practice in diagnostic assessment, intervention, and alcoholism and/or drug counseling in both individual and group settings;
- b) practice in alcoholism and/or drug counseling to establish and maintain recovery and prevent relapse; and
- c) weekly, on-site and documented clinical experience.

⁶ *Op. cit.* 105 CMR 168.004: Licensure of Alcohol and Drug Counselors, Definitions.

⁷ These include governmental and school employees acting under the jurisdiction or on behalf of their respective agency, employees of licensed alcohol and drug treatment programs, as well as educational psychologists, marriage and family therapists, mental health counselors, nurse practitioners, occupational therapists, physicians, physician assistants, practical nurses, psychologists, registered nurses, rehabilitation counselors and social workers. 105 CMR 168.005: Licensure of Alcohol and Drug Counselors, Exemptions. Accessed 14 July 2014: <http://www.mass.gov/eohhs/docs/dph/regs/105cmr168.pdf>.

⁸ Behavioral Sciences includes: anthropology, art/dance therapy, child development/family relations, community mental health, chemical dependence, counseling/guidance, criminal justice, divinity/religion/theology, drama therapy, education, gerontology, health administration, health education, human services, music therapy, nursing/medicine, occupational therapy, pastoral counseling, physical therapy, psychology, recreational therapy, rehabilitation counseling, social work, sociology, special education, speech pathology, and vocational counseling. *Op. cit.* 105 CMR 168.004: Licensure of Alcohol and Drug Counselors, Definitions.

⁹ Licensure would be granted to those who: 1) Received certification as Certified Alcohol and Drug Abuse Counselor (CADAC), Certified Clinical Supervision (CCS), Certified Addiction Specialist (CAS), Certified Employment Assistance Professional (CEAP) or Certified Alcohol Counselor (CAC); OR 2) Served as an executive director, program director or clinical director of a substance abuse program; OR 3) Served as a clinical or administrative supervisor in a substance abuse program and has defined clinical and supervisory experience; OR 4) Has a master’s degree in behavioral science and 4,000 hours of substance abuse clinical experience and 270 hours of alcohol and drug counseling education; OR 5) has a bachelors degree and 6,000 hours of substance abuse clinical experience and 270 hours of alcohol and drug counseling education. 105 CMR 168.012: Licensure of Alcohol and Drug Counselors, Grandparenting Licensure. Accessed 14 July 2014: <http://www.mass.gov/eohhs/docs/dph/regs/105cmr168.pdf>.

¹⁰ Email communication with Department of Public Health, Bureau of Substance Abuse Services, 9 July 2014.

¹¹ Email communication with Department of Public Health, Bureau of Substance Abuse Services, 26 August 2014.

¹² Email communication with Department of Public Health, Bureau of Substance Abuse Services, 9 July 2014.

¹³ Survey of Massachusetts insurance carriers, distributed by Massachusetts Center for Health Information and Analysis, 27 August 2014.

¹⁴ *Op. cit.* Survey of Massachusetts insurance carriers, distributed by Massachusetts Center for Health Information and Analysis, 27 August 2014.

¹⁵ Phone interviews by Compass staff conducted July and August 2014 with provider staff from: AdCare, High Point Treatment Centers, Spectrum Health Systems.

¹⁶ Licensure would be granted to those who: 1) Received certification as Certified Alcohol and Drug Abuse Counselor (CADAC), Certified Clinical Supervision (CCS), Certified Addiction Specialist (CAS), Certified Employment Assistance Professional (CEAP) or Certified Alcohol Counselor (CAC); OR 2) Served as an executive director, program director or clinical director of a substance abuse program; OR 3) Served as a clinical or administrative supervisor in a substance abuse program and has defined clinical and supervisory experience; OR 4) Has a master's degree in behavioral science and 4,000 hours of substance abuse clinical experience and 270 hours of alcohol and drug counseling education; OR 5) has a bachelors degree and 6,000 hours of substance abuse clinical experience and 270 hours of alcohol and drug counseling education. 105 CMR 168.012: Licensure of Alcohol and Drug Counselors, Grandparenting Licensure. Accessed 14 July 2014: <http://www.mass.gov/eohhs/docs/dph/regs/105cmr168.pdf>.

¹⁷ Annual Report on Massachusetts Health Care Market, Commonwealth of Massachusetts, Center for Health Information Analysis, Accessed August 2013: <http://www.mass.gov/chia/docs/r/pubs/13/ar-ma-health-care-market-2013.pdf>. Calculations from Coverage Chart on page 4 derived the distribution between commercial, Medicare, Medicaid, and the uninsured and from the chart on page 8 ("Enrollment by Market Sector") yielded a fully insured vs. self incurred split for commercial coverage.

¹⁸ More information can be found at <http://www.apr.rcpsych.org/content/13/6/423.full>.

¹⁹ Massachusetts Center for Health Information and Analysis. Annual Report on the Massachusetts Health Care Market, August 2013. Accessed 17 March 2014: <http://www.mass.gov/chia/docs/r/pubs/13/ar-ma-health-care-market-2013.pdf>.

²⁰ With a start date of October 1, 2015 dollars were estimated at only 2.5% of the annual cost, based upon an assumed renewal distribution by month (Oct through Dec) by market segment and the Massachusetts market segment composition.

²¹ U.S. Census Bureau. Annual Estimates of the Population for the United States, Regions, States, and Puerto Rico: April 1, 2010 to July 1, 2013. Accessed 23 January 2014: <http://www.census.gov/popest/data/state/totals/2013/index.html>.

²² U.S. Census Bureau. Annual Estimates of the Resident Population by Single Year of Age and Sex for the United States, States, and Puerto Rico Commonwealth: April 1, 2010 to July 1, 2012. Accessed 23 January 2014: <http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkml>.

²³ U.S. Census Bureau. File 4. Interim State Projections of Population by Single Year of Age and Sex: July 1, 2004 to 2030, U.S. Census Bureau, Population Division, Interim State Population Projections, 2005. Accessed 23 January 2014: <http://www.census.gov/population/projections/data/state/projectionsagesex.html>.

²⁴ U.S. Census Bureau. Table HIB-4. Health Insurance Coverage Status and Type of Coverage by State All People: 1999 to 2012. Accessed 23 January 2014: http://www.census.gov/hhes/www/hlthins/data/historical/HIB_tables.html.

²⁵ Agency for Healthcare Research and Quality. Percent of private-sector enrollees that are enrolled in self-insured plans at establishments that offer health insurance by firm size and State (Table II.B.2.b.1), years 1996-2012: 1996 (Revised March 2000), 1997 (March 2000), 1998 (August 2000), 1999 (August 2001), 2000 (August 2002), 2001 (August 2003), 2002 (July 2004), 2003 (July 2005), 2004 (July 2006), 2005 (July 2007), 2006 (July 2008), 2008 (July 2009), 2009 (July 2010), 2010 (July 2011), 2011 (July 2012), 2012 (July 2013). Medical Expenditure Panel Survey Insurance Component Tables. Generated using MEPSnet/IC. Accessed 31 January 2014: http://www.meps.ahrq.gov/mepsweb/data_stats/MEPSnetIC.jsp.

²⁶ IRS. Table 2. Individual Income and Tax Data, by State and Size of Adjusted Gross Income, Tax Year 2010. Accessed 6 March 2014: <http://www.irs.gov/uac/SOI-Tax-Stats---Historic-Table-2>.

²⁷ Massachusetts Department of Revenue. Massachusetts Personal Income Tax Paid by Non-Resident by State for TY2010. Accessed 23 January 2014: <http://www.mass.gov/dor/tax-professionals/news-and-reports/statistical-reports/>.

²⁸ Massachusetts Budget and Policy Center. THE GOVERNOR'S FY 2014 HOUSE 1 BUDGET PROPOSAL. Accessed 5 March 2014: http://www.massbudget.org/reports/pdf/mmpi_gov_14.pdf.

²⁹ Group Insurance Commission. Group Insurance Commission Fiscal Year 2012 Annual Report. Accessed 14 March 2014: <http://www.mass.gov/anf/docs/gic/annual-report/arfy2012.pdf>.

³⁰ Group Insurance Commission. GIC Health Plan Membership by Insured Status FY2013. Accessed 22 January 2014: <http://www.mass.gov/anf/employee-insurance-and-retirement-benefits/annual-reports/annual-report-fy-2013-financial-and-trend.html>.

**Actuarial Assessment of
Chapter 258 of the Acts of 2014:
“An Act to increase opportunities for
long-term substance abuse recovery”**

**Acute Treatment and Clinical Stabilization Services
and Substance Abuse Treatment Preauthorization**

Prepared for
Commonwealth of Massachusetts
Center for Health Information and Analysis

December 2014

Prepared by
Compass Health Analytics, Inc.



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Actuarial Assessment of Chapter 258 of the Acts of 2014: “An Act to increase opportunities for long-term substance abuse recovery”

Acute Treatment and Clinical Stabilization Services and Substance Abuse Treatment Preauthorization

Executive Summary

Among the provisions of Chapter 258 of the Massachusetts Acts of 2014 (Chapter 258), two place restrictions on the ability of health insurance carriers to require authorization for substance abuse services. Carriers generally require providers to obtain preauthorization (prior authorization) for such services or the carrier will deny payment. In addition, for facility services, the carrier may review the necessity of continuing the treatment (in a “concurrent review”) and may sometimes terminate authorization for an ongoing stay. Chapter 258 eliminates preauthorization across the range of substance abuse services covered by the carrier, and also eliminates carriers’ ability to terminate authorization for stays shorter than 14 days for two intensive facility-based services.

Specifically, these provisions of the law require:

- No preauthorization for “substance abuse treatment”: Health insurance plans “shall not require a member to obtain preauthorization for substance abuse treatment if the provider is certified or licensed by the department of public health.” The law further defines substance abuse treatment to include “early intervention services for substance use disorder treatment; outpatient services including medically assisted therapies; intensive outpatient and partial hospitalization services; residential or inpatient services...; and medically managed intensive inpatient services...”¹
- No preauthorization or concurrent review for acute treatment services (ATS) and crisis stabilization services (CSS): Health insurance plans “shall provide...coverage for medically necessary acute treatment servicesⁱ and medically necessary clinical stabilization servicesⁱⁱ for up to a total of 14 days and shall not require preauthorization prior to obtaining acute treatment services or clinical stabilization services...; provided further, that utilization review procedures may be initiated on day 7. Medical necessity shall be determined by the treating clinician in consultation with the patient and noted in the patient’s medical record.”²

Read together, the two provisions prevent carriers from requiring prior authorization for the entire spectrum of substance abuse treatment. They further limit the discretion insurers have in managing acute treatment services (ATS) and clinical stabilization services (CSS). The provisions

ⁱ “Acute treatment services,” as defined in Chapter 258: “24-hour medically supervised addiction treatment for adults or adolescents provided in a medically managed or medically monitored inpatient facility, as defined by the department of public health..., that provides evaluation and withdrawal management...”

ⁱⁱ “Clinical stabilization services,” as defined in Chapter 258: “24-hour clinically managed post detoxification treatment for adults or adolescents, as defined by the department of public health..., usually following acute treatment services..., for individuals beginning to engage in recovery from addiction.”

apply to policies from fully-insured commercial insurance plans issued or renewed on or after October 1, 2015, and apply to both fully-insured and self-insured plans operated for state and local employees by the Group Insurance Commission (GIC), with an effective date for all GIC policies of October 1, 2015.

Massachusetts General Laws (M.G.L.) c. 3 § 38C charges the Massachusetts Center for Health Information and Analysis (CHIA) with reviewing the potential impact of proposed mandated health care insurance benefits on the premiums paid by businesses and consumers. CHIA has engaged Compass Health Analytics, Inc. to provide an actuarial estimate of the effect the law has on the cost of health care insurance in Massachusetts.

Assessing the impact of this law entails analyzing its incremental effect on spending by insurance plans. This in turn requires comparing spending under the provisions of the law to spending under current statutes and current benefit plans for the relevant services.

Background

Chapter 258 enables providers to control initial access to substance abuse services and limits the ability of insurers to restrict access with prior authorization requirements or medical necessity criteria.

Current coverage

Before implementation of the relevant provisions of Chapter 258 in October 2015, private insurers in Massachusetts may require prior authorization for substance abuse treatment (SAT) services.³ According to some providers as well as a survey of Massachusetts insurance carriers, patients would generally not be admitted for these types of treatments unless an insurer approved the treatment or stay prior to admission, based on the insurer's medical necessity criteria and determination. ATS stays are much more likely to be approved by insurers than CSS admissions.⁴

Until implementation of Chapter 258, for patients who receive prior authorization for treatment or admission, insurers most often provide preliminary approval for a set number of treatment days. If a provider determines that treatment needs to extend beyond this initially-approved timeframe, the insurer may conduct a utilization review (UR) to determine if a longer stay or additional treatment is medically necessary. The insurer both defines the medical necessity criteria used and determines whether a patient meets the criteria outlined for a longer stay or treatment. A survey of carriers found that preauthorization is also required for other levels of service, including intensive outpatient day treatment.

Changes to access to services under Chapter 258

The primary effect of these sections of Chapter 258 is to shift the balance of decision-making about treatment approval for various levels of substance abuse services from the insurer to the provider; under the new law, the provider determines into which level of service a patient is admitted without need for prior authorization from the insurer.

For ATS/CSS services specifically, the law goes further and transfers to the provider the ability to both define and determine the medical necessity of treatment for the first 14 days of a treatment episode.⁵ This is a significant change as the respective definitions of medical or treatment necessity held by commercial insurers and substance abuse treatment providers are often different; criteria used by providers to set treatment are generally broader, focused not only on a patient's detoxification and stabilization, but often also on readiness to change and the degree of support in his or her living environment. How these arguably broader criteria are interpreted by providers and applied to commercially-insured patients with substance use disorders will determine the impact of Chapter 258 provisions regarding access to the various levels of substance abuse treatment.

Overlap with mental health parity statutes

The Massachusetts mental health parity statutes⁶ require insurers to cover biologically-based mental disorders, including substance abuse disorders, and already mandate most of the services in the spectrum of substance abuse treatment included in Chapter 258. The extent to which the existing parity statutes overlap with Chapter 258 introduces some uncertainty into the estimate of the effect of Chapter 258 on commercial premiums: if the parity statutes do not already mandate all services in the substance abuse treatment spectrum, and Chapter 258 is read to do so, then Chapter 258 not only prohibits preauthorization of selected services but requires coverage for some previously non-mandated services. This analysis does not interpret Chapter 258 to extend required coverage beyond that already required in the parity mandates.

Analysis

In its simplest form, the primary question in estimating the impact on carriers' medical expense of this provision of Chapter 258 is: How will volumes of substance abuse services delivered to fully-insured members change, by level of care? Answering this question requires considering the factors that influence the demand for, and supply of, these services.

Assessing potential demand for substance abuse services relies primarily on a review of historical data about levels of treatment before managed care techniques were implemented along with consideration of the current environment in Massachusetts. Projecting the supply of services requires considering the current capacity in the system for substance abuse treatment facilities licensed by BSAS, as well as other facilities providing treatment. Licensed bed expansions and displacement of Medicaid patients also may drive future capacity expansion.

This general approach was executed in the following steps.

Analyze service delivery capacity

- Construct an historical baseline profile of substance abuse service use by level of care in 2012, broken into utilization and average unit cost, and project forward a baseline cost estimate over the projection period

- Using available Commonwealth resources, determine the current licensed bed capacity for substance abuse treatment units, and the known and expected future expansions
- Relying on all-payer claim data, assess the potential for displacement of Medicaid admissions by commercial admissions

Analyze potential demand for services

- Review available literature on historical impacts of managed care controls on substance abuse service use and costs
- Develop ranges of potential service expansion/shifting by level of care
- Compare the potential demand for services to the available and projected capacity of services, using the smaller of the two in any time period as the projected utilization value

Calculate insurance premium impact of projected spending

- Subtract the baseline projection from the Chapter 258 projection based on capacity and demand
- Estimate the impact of insurer retention (administrative costs and profit) on premiums and estimate the fully-insured Massachusetts population under age 65, projected for the next five years (2015 to 2019)
- Project the estimated cost over the next five years

Based in part on a shift back toward (though not arriving at) the much higher historical levels of inpatient treatment prior to implementation of managed care programs, and in part on some displacement of Medicaid patients, for whom provider rates are lower, the analytical results include a significant increase in inpatient ATS utilization by 2019 of between 10 and 27 percent. As CSS is now nearly absent in the commercial market, a much larger percentage increase in CSS services is likely. Note that billing data in the APCD indicate that almost one third of ATS/CSS service dollars reimbursed by commercial insurers are spent on providers outside Massachusetts, not licensed by DPH, and thus not subject to the law's authorization approval restrictions.

Because ambulatory outpatient services are not now preauthorized by most Massachusetts carriers and increased access to CSS will reduce pressure on outpatient day programs, the potential demand increase for these services is small, while supply increases are expected to be minimal because of the difficulty providers have achieving profitability on outpatient service programs. Therefore, this analysis assumes that on net outpatient services will not shift materially from their baseline projected levels.

Summary results

For each year in the five-year analysis period, Table ES1 displays the projected net impact of the mandate on medical expense and premiums using a projection of Massachusetts fully-insured

membership. Note that Chapter 258 is effective October 1, 2015; therefore the impact in 2015 is for a small number of policies renewing in the fourth quarter.

By the last year of the projection period this analysis estimates that the mandate would increase fully-insured premiums by as much as 0.02 percent; a more likely increase is in the range of 0.01 percent. The relatively modest impact estimates, despite large increases in assumed system ATS/CSS capacity, stem primarily from a relatively small base of substance abuse spending in the commercial fully-insured population, lack of coverage by commercial insurers for residential services other than CSS, and to the exclusion – from the base of services to which Chapter 258 applies – of the third of ATS/CSS dollars spent on out-of-state facilities and of expenses for longer-term residential services.

Finally, the impact of the law on any one individual, employer-group, or carrier may vary from the overall results depending on the current level of benefits each receives or provides, and on how the benefits will change under the mandate.

Table ES1: Summary Results

	Q4 2015	2016	2017	2018	2019	Weighted Average	5 Yr Total
Members (000s)	2,144	2,121	2,096	2,071	2,045		
Medical Expense Low (\$000s)	\$20	\$886	\$968	\$1,052	\$1,149	\$1,013	\$4,076
Medical Expense Mid (\$000s)	\$29	\$1,341	\$1,477	\$1,696	\$1,928	\$1,608	\$6,472
Medical Expense High (\$000s)	\$37	\$1,883	\$2,171	\$2,488	\$2,845	\$2,341	\$9,424
Premium Low (\$000s)	\$22	\$1,001	\$1,094	\$1,189	\$1,299	\$1,144	\$4,605
Premium Mid (\$000s)	\$33	\$1,516	\$1,669	\$1,917	\$2,179	\$1,817	\$7,313
Premium High (\$000s)	\$42	\$2,127	\$2,454	\$2,811	\$3,215	\$2,645	\$10,649
PMPM Low	\$0.03	\$0.04	\$0.04	\$0.05	\$0.05	\$0.04	\$0.04
PMPM Mid	\$0.05	\$0.06	\$0.07	\$0.08	\$0.09	\$0.07	\$0.07
PMPM High	\$0.06	\$0.08	\$0.10	\$0.11	\$0.13	\$0.10	\$0.10
Estimated Monthly Premium	\$512	\$537	\$564	\$592	\$622	\$566	\$566
Premium % Rise Low	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%
Premium % Rise Mid	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%
Premium % Rise High	0.01%	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%

Executive Summary Endnotes

¹ Massachusetts Acts of 2014, Chapter 258, “An Act to Increase Opportunities for Long-Term Substance Abuse Recovery”, Sections 9, 21, 23, 25, and 27. Accessed 2 October 2014: <https://malegislature.gov/Laws/SessionLaws/Acts/2014/Chapter258>.

² *Op. cit.* Acts 2014 c. 258. Sections 9, 21, 23, 25, and 27.

³ Phone interviews by Compass staff conducted July and August 2014 with Massachusetts provider staff from: AdCare, High Point Treatment Centers, Spectrum Health Systems.

⁴ Phone interviews by Compass staff conducted July and August 2014 with Massachusetts provider staff from: AdCare, High Point Treatment Centers, Spectrum Health Systems.

⁵ Preliminary interpretation of the law might suggest that provider-defined criteria will be used for determining medical necessity of stays for ATS and/or CSS through the first 14 days of treatment, presuming that the criteria have been formally published and/or adopted by a relevant professional organization such as ASAM. After 14 days of treatment, insurers may define and determine the medical necessity of a continuing stay. Moreover, for levels of service other than ATS or CSS, the definition and determination of the medical necessity of substance abuse treatment remains with the insurer (as defined by contract/policy terms).

⁶ M.G.L. c.32A §22, c.175 §47B, c.176A §8A, c.176B §4A, c.176G §4M.

Actuarial Assessment of Chapter 258 of the Acts of 2014: “An Act to increase opportunities for long-term substance abuse recovery”

Acute Treatment and Clinical Stabilization Services and Substance Abuse Treatment Preauthorization

1. Introduction

Among the provisions of Chapter 258 of the Massachusetts Acts of 2014 (Chapter 258), two place restrictions on the ability of health insurance carriers to require authorization for substance abuse services. Carriers generally require providers to obtain preauthorization (prior authorization) for such services or the carrier will deny payment. In addition, for facility services, the carrier may review the necessity of continuing the treatment (in a “concurrent review”) and may sometimes terminate authorization for an ongoing stay. Chapter 258 eliminates preauthorization across the full spectrum of substance abuse services, and, for two intensive facility-based services, also eliminates carriers’ ability to terminate authorization for stays shorter than 14 days.

Specifically, these provisions of the law require:

- No preauthorization for “substance abuse treatment”: Health insurance plans “shall not require a member to obtain preauthorization for substance abuse treatment if the provider is certified or licensed by the department of public health.” The law further defines substance abuse treatment to include “early intervention services for substance use disorder treatment; outpatient services including medically assisted therapies; intensive outpatient and partial hospitalization services; residential or inpatient services...; and medically managed intensive inpatient services...”¹
- No preauthorization or concurrent review for acute treatment services (ATS) and crisis stabilization services (CSS): Health insurance plans “shall provide...coverage for medically necessary acute treatment servicesⁱⁱⁱ and medically necessary clinical stabilization services^{iv} for up to a total of 14 days and shall not require preauthorization prior to obtaining acute treatment services or clinical stabilization services...; provided further, that utilization review procedures may be initiated on day 7. Medical necessity shall be determined by the treating clinician in consultation with the patient and noted in the patient’s medical record.”²

These two provisions touch most of the spectrum of substance abuse services, prohibiting prior authorization for all, and prohibiting concurrent review denials within 14 days for ATS/CSS.

ⁱⁱⁱ “Acute treatment services,” as defined in Chapter 258: “24-hour medically supervised addiction treatment for adults or adolescents provided in a medically managed or medically monitored inpatient facility, as defined by the department of public health..., that provides evaluation and withdrawal management...”

^{iv} “Clinical stabilization services,” as defined in Chapter 258: “24-hour clinically managed post detoxification treatment for adults or adolescents, as defined by the department of public health..., usually following acute treatment services..., for individuals beginning to engage in recovery from addiction.”

Massachusetts General Laws (M.G.L.) c. 3 § 38C charges the Massachusetts Center for Health Information and Analysis (CHIA) with reviewing the potential impact of proposed mandated health care insurance benefits on the premiums paid by businesses and consumers. CHIA has engaged Compass Health Analytics, Inc. to provide an actuarial estimate of the effect the law has on the cost of health care insurance in Massachusetts.

Assessing the impact of this law entails analyzing the incremental effect of the law on spending by insurance plans. This in turn requires comparing spending under the provisions of the law to spending under current statutes and current benefit plans for the relevant services.

Section 2 of this analysis outlines the provisions of the law. Section 3 summarizes the methodology used for the estimate. Section 4 discusses important considerations in translating the law's language into estimates of its incremental impact on health care costs and steps through the analysis of the calculations. Section 5 summarizes the results.

2. Interpretation of Chapter 258

The following subsections describe the provisions of Chapter 258 related to coverage for acute treatment and clinical stabilization services and to preauthorization for substance abuse treatment.

2.1. Plans affected by the Chapter 258 mandates

Chapter 258 amends the statutes that regulate insurers providing health insurance in Massachusetts. The following five sections of the law, each addressing existing statutes dealing with a particular type of health insurance policy, were relevant to this analysis:

- Section 9: Insurance for persons in service of the Commonwealth (creating M.G.L. c. 32A, §§ 17M and 17N)
- Section 21: Accident and sickness insurance policies (creating M.G.L. c. 175, §§ 47FF and 47GG)
- Section 23: Contracts with non-profit hospital service corporations (creating M.G.L. c. 176A, §§ 8HH and 8II)
- Section 25: Certificates under medical service agreements (creating M.G.L. c. 176B, §§ 4HH and 4II)
- Section 27: Health maintenance contracts (creating M.G.L. 176G, §§ 4Z and 4AA)

The law requires coverage for members under the relevant plans, regardless of whether they reside within the Commonwealth or merely have their principal place of employment in the Commonwealth.

Self-insured commercial plans are subject to federal law and, with the exception of those operated by the Group Insurance Commission (GIC), not to state-level health insurance benefit mandates. State mandates do not apply to Medicare, and this analysis assumes that this mandate does not

affect Medicare extension/supplement plans even to the extent they are regulated by state law. This analysis does not apply to the effect of Chapter 258 on Medicaid/MassHealth; Chapter 258 includes a separate provision related to MassHealth coverage of acute treatment and clinical stabilization services.

The provisions apply to policies from fully-insured commercial insurance plans issued or renewed on or after October 1, 2015, and apply to both fully-insured and self-insured plans operated for state and local employees by the GIC, with an effective date for all GIC policies of October 1, 2015.

2.2. Substance abuse services covered by Chapter 258

Chapter 258 limits the discretion commercial fully-insured health insurance plans have in managing substance abuse treatment. It has two provisions related to services on the spectrum of available substance abuse services, as quoted above in Section 1.

The law is so written that the restraint on preauthorization (prior authorization) in the first provision applies to the full range of substance abuse services except for services in the second provision, i.e., acute treatment and clinical stabilization services (ATS/CSS). However the second provision prohibits insurers from requiring prior authorization for acute treatment and clinical stabilization services. Therefore, read together, the two provisions prevent carriers from requiring prior authorization for the entire spectrum of substance abuse services. They then further limit the discretion insurers have in managing ATS/CSS by allowing providers, not carriers, to determine those services are medically necessary for the first 14 days of an episode of ATS and/or CSS.

Both provisions refer to substance abuse facilities or programs licensed or defined, and therefore essentially approved, by the Massachusetts Department of Public Health (DPH). Therefore if a carrier covers treatment at a facility not licensed or approved by DPH, perhaps outside DPH's jurisdiction (e.g., not based in Massachusetts), the carrier is not bound by Chapter 258's restraints on the management of services at that facility.

2.3. Changes to coverage under Chapter 258

Chapter 258 enables providers to control initial access to these substance abuse services and limits the ability of insurers to restrict access with prior authorization requirements or medical necessity criteria.

Current coverage

Before implementation of the relevant provisions of Chapter 258 in October 2015, private insurers in Massachusetts may require prior authorization for substance abuse services under most circumstances.^{v,3} According to some providers, patients would generally not be admitted for these types of treatments unless an insurer approved the treatment or stay prior to admission, based on the insurer's medical necessity criteria and determination.

^v Exceptions are made by some insurers for after-hours and weekend admissions.

Based on interviews with selected providers of inpatient services as well as a survey of Massachusetts insurance carriers, ATS stays were much more likely to be approved by insurers than CSS admissions.⁴ Some insurers would not admit patients to the CSS level of care regardless of circumstances, while others would not admit to CSS directly;⁵ i.e., they would allow CSS care only as a step-down from ATS, or after outpatient treatment was attempted and proven inadequate. Analysis of claims in the Massachusetts All Payer Claim Database, maintained by CHIA, confirms very small amounts of CSS were paid for under fully-insured commercial insurance plans.

Until implementation of Chapter 258, for patients who receive prior authorization for treatment or admission, insurers most often provide preliminary approval for a set number of treatment days. If a provider determines that treatment needs to extend beyond this initially-approved timeframe, the insurer may conduct a utilization review (UR) to determine if a longer stay or additional treatment is medically necessary. The insurer both defines the medical necessity criteria used and determines whether a patient meets the criteria outlined for a longer stay or treatment. A survey of carriers found that preauthorization is also required for other levels of service, including intensive outpatient day treatment.

Changes to access to services under Chapter 258

The primary effect of these sections of Chapter 258 is to shift the balance of decision-making about approval for various levels of substance abuse services from the insurer to the provider; under the new law, the provider determines into which level of service a patient is admitted without need for prior authorization from the insurer.

For ATS/CSS services specifically, the law goes further and transfers to the provider the ability to both define and determine the medical necessity of treatment for the first 14 days of a patient's treatment episode.⁶ This is a significant change as the respective definitions of medical or treatment necessity held by commercial insurers and substance abuse treatment providers are often different. In commercial insurance, medical necessity criteria commonly dictate not only whether treatment is necessary, but at what level of care the services are provided.⁷ Services are generally determined based on diagnosis, and are intended to restore an individual to a level of functioning present prior to an acute episode, illness, or injury. Most often in case involving substance abuse services, authorization for admission or continuation of treatment after review is determined by a patient's withdrawal symptoms and severity, as well as the severity of co-occurring biomedical conditions. In some cases, emotional, behavioral, or cognitive conditions and complications may be considered. These medical necessity criteria, then, are focused on a patient's acute detoxification, withdrawal, and medical stabilization.

Substance abuse providers use medical necessity criteria different from those used by carriers. One widely-used standard set of criteria for service placement, continued stay, and patient transfer/discharge is published by ASAM (ASAM criteria), which recommends a much broader set of assessment parameters – including a patient's readiness to change and his/her living environment – to determine treatment services needed by an individual.⁸ See CHIA's review of the medical efficacy of Chapter 258 for a more detailed discussion of these broader criteria. How these arguably broader criteria are interpreted by providers and applied to commercially-insured

patients with substance use disorders will play an important role in determining the impact of Chapter 258 provisions regarding access to the various levels of service.

Note that this analysis assumes that the insurer is prohibited from applying its medical necessity determination for 14 days, but after that it may do so. The law also allows the insurer to initiate utilization review after 7 days, which presumably allows the insurer to review the patient's progress in treatment, but nonetheless excludes medical necessity review and the ability to deny authorization until 14 days have passed.

2.4. Overlap with mental health parity statutes

Chapter 258's restraint on prior authorization applies to:

- Early intervention services for substance use disorder treatment
- Outpatient services including medically assisted therapies
- Intensive outpatient and partial hospitalization services
- Residential or inpatient episodes
- Medically managed intensive inpatient episodes

See CHIA's review of the medical efficacy of these provisions of Chapter 258 for detail on the scope of these services.

The Massachusetts mental health parity statutes⁹ require insurers to cover biologically-based mental disorders, including substance abuse disorders. Subsection (g) of the relevant chapters specifies the range of inpatient, intermediate, and outpatient services for which coverage is required:

- Inpatient services may be provided "in a general hospital licensed to provide such services..., or in a substance abuse facility licensed by the department of public health."
- Intermediate services "shall include, but not be limited to, Level III community-based detoxification, acute residential treatment, partial hospitalization, day treatment and crisis stabilization licensed or approved by the department of public health or the department of mental health."
- Outpatient services may be provided "in a licensed hospital, a mental health or substance abuse clinic licensed by the department of public health, a public community mental health center, a professional office, or home-based services...."

The overlap between Chapter 258 and the mental health parity statutes is imperfect. In particular, Chapter 258 refers to "residential services," which does not have a precise counterpart on the list of services in the parity statutes, which instead refer to "acute residential treatment". This analysis assumes that the parity statutes do not require coverage for longer-stay residential rehabilitation. This assumption is supported by a survey of Massachusetts carriers that showed very few currently

covered this type of treatment. Furthermore, we assume the preauthorization requirements of Chapter 258 apply only to services covered by a carrier.

Assuming carriers were not previously required to cover longer-term residential services, a question arises about whether Chapter 258: a) not only prohibits prior authorization, but also requires coverage for that service, or b) prohibits a carrier from requiring preauthorization only if the carrier covers the treatment. This analysis assumes the latter, i.e., that Chapter 258 does not introduce the obligation to cover residential services, but only forbids preauthorization if the coverage exists. If Chapter 258 were to introduce the requirement that insurers cover longer-term residential treatment, the net cost of the law to premium payers would be higher than estimated in this report.

3. Methodology

3.1. Overview

As described above, Massachusetts Chapter 258 limits the discretion commercial fully-insured health insurance plans have in managing substance abuse treatment by eliminating pre-authorization for services and by restraining plans' ability to deny authorization for ATS and CSS until after 14 days of treatment.^{vi} In its simplest form, the analytical question that must be answered to estimate the impact of this change is: How will volumes of substance abuse services delivered to fully-insured members change, by level of care? Estimating answers to that question requires considering the factors that influence the demand for substance abuse services and those that influence the supply of services.

Assessing potential demand for substance abuse services relies primarily on a review of historical data about levels of treatment before more-intensive managed care techniques were implemented along with consideration of the current environment in Massachusetts. Projecting the supply of services requires considering the current capacity of substance abuse treatment facilities licensed by BSAS or DPH. The analysis also requires projecting the potential for expansion over the next five years. Potential displacement of capacity currently utilized by Medicaid and uninsured patients is also a factor given the higher reimbursement paid on average for commercial contracts.^{vii} In addition, the analysis must consider shifts in utilization between levels of care (e.g., between inpatient and intensive outpatient).

The analysis then estimates the impact on insurer medical expense as the lesser of demand or supply less projected expenditures in the absence of Chapter 258. That is, the projected demand will determine the cost level unless it meets a capacity constraint, in which case the estimated utilization is equal to the projected capacity.

^{vi} Concurrent review by the carrier of a case can begin after day 7, but no denial of authorization can occur until after 14 days.

^{vii} As discussed further below, higher overall average payment rates for commercial payers were confirmed using the APCD.

3.2. Steps in the analysis

The general approach outlined above was executed in the following steps.

Analyze service delivery capacity

- Construct an historical baseline profile of substance abuse service use in facilities and programs in Massachusetts by level of care in 2012, broken into utilization and average unit cost, using the Massachusetts All Payer Claim Database (APCD); project forward a baseline cost estimate over the projection period
- Using available Commonwealth resources, determine the current licensed bed capacity for substance abuse treatment units and the known and expected future expansions
- Review current Medicaid and commercial utilization and average unit costs, assess the potential for displacement of Medicaid admissions by commercial admissions, and estimate potential effects allowing additional use by commercially insured individuals

Analyze potential demand for services

- Review available literature on historical impacts of managed care controls on substance abuse service use and costs
- Based on comparison of historical (before intensive managed care) and current levels of use, and consideration of current factors, estimate ranges of potential service expansion/shifting by level of care
- Compare the potential demand for services to the available and projected capacity of services, using the smaller of the two in any time period as the projected utilization value

Calculate insurance premium impact of projected spending

- Subtract the baseline projection from the Chapter 258 projection, and apply projected unit costs to the resulting incremental service utilization profile to calculate incremental medical spending, dividing by the corresponding membership to get per member per month (PMPM) costs
- Estimate the impact of insurer retention (administrative costs and profit) on premiums
- Estimate the fully-insured Massachusetts population under age 65, projected for the next five years (2015 to 2019)
- Project the estimated cost over the next five years

3.3. Data sources

The primary data sources used in the analysis were:

- Information from clinical providers and billing staff

- Information from a survey of private health insurance carriers in Massachusetts
- Academic literature, published reports, and population data cited as appropriate
- Massachusetts insurer claim data from CHIA’s Massachusetts APCD for calendar years 2009 to 2012, for plans covering the majority of the under-65 fully-insured population subject to the mandate

The more detailed step-by-step description of the estimation process described below addresses limitations in some of these sources and the uncertainties they contribute to the cost estimate.

3.4. Limitations

Two significant areas of uncertainty in this analysis are (i) the degree to which historical utilization levels prior to implementation of managed care are a guide to potential demand after implementation of Chapter 258’s utilization management restrictions, and (ii) projections of future capacity for licensed and other bed capacity for substance abuse services. Assumptions are varied to account for this uncertainty.

4. Analysis

To estimate the impact of the law, the calculations outlined in the previous section were executed; this section describes that execution in detail. The analysis includes development of a best estimate “mid-level” scenario, as well as a low-level scenario using assumptions that produced a lower estimate, and a high-level scenario using more conservative assumptions that produced a higher estimated impact.

4.1. Historical service profile

A high-level summary of the substance abuse service spectrum is as follows:

- Early intervention
- Outpatient
- Intensive outpatient and partial hospitalization
- Residential or inpatient (including clinical stabilization services or CSS)
- Medically managed intensive inpatient (including acute treatment services or ATS)

An historical service profile, including utilization rates and average unit costs, was constructed using the 2012 Massachusetts APCD. Excluded were records for providers not based in Massachusetts, as the law applies only to facilities or programs licensed or approved by DPH. The data set was analyzed for the fully-insured commercial sector, sub-divided into licensed substance abuse treatment programs and other providers (see section 4.2 for an explanation of these differences). The baseline utilization and unit costs were projected over the five-year 2015-2019

projection period to form a baseline against which the projected costs after implementation of Chapter 258 could be compared.

Data were also compared to APCD Medicaid data to assess differences in payment rates and utilization rates to understand potential interacting volume shifts in the Medicaid and commercial markets (see section 4.3).

4.2. Service delivery capacity

The Commonwealth's Bureau of Substance Abuse Services (BSAS) licenses substance abuse treatment programs and facilities. For facility services, licenses are granted on a bed capacity basis. For outpatient services, a program license is granted, and the service capacities of the programs are not regulated. BSAS provided information on licensed bed capacity in 2014 for ATS and CSS.

ATS are inpatient detoxification services spanning two different levels of care. The lower level of ATS, defined in state regulations as Medically-Monitored Inpatient Detoxification Services, is provided in a freestanding medical (as opposed to hospital) setting and includes 24-hour nursing care and medical supervision.¹⁰ Patients are admitted to this level of care when their health and well-being are at risk, and when withdrawal symptoms require medical monitoring.¹¹ Physician care is not required 24-hours per day, as in the more intensive Medically-Managed level of ATS, but must be available as needed. There are currently 20 providers managing 704 licensed adult beds in the state at this level of service,¹² with an additional 32 beds currently under licensing review by the state.¹³

Patients admitted to CSS, defined as Clinically-Managed Detoxification by state licensing regulations, do not have severe withdrawal symptoms, and are supervised for 24 hours per day in a "non-medical setting," with at least four hours of daily nursing care, along with other services.¹⁴ There are currently 11 providers managing 297 licensed adult beds in the state at this level of service,¹⁵ with an additional 32 beds currently under licensing review by the state.¹⁶

As reported by a sample of providers and by BSAS, the existing system of ATS and CSS beds is very near, if not at, capacity. This means that the provisions of the law as they apply to these services will not be meaningful unless the Commonwealth allows bed capacity to expand. For that reason, this analysis assumes the policy direction set by the passage of Chapter 258 will lead to large increases in bed capacity, especially for CSS services. The maximum throughput of these licensed beds was calculated based on a range of 85 to 95 percent occupancy. Since outpatient programs have less concrete service delivery capacity limits, none were applied to these services. Table 1 shows projected licensed capacity for ATS and CSS.

Table 1
Projected Licensed Bed Capacity

	2015	2016	2017	2018	2019
Acute Treatment (ATS)					
Low Scenario	768	800	832	832	832
Mid Scenario	800	832	864	864	864
High Scenario	800	832	864	896	928
Clinical Stabilization Services (CSS)					
Low Scenario	361	393	425	457	489
Mid Scenario	393	449	489	585	681
High Scenario	393	585	713	841	969

In comparing the list of licensed programs to utilization data in the APCD, approximately 35 percent of total ATS/CSS substance abuse service use in the fully-insured commercial population occurs in providers not licensed through BSAS. Of this, approximately 88 percent is for out-of-state providers not licensed by DPH, and carriers, when paying for treatment at these facilities, are not obligated to follow the authorization restrictions in Chapter 258. As a result, a significant portion of the treatment activity is excluded, reducing the cost impact of the law. The remaining 12 percent are likely to be other licensed mental health programs contracted with commercial insurers. BSAS-licensed providers have the lowest average unit costs, followed by other Massachusetts providers, with out-of-state providers having the highest average unit costs.

4.3. Medicaid displacement

Analysis of the Massachusetts APCD shows that commercial payment rates for ATS and CSS are higher, on average, than Medicaid rates for those services, a pattern confirmed with a sample of provider fee schedules with payer-specific rates.^{viii} Because unit costs paid by Medicaid are significantly lower on average, with the relaxation of managed care restrictions on admissions and length of stay, providers will have a financial incentive to admit and treat more higher-paying commercial patients and fewer Medicaid patients. This will be limited by clinical assessment of relative severity; however, financial incentives are strong predictors of behavior and this analysis models modest shifts of capacity from Medicaid patients to commercial patients. Our projections assume that between 3.1 and 6.3 percent of current Medicaid ATS and between 2.2 and 4.5 percent of CSS patients will be displaced from these levels of care before consideration of bed capacity expansions. That is, the payer mix will shift toward commercial even as capacity expands. Interviews with provider organizations indicated that their requests for treatment for MassHealth patients were generally granted, so our estimates do not assume a significant increase in Medicaid utilization beyond that allowed by (the slightly less than proportionate) growth related to the increased bed capacity.

^{viii} Providers for which ATS rates were compared had some commercial contracts at the same level as Medicaid, and others with significant volumes at rates 15% to 50% higher for commercial payers. In the small sample of (large) providers for which fee schedules were available, fees for the Massachusetts Behavioral Health Partnership (which is not represented in the APCD) had fees identical to those of MassHealth.

4.4. Reversing managed care effects

Assessing the impact of the restriction on utilization controls requires estimating how much utilization will increase without managed care controls. Certainly there is a need for treatment far beyond existing utilization. Of those with drug dependence or abuse in Massachusetts in 2008 to 2012, an estimated 86 percent did not receive treatment.¹⁷ Focusing on those who are engaged with the commercial insurance system and have the potential to connect to treatment, historical data can help to illuminate the degree to which substance abuse treatment was restrained by managed care programs. This provides a starting point for estimating how much utilization may increase when those controls are eliminated or relaxed.

Frank and Garfield reviewed the history and literature of behavioral health “carve-outs,” which have been a primary vehicle for managing reductions in spending for substance abuse treatment.¹⁸ Carve-outs are managed care contracts held by behavioral health managed care organizations to manage services directly for a sponsor (employer or state government), or as a sub-contract to an insurance carrier with a full-spectrum insurance contract. Frank and Garfield summarize the literature available on a variety of measures, including utilization and total cost reductions for substance abuse programs. Steenrod, Brisson, et al. reviewed carve-outs and other managed care programs specifically for substance abuse services and their impact.¹⁹ From these reviews, two studies stand out as relevant to the question at hand. Shepard, Daley, et. al.²⁰ analyzed the impact of the introduction of a behavioral health carve-out for the Massachusetts Medicaid program, and Ma and McGuire²¹ evaluated a carve-out program for the Group Insurance Commission (GIC), the insurance entity for Massachusetts state employees. The Ma and McGuire study, as it is based on a commercial population, is more directly relevant.

While both of these studies found very large decreases in spending overall and on inpatient substance abuse services as a result of the carve-outs’ management methods, very little change was attributable to reductions in inpatient utilization, with the Medicaid carve-out actually increasing inpatient units per member by 2 percent, and the GIC carve-out reducing inpatient units by 4 percent. However, inpatient spending went down by 64 and 68 percent respectively as a result of unit cost reductions. While some of these reductions may have come from re-contracted rates, the unit cost data discussed in section 4.3 above show significant variation in inpatient rates, particularly when comparing inpatient ATS programs with CSS facility rates. Shifts in provider setting/mix could explain the large reductions in unit cost seen in the two Massachusetts-based studies. One possible impact of Chapter 258 is that the relaxation of controls will allow utilization for higher-cost service levels and providers to increase more rapidly, a reversal of these historical reductions.

Shepard, et. al. and Ma and McGuire arrived at very different findings on outpatient utilization impacts, with Shepard finding a 16 percent increase in Medicaid and Ma and McGuire finding a 44 percent decrease in the GIC population. However, for reasons discussed below, current insurance coverage and managed care for outpatient services are not likely to be affected significantly by the Chapter 258 provisions.

There are at least two reasons why drawing on the (reverse of the) dampening effects on utilization of increased management from the Ma and McGuire study might underestimate the impact the reduced management the Chapter 258 provisions would have in increasing inpatient services:

- The change in Ma and McGuire was from a leaner benefit with management to a richer benefit with more extensive management, thus understating the effect since Chapter 258 introduces no benefit changes
- Chapter 258 effectively moves the current structure (which is a mix of carrier carve-outs with managed behavioral health sub-contractors and internal behavioral management) to something resembling the unmanaged, pre-managed care market, potentially causing a larger shift

On the latter point, overall commercial substance abuse admissions per thousand in the 2012 APCD are estimated to be approximately 50 percent below the levels in the Ma and McGuire study, but GIC (the subject of the study by Ma and McGuire) admissions per thousand in the 2012 APCD are higher than the overall commercial average by 25 percent, that is, 25 percent below their 1990s level.^{ix} This analysis will assume that the proportional difference in the GIC admission rate relative to its level in the 1990s represents changes in managed care techniques that have affected the commercial population generally, and that this creates an area of potential increased utilization after the introduction of Chapter 258.

As discussed previously in section 2.3, in addition to removing the ability of insurers to require providers to obtain prior authorization before providing substance abuse services, Chapter 258 shifts initial medical necessity determination from carriers to providers. This is a significant change, as the definitions of medical or treatment necessity held by commercial insurers and substance abuse treatment providers are often different. How the arguably broader provider criteria are interpreted and applied to commercially-insured patients with substance use disorders plays an important role in determining the impact of Chapter 258 provisions regarding access to the various levels of substance abuse services. The use of broader criteria is likely to increase care in more intensive inpatient settings as well as shift care to inpatient settings from outpatient and intensive outpatient settings.

In addition to the factors just discussed that may suggest a large impact due to eliminating prior and concurrent authorization before 14 days, a number of other factors will mitigate the effect of this “reverse managed care shift”:

- Carriers and their sub-contractors still have contracting as a management tool, and may put pressure on contracts and contract rates, which will reduce costs and in turn lead to reductions in supply
- A large fraction of provider activity in Massachusetts is now in payment mechanisms with population-based risk-sharing, and the state has heightened cost awareness with its Chapter 224 voluntary cost targets, dampening traditional provider incentive to increase volume

^{ix} GIC numbers are based on a subset of GIC records for which behavioral health data is available in the APCD.

The numerous factors to be addressed in setting ranges for the parameters driving the analysis make a clear-cut estimate of the utilization change difficult. Drawing on studies based on events of the 1990s and adding consideration to the ways in which Chapter 258's changes differ from them makes direct use of the results in the research literature problematic. Other features of the current environment that affect overall healthcare cost growth, such as voluntary spending targets and alternative provider contracts, contribute to the difficulty in drawing conclusions from studies conducted in the 1990s. However, after considering the dynamics in play in the historical events, and the magnitudes of utilization reductions that occurred in the past, along with the other enumerated issues, this analysis assumes that inpatient (ATS) services will increase between 10 percent (low scenario) and 20 percent (high scenario) for licensed BSAS-licensed providers, and between 10 percent and 30 percent for the relatively small activity with providers not licensed by BSAS (not including out-of-state providers to which the law does not apply).

CSS services are likely to grow more rapidly than ATS services in the commercial population. CSS services, facility services which include medical monitoring but not medical management, are found very rarely in the 2012 APCD commercial fully-insured claims. Carriers rely more on intensive outpatient treatment as a step down from or alternative to inpatient care. These services are much more common in the Medicaid population, owing in significant part to provider focus on supporting individuals completing detox but without home environments conducive to sobriety. With prior authorization requirements prohibited for this service, it will likely be used more frequently in the commercial population. To estimate this effect, this analysis assumes that in the high scenario, the ratio of commercial CSS/ATS services is equal to the Medicaid level, with the ratio at one half of Medicaid in the mid scenario and one quarter in the low scenario. However, the utilization resulting from these ratios is further constrained by projected bed capacity.

There will be both upward and downward pressure on outpatient services. As noted above, the behavioral managed care research literature is not conclusive on outpatient effects, with some showing increases and some showing decreases. The degree to which the baseline service profile has been managed, the benefit structures, the nature of the contracts with the behavioral managed care company, and other factors can all influence the expected effects. As a result of the relaxed managed care controls required by Chapter 258, overall outpatient utilization would be expected to remain steady, as more-intensive services will shift into an inpatient setting while less-intensive services increase to meet previously unmet demand. Outpatient providers will face relaxed preauthorization requirements for intensive outpatient treatment (IOP), but the longstanding difficulty providers have had making outpatient programs profitable serves as a restraint.

For traditional ambulatory substance abuse counseling, the survey of carriers conducted for this study found that these services are not pre-authorized for nearly all the carriers. This analysis assumes there will be no net effect on outpatient services relative to the projected baseline.

Overall for non-inpatient services, the expected impact is small and assumed to be zero. To the extent that actual events lead to increased outpatient use, it will likely be in scenarios in which inpatient use is lower than projected, and vice versa, again washing out within the degree of precision in these estimates. This projected outcome for the "substance abuse treatment" provision in Chapter 258 is interdependent with the ATS/CSS projection's assumptions and results. That is,

both the projected increase in ATS/CSS and the projected zero change in substance abuse treatment (non-ATS/CSS) services are based on inter-dependent assumptions about the changes in services in these levels of care as the implementation of Chapter 258 plays out.

4.5. Projected Utilization

From the preceding steps, capacity-based and demand-based projections of utilization were made and compared to each other. Where estimated demand increases exceed estimated capacity, the capacity serves as a cap to utilization increases. Where the cap is not a constraint, the projected growth in demand is the projected utilization. The net utilization increase for inpatient services, after considering projected capacity, potential displacement of Medicaid patients, and increasing demand for services as a result of Chapter 258 is shown in Table 2 for both the BSAS-licensed and other portion of the provider market.

Table 2
Net Utilization Increase for BSAS-Licensed and Other ATS and CSS^x

	2015	2016	2017	2018	2019
Acute Treatment (ATS) - BSAS Licensed					
Low Scenario	10.0%	10.0%	10.0%	10.0%	10.0%
Mid Scenario	15.0%	15.0%	15.0%	15.0%	15.0%
High Scenario	20.0%	20.0%	20.0%	20.0%	20.0%
Acute Treatment (ATS) - Other					
Low Scenario	4.5%	9.1%	10.0%	10.0%	10.0%
Mid Scenario	4.5%	13.6%	18.2%	20.0%	20.0%
High Scenario	4.5%	13.6%	18.2%	22.7%	27.3%
Clinical Stabilization Services (CSS)					
Low Scenario	28.7%	39.5%	50.3%	61.0%	71.8%
Mid Scenario	42.9%	61.8%	75.3%	107.6%	139.9%
High Scenario	46.3%	111.0%	154.1%	197.2%	240.3%

Payment rates (unit costs) are, as noted in Section 4.3, available in the APCD data; these rates were multiplied by the net utilization increases to yield the increased medical expense. The baseline PMPM medical expense for substance abuse treatment in the fully-insured commercial market is a small fraction of overall medical expense, and so even large percentage increases result in PMPM increases of less than 10 cents in the mid-scenario.

4.6. Carrier retention and increase in premium

Assuming an average retention rate of 11.5 percent, based on CHIA’s analysis of administrative costs and profit in Massachusetts,²² the increase in medical expense was adjusted upward to approximate the total impact on premiums. Table 3 shows the result.

^x The base number of ATS admissions are approximately 2750 in the BSAS licensed facilities and approximately 1450 in the other facilities.

Table 3
Estimate of Increase in Final-Year Carrier
Premium Expense PMPM

	Claims <u>PMPM</u>	Premium <u>PMPM</u>	% <u>Change</u>
Low Scenario	\$0.05	\$0.05	0.01%
Mid Scenario	\$0.08	\$0.09	0.01%
High Scenario	\$0.12	\$0.13	0.02%

The mid-level 2019 PMPM premium impact of \$0.09 results in an annual total of approximately \$2.2 million.

4.7. Projected fully-insured population in Massachusetts

Table 4 shows the fully-insured population in Massachusetts ages 0 to 64 projected for the next five years. Appendix A describes the data sources and methodology for the population projections.

Table 4
Projected Fully-Insured Population in Massachusetts, Ages 0-64

<u>Year</u>	<u>Total (0-64)</u>
2015	2,144,066
2016	2,120,558
2017	2,096,250
2018	2,071,138
2019	2,045,433

Projecting the five-year cost impact of the law requires, in addition to the membership projection, a projection of the 2012 baseline PMPM cost forward to the same 2015-2019 period, discussed next.

4.8. Projection

To project over the five-year (2015-2019) period, the increased medical expense for each time period was estimated by multiplying the net utilization increases by the corresponding average unit costs for the appropriate time period. The 2012 base period unit prices are adjusted using an average annual projected hospital cost trend of 4.5 percent.

5. Results

The estimated impact of the law on medical expense and premiums appears below. The analysis includes development of a best estimate “mid-level” scenario, as well as a low-level scenario using assumptions that produced a lower estimate, and a high-level scenario using more conservative assumptions that produced a higher estimated impact.

The impact on premiums reported in this section derives almost entirely from inpatient services, i.e., the provision of Chapter 258 related to ATS/CSS. In contrast, overall for non-inpatient services the expected impact is small and assumed to be zero. To the extent that actual events lead to increased outpatient use, it will likely be in scenarios in which inpatient use is lower than projected, and vice versa, again washing out within the degree of precision in these estimates. This projected outcome for the “substance abuse treatment” provision in Chapter 258 is interdependent with the ATS/CSS projection’s assumptions and results. That is, both the positive ATS/CSS impact and the zero substance abuse treatment (non-ATS/CSS) services impact depend on the inherent interaction between these levels of care as the implementation of Chapter 258 plays out.

5.1. Five-year estimated impact

For each year in the five-year analysis period, Table 5 displays the projected net impact of the mandate on medical expense and premiums using a projection of Massachusetts fully-insured membership. Note that Chapter 258 is effective October 1, 2015; therefore the impact in 2015 is for a small number of policies renewing in the 4th quarter.²³

By the last year of the projection period this analysis estimates that the mandate would increase fully-insured premiums by as much as 0.02 percent; a more likely increase is in the range of 0.01 percent. The relatively modest impact estimates, despite large increases in assumed system ATS/CSS capacity, stem primarily from a relatively small base of substance abuse spending in the commercial fully-insured population, non-coverage of residential services by commercial insurers, and to the exclusion – from the base of services to which Chapter 258 applies – of the 31 percent of ATS/CSS dollars spent on out-of-state facilities and of expenses for longer-term residential services.

Finally, the impact of the law on any one individual, employer-group, or carrier may vary from the overall results depending on the current level of benefits each receives or provides, and on how the benefits will change under the mandate.

**Table 5
Summary Results**

	Q4 2015	2016	2017	2018	2019	Weighted Average	5 Yr Total
Members (000s)	2,144	2,121	2,096	2,071	2,045		
Medical Expense Low (\$000s)	\$20	\$886	\$968	\$1,052	\$1,149	\$1,013	\$4,076
Medical Expense Mid (\$000s)	\$29	\$1,341	\$1,477	\$1,696	\$1,928	\$1,608	\$6,472
Medical Expense High (\$000s)	\$37	\$1,883	\$2,171	\$2,488	\$2,845	\$2,341	\$9,424
Premium Low (\$000s)	\$22	\$1,001	\$1,094	\$1,189	\$1,299	\$1,144	\$4,605
Premium Mid (\$000s)	\$33	\$1,516	\$1,669	\$1,917	\$2,179	\$1,817	\$7,313
Premium High (\$000s)	\$42	\$2,127	\$2,454	\$2,811	\$3,215	\$2,645	\$10,649
PMPM Low	\$0.03	\$0.04	\$0.04	\$0.05	\$0.05	\$0.04	\$0.04
PMPM Mid	\$0.05	\$0.06	\$0.07	\$0.08	\$0.09	\$0.07	\$0.07
PMPM High	\$0.06	\$0.08	\$0.10	\$0.11	\$0.13	\$0.10	\$0.10
Estimated Monthly Premium	\$512	\$537	\$564	\$592	\$622	\$566	\$566
Premium % Rise Low	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%
Premium % Rise Mid	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%
Premium % Rise High	0.01%	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%

5.2. Impact on the GIC

Chapter 258 applies to both fully-insured and self-insured plans operated for state and local employees by the Group Insurance Commission (GIC), with an effective date for all GIC policies on October 1, 2015.

Benefit offerings of GIC plans are generally similar to those of most other commercial plans in Massachusetts. However, based on data from the 2012 Massachusetts APCD, the GIC's substance abuse inpatient admission rate is about 25 percent higher than that of the general fully-insured population.²⁴ As a result, the estimated effect of the mandate on GIC PMPM medical expense is expected to be about 25 percent higher than that calculated for the other fully-insured plans in Massachusetts. It is important to note that approximately 30 percent of the GIC membership was cleanly identifiable in the APCD, and the utilization estimate assumes the available portion represents a reasonable sample of the overall GIC membership. To calculate the medical expense for the GIC, the medical expense PMPM for the general fully-insured population was applied to the GIC membership and increased by 25 percent.

Table 7 breaks out the GIC-only fully-insured membership and the GIC self-insured membership. Note that the total medical expense and premium values for the general fully-insured membership displayed in Table 6 also include the GIC fully-insured membership. Finally, the law requires the GIC to implement the provisions fully on October 1, 2015; therefore, the fourth quarter of 2015 represents approximately one quarter of an annual value.

Table 7
GIC Summary Results

	Q4 2015	2016	2017	2018	2019	Weighted Average	5 Yr Total
GIC Fully-Insured							
Members (000s)	57	57	57	57	57		
Medical Expense Low (\$000s)	\$6	\$30	\$33	\$36	\$40	\$34	\$145
Medical Expense Mid (\$000s)	\$10	\$45	\$50	\$58	\$67	\$54	\$230
Medical Expense High (\$000s)	\$12	\$63	\$74	\$86	\$99	\$79	\$334
Premium Low (\$000s)	\$7	\$34	\$37	\$41	\$45	\$39	\$164
Premium Mid (\$000s)	\$11	\$51	\$57	\$66	\$76	\$61	\$260
Premium High (\$000s)	\$14	\$72	\$83	\$97	\$112	\$89	\$377
GIC Self-Insured							
Members (000s)	259	259	259	258	258		
Medical Expense Low (\$000s)	\$29	\$135	\$149	\$164	\$181	\$155	\$659
Medical Expense Mid (\$000s)	\$43	\$205	\$228	\$264	\$304	\$246	\$1,044
Medical Expense High (\$000s)	\$56	\$287	\$335	\$388	\$449	\$356	\$1,514

Appendix A: Membership Affected by the Mandate

Membership potentially affected by a mandate may include Massachusetts residents with fully-insured employer-sponsored health insurance (including through the GIC), non-residents with fully-insured employer-sponsored insurance issued in Massachusetts, Massachusetts residents with individual (direct) health insurance coverage, and, in some cases, lives covered by GIC self-insured coverage. Membership projections for 2015 to 2019 are derived from the following sources.

Total Massachusetts population estimates for 2012 and 2013 from U. S. Census Bureau data²⁵ form the base for the projections. Distributions by gender and age, also from the Census Bureau,²⁶ were applied to these totals. Projected growth rates for each gender/age category were calculated from Census Bureau population projections to 2030.²⁷ The resulting growth rates were then applied to the base amounts to project the total Massachusetts population for 2015 to 2019.

The number of Massachusetts residents with employer-sponsored or individual (direct) health insurance coverage was estimated using Census Bureau data on health insurance coverage status and type of coverage²⁸ applied to the population projections.

To estimate the number of Massachusetts residents with fully-insured employer-sponsored coverage, projected estimates of the percentage of employer-based coverage that is fully-insured were developed using historical data from the Medical Expenditure Panel Survey Insurance Component Tables.²⁹

To estimate the number of non-residents covered by a Massachusetts policy – typically cases in which a non-resident works for a Massachusetts employer offering employer-sponsored coverage – the number of lives with fully-insured employer-sponsored coverage was increased by the ratio of the total number of individual tax returns filed in Massachusetts by residents³⁰ and non-residents³¹ to the total number of individual tax returns filed in Massachusetts by residents.

The number of residents with individual (direct) coverage was adjusted further to subtract the estimated number of people previously covered by Commonwealth Care who moved into MassHealth due to expanded Medicaid eligibility under the Affordable Care Act.³²

Projections for the GIC self-insured lives were developed using GIC base data for 2012³³ and 2013³⁴ and the same projected growth rates from the Census Bureau that were used for the Massachusetts population. Breakdowns of the GIC self-insured lives by gender and age were based on the Census Bureau distributions.

Endnotes

¹ Massachusetts Acts of 2014, Chapter 258, “An Act to Increase Opportunities for Long-Term Substance Abuse Recovery”, Sections 9, 21, 23, 25, and 27. Accessed 2 October 2014: <https://malegislature.gov/Laws/SessionLaws/Acts/2014/Chapter258>.

² *Op. cit.* Acts 2014 c. 258. Sections 9, 21, 23, 25, and 27.

³ Phone interviews by Compass staff conducted July and August 2014 with Massachusetts provider staff from: AdCare, High Point Treatment Centers, Spectrum Health Systems.

⁴ Phone interviews by Compass staff conducted July and August 2014 with Massachusetts provider staff from: AdCare, High Point Treatment Centers, Spectrum Health Systems.

⁵ Phone interviews by Compass staff conducted July and August 2014 with Massachusetts provider staff from: AdCare, High Point Treatment Centers, Spectrum Health Systems.

⁶ Preliminary interpretation of the law might suggest that provider-defined criteria will be used for determining medical necessity of stays for ATS and/or CSS through the first 14 days of treatment, presuming that the criteria have been formally published and/or adopted by a relevant professional organization such as ASAM. After 14 days of treatment, insurers may define and determine the medical necessity of a continuing stay. Moreover, for levels of service other than ATS or CSS, the definition and determination of the medical necessity of substance abuse treatment remains with the insurer (as defined by contract/policy terms).

⁷ For example:

Medical Necessity Guidelines are developed for selected therapeutic or diagnostic services found to be safe, but proven effective in a limited, defined population of patients or clinical circumstances. They include concise clinical coverage criteria based on current literature review, consultation with practicing physicians in the Plan service area who are medical experts in the particular field, FDA and other government agency policies, and standards adopted by national accreditation organizations... The use of this guideline is not a guarantee of payment or a final prediction of how specific claim(s) will be adjudicated. Claims payment is subject to eligibility and benefits on the date of service, coordination of benefits, referral/authorization, utilization management guidelines when applicable, and adherence to plan policies, plan procedures, and claims editing logic.

Accessed 16 June 2014: http://www.tuftshealthplan.com/providers/pdf/mng/autism_aba_ri.pdf.

⁸ *Op. cit.* The ASAM Criteria.

⁹ M.G.L. c.32A §22, c.175 §47B, c.176A §8A, c.176B §4A, c.176G §4M.

¹⁰ *Op. cit.* 105 CMR 164.133(A)(1)(b)1: Medically Monitored Inpatient Detoxification Services.

¹¹ *Op. cit.* 105 CMR 164.133(A)(1)(b)2.

¹² *Op. cit.* Email correspondence, 22 August 2014, QAL, BSAS, MA-DPH.

¹³ *Op. cit.* Email correspondence, 21 October 2014, QAL, BSAS, MA-DPH.

¹⁴ *Op. cit.* 105 CMR 164.133(A)(1)(c): Clinically Monitored Detoxification.

¹⁵ Email correspondence, 22 August 2014, Quality Assurance and Licensing, Bureau of Substance Abuse Services, Massachusetts Department of Public Health (QAL, BSAS, MA-DPH).

¹⁶ Email correspondence, 21 October 2014, Quality Assurance and Licensing, Bureau of Substance Abuse Services, Massachusetts Department of Public Health (QAL, BSAS, MA-DPH).

¹⁷ Substance Abuse and Mental Health Services Administration (SAMHSA). Behavioral Health Barometer: Massachusetts, 2013. HHS Publication No. SMA-13-4796MA. Past-Year Illicit Drug Use Treatment among Persons Aged 12 or Older with Illicit Drug Dependence or Abuse in Massachusetts (2008-2012). Published 2013; accessed 23 September 2014: http://samhsa.gov/data/StatesInBrief/2k14/Massachusetts_BHBarometer.pdf.

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- ²² Massachusetts Center for Health Information and Analysis. Annual Report on the Massachusetts Health Care Market, August 2013. Accessed 17 March 2014: <http://www.mass.gov/chia/docs/r/pubs/13/ar-ma-health-care-market-2013.pdf>.
- ²³ With a start date of October 1, 2015 dollars were estimated at only 2.5% of the annual cost, based upon an assumed renewal distribution by month (Oct through Dec) by market segment and the Massachusetts market segment composition.
- ²⁴ Note that the APCD also showed a 35 percent higher cost per day for utilized services for the GIC membership. Given that this is mostly driven by use of a greater percentage of out-of-state, higher-cost facilities, and use of out-of-state facilities is not affected by this mandate, it was disregarded.
- ²⁵ U.S. Census Bureau. Annual Estimates of the Population for the United States, Regions, States, and Puerto Rico: April 1, 2010 to July 1, 2013. Accessed 23 January 2014: <http://www.census.gov/popest/data/state/totals/2013/index.html>.
- ²⁶ U.S. Census Bureau. Annual Estimates of the Resident Population by Single Year of Age and Sex for the United States, States, and Puerto Rico Commonwealth: April 1, 2010 to July 1, 2012. Accessed 23 January 2014: <http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk>.
- ²⁷ U.S. Census Bureau. File 4. Interim State Projections of Population by Single Year of Age and Sex: July 1, 2004 to 2030, U.S. Census Bureau, Population Division, Interim State Population Projections, 2005. Accessed 23 January 2014: <http://www.census.gov/population/projections/data/state/projectionsagesex.html>.
- ²⁸ U.S. Census Bureau. Table HIB-4. Health Insurance Coverage Status and Type of Coverage by State All People: 1999 to 2012. Accessed 23 January 2014: http://www.census.gov/hhes/www/hlthins/data/historical/HIB_tables.html.
- ²⁹ Agency for Healthcare Research and Quality. Percent of private-sector enrollees that are enrolled in self-insured plans at establishments that offer health insurance by firm size and State (Table II.B.2.b.1), years 1996-2012: 1996 (Revised March 2000), 1997 (March 2000), 1998 (August 2000), 1999 (August 2001), 2000 (August 2002), 2001 (August 2003), 2002 (July 2004), 2003 (July 2005), 2004 (July 2006), 2005 (July 2007), 2006 (July 2008), 2008 (July 2009), 2009 (July 2010), 2010 (July 2011), 2011 (July 2012), 2012 (July 2013). Medical Expenditure Panel Survey Insurance Component Tables. Generated using MEPSnet/IC. Accessed 31 January 2014: http://www.meps.ahrq.gov/mepsweb/data_stats/MEPSnetIC.jsp.
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- ³³ Group Insurance Commission. Group Insurance Commission Fiscal Year 2012 Annual Report. Accessed 14 March 2014: <http://www.mass.gov/anf/docs/gic/annual-report/arfy2012.pdf>.
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