

**THE MA PRESCRIPTION MONITORING PROGRAM:  
A REPORT TO THE MASSACHUSETTS LEGISLATURE**

**PRESCRIPTION DRUG MISUSE: A GROWING EPIDEMIC**

Over the past decade, the rate of prescription drug abuse has increased rapidly in the U.S., becoming a critical public health epidemic. A report released by the United States Substance Abuse and Mental Health Services Administration (SAMHSA) in 2010 found that the number of people who reported seeking treatment for pain reliever dependence doubled between 2002 and 2010 (SAMHSA, 2011). The 2011 National Survey on Drug Use and Health (NSDUH) found that non-medical use of prescription drugs was second only to that of marijuana (SAMHSA, 2012a). Prescription drug abuse remains the fastest growing drug problem in the United States.

National costs associated with prescription drug abuse are high and disproportionately burden the health care system. A recent study estimated the total annual national expenditure for addressing prescription drug misuse as \$55.7 billion, of which \$25 billion was in the health care sector (Birnbaum et al, 2011). These costs are not only associated with the prescription drug products themselves, but also with the additional health care services utilized by those misusing controlled substances. For example, prescription drug misuse and abuse resulted in over 1.3 million emergency department (ED) visits nationwide in 2010, more than doubling over the last five years. The increase in ED visits caused by pharmaceutical abuse and misuse was largely driven by a 255 percent increase in oxycodone-related visits and a 196 percent increase in stimulant-related visits between 2004 and 2010 (SAMHSA, 2012b). In addition, criminal justice costs, which include factors such as property lost to crime, correctional facility operation, and police and legal services, are estimated at \$5.1 billion (Birnbaum et al, 2011). Expenditures on prescription drug abuse related services and treatment far exceed the cost of the medications themselves, underscoring the need to address this problem.

***Massachusetts Trends:*** Massachusetts shares in the nationwide prescription drug abuse problem. The scale of prescription pain reliever abuse in Massachusetts exceeded the 2008-2009 national average of 4.8 percent, with 5.3 percent of the state population reporting past year misuse (Centers for Disease Control and Prevention, 2011). From 2010-2011, Massachusetts was 35<sup>th</sup> in the nation for nonmedical use of prescription pain relievers for those age 12 and older; however,

for those ages 18 to 25, Massachusetts ranked 21<sup>st</sup> (SAMHSA, 2013). From Fiscal Year (FY) 2001 to FY 2011<sup>1</sup>, analyses of Massachusetts Prescription Monitoring Program (PMP) data indicated that the number of prescriptions for all Schedule II<sup>2</sup> opioids, including oxycodone products, increased 88 percent, from 1.4 million to 2.6 million.

As a result, fatalities related to controlled substance use have increased in the Commonwealth, with overdose now the leading cause of accidental death. Opioids, including heroin, oxycodone, morphine, codeine and methadone, continue to be the drugs most associated with poisoning deaths (67%), which have been increasing five percent per year since 2000 (DPH 2012a).

#### **DEVELOPMENT OF THE MASSACHUSETTS PRESCRIPTION MONITORING PROGRAM**

To help combat the prescription drug abuse epidemic, the Centers for Disease Control and Prevention (CDC) recommended that states establish prescription drug monitoring programs (PDMPs) in 2011. These state-run electronic databases can help identify and curb questionable activity, such as doctor shopping and illicit prescribing, by tracking the distribution of all dispensed controlled substances, from prescriber to pharmacy to patient. Information provided by PDMPs, including the type of drug, its quantity and date dispensed, can help prescribers and pharmacists identify individuals who might be abusing controlled substances and therefore might need intervention, such as referral to treatment. PDMP data are also used by drug diversion investigators, medical licensing boards, medical examiners, drug courts, opioid treatment programs, and community-based drug prevention programs (PDMP Center of Excellence, [Briefing on PDMP Effectiveness](#) and [Prescription Drug Monitoring Programs: An Assessment of the Evidence for Best Practices](#)). PDMPs therefore constitute an important resource in the fight against prescription drug abuse that should be leveraged nationwide.

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<sup>1</sup> Massachusetts state fiscal year (FY) is defined as July 1-June 30.

<sup>2</sup> Drugs, substances, and certain chemicals used to make drugs are classified into five (5) distinct categories or schedules depending upon the drug's acceptable medical use and the drug's abuse or dependency potential, ranging from Schedule II with the greatest potential to Schedule V with the least. The abuse rate is a determining factor in the scheduling of the drug. The Commonwealth of Massachusetts currently monitors Schedules II-V controlled drugs.

***Establishing the Massachusetts PMP:*** The Drug Control Program (DCP) within the Massachusetts Department of Public Health's Bureau of Health Care Safety and Quality (BHCSQ) established a PMP through joint regulations with the Board of Registration in Pharmacy in 1992. DCP manages the PMP as an integral component of the Commonwealth's *Substance Abuse Strategic Plan* (Commonwealth of MA 2010) and continues to expand the capabilities of this important clinical tool.

***Federal Grant Projects:*** In its commitment to enhancing the PMP, DCP has sought and been awarded several competitive grants from U.S. Department of Justice, Bureau of Justice Assistance's (BJA) Harold Rogers Prescription Drug Monitoring Program. Administered by the BJA, these grants are awarded in order to help states facilitate planning, implementation and program enhancement, including the adoption of interstate data sharing and other PDMP best practices. MA DCP has received awards from BJA ranging from \$300,000-\$400,000 annually since 2003. BJA grants have been a major source of support in developing and promulgating regulatory amendments that have greatly expanded the MA PMP's breadth and impact, which are outlined in Table 1. BJA grants continue to enable the further enhancement of PMP operational capacities to better meet the needs of the Commonwealth.

***Expanding the MA PMP and MA Online PMP:*** While BJA grants have been an important source of support for enhancing the PMP, DCP has made system improvements since its inception in 1992 through initiatives supported by state appropriations, which are also summarized in Table 1. MA DCP launched the MA Online PMP in 2010, providing authorized users (prescribers, dispensers, law enforcement and regulatory personnel) with web-based access to patients' controlled substances prescription histories that they can use to screen for and identify individuals who may have been prescribed multiple drugs. Providing data online has improved prescriber and pharmacist access to necessary patient information and allows timely interventions with at-risk patients, improving medical care and containing costs.

Recognizing the need to balance protecting patient confidentiality with improving access to prescription monitoring data through the online system, DCP implemented proper quality assurance measures and evaluated necessary security features prior to fully launching the MA Online PMP. In order to fully assess Internet security risks and possible operational failures

associated with an online system, DCP initiated enrollment only within a small population of prescribers and pharmacists for the first six months immediately following the announcement of the online system launch. Once proper safeguards were in place, DCP began the process for a wider roll out of the program to encourage enrollment of a larger population of prescribers and pharmacists. Following the initial period of limited enrollment, participation in the MA Online PMP has steadily increased. Enrollment remained voluntary for physicians, dentists and podiatrists until 2012 and the passage of Chapter 244 of the Acts of 2012. As part of Chapter 244, DCP has incorporated automatic enrollment of physicians, dentists and podiatrists into the Massachusetts Controlled Substances Registration program. As of December 2012, nearly 4,000 prescribers, dispensers, and law enforcement participants had been enrolled to use the system. Through December, 2012, over 150,000 separate patient lookups had been initiated by MA Online PMP users. Furthermore, in FY 2012<sup>3</sup>, DCP staff responded to approximately 500 written requests for PMP data, which staff tracks in a separate database.

<i>DATE</i>	<i>MILESTONE</i>
<b>1992</b>	DPH & Board of Registration in Pharmacy promulgate regulations authorizing PMP; pharmacies begin reporting prescription dispensing data to PMP
<b>1993</b>	PMP funded by Legislature; Medical Review Groups (MRGs) formed
<b>1994</b>	DPH and MRGs release first PMP reports to investigative agencies; DPH undertakes first intervention with prescribers to decrease inappropriate prescribing of glutethimide
<b>1995</b>	DPH and Brandeis University conduct practitioner survey
<b>2003</b>	DPH seeks and is awarded first competitive grant from the U.S. Dept. of Justice to fund enhancement of the PMP
<b>2005</b>	PMP is highlighted in MA <i>Substance Abuse Strategic Plan</i> ; DPH organizes and hosts first Northeast Regional Meeting of state PMPs
<b>2006</b>	OxyContin and Other Drug Abuse Commission issues report including recommendations for MA PMP
<b>2007</b>	DPH reports to OxyContin and Other Drug Abuse Commission
<b>2008</b>	DPH & Board of Registration in Pharmacy promulgate amendments to PMP regulations to enable unsolicited reporting to prescribers and pharmacies <sup>4</sup>
<b>January 2009</b>	Additional pharmacy reporting requirements go into effect
<b>November 2009</b>	OxyContin and Heroin Commission issues report including recommendations for MA PMP
<b>January 2010</b>	DPH initiates sending prescription dispensing history reports (unsolicited) to providers on their patients, conducts survey on the utility and impact of reports.
<b>June 2010</b>	DPH initiates development of MA Online PMP
<b>August 2010</b>	Chapter 283 of the Acts of 2010 is enacted, establishing PMP in statute

<sup>3</sup> Massachusetts Fiscal Year (FY) 2012 is July 1, 2011 through June 30, 2012

<sup>4</sup> Amendments authorize collection of patient identifier information; unsolicited (proactive) reporting to practitioners and pharmacies; and changing the customer ID provision from a request to a requirement.

<b>September 2010</b>	DPH promulgates amendments to PMP regulations to expand pharmacy reporting requirements <sup>5</sup> ; Board of Registration in Pharmacy files companion amendments
<b>November 2010</b>	DPH reports to Legislature on Chapter 283 of the Acts of 2010
<b>December 2010</b>	First providers log on to MA Online PMP (400 initial invitees, single patient look up, Schedule II prescription dispensing records)
<b>January 2011</b>	Expanded pharmacy reporting requirements go into effect; records for Schedules III – V prescriptions begin to be added to MA Online PMP
<b>April – June 2011</b>	DPH begins enrolling additional providers in the MA Online PMP
<b>August 2011</b>	DPH begins training and enrolling investigators for use of the MA Online PMP
<b>February – May 2012</b>	DPH expands outreach efforts to increase enrollment in MA Online PMP
<b>January 2013</b>	DPH promulgates amendments to PMP regulations to fulfill statutory mandates of Chapter 283 of the Acts of 2010 <sup>6</sup> DPH begins automatic enrollment in the MA Online PMP for physicians, dentists and podiatrists when applying to obtain or have had a recall to renew a Massachusetts Controlled Substance Registration (MCSR)
<b>February 2013</b>	DPH proposes amendments to PMP regulations regarding participant use of the MA Online PMP and delegate user functionality to fulfill statutory mandates of Chapter 244 of the Acts of 2012 <sup>7</sup>
<b>July 2013</b>	Chapter 38 of the Acts of 2013 amends the mandatory PMP utilization requirement under Chapter 244 of the Acts of 2012 <sup>8</sup>
<b>Winter 2012-2013</b>	Planned implementation of MA Online PMP enhancements (batch look ups, electronic alerts, interstate data sharing, local law enforcement use of data)

**Unsolicited Reporting:** In an effort to establish proactive applications of PMP data reporting, DCP initiated sending unsolicited reports to prescribers in January 2010. Unsolicited reports began as paper-based alerts provided to health care providers stating that questionable activity had been identified. Producing these reports is triggered by an analysis of MA Online PMP data where the MA DCP specified threshold for “doctor shopping” is identified. DPH staff are responsible for reviewing each report. Since beginning this initiative, DCP identified 106 individuals exceeding thresholds for questionable activity. A total of 2,087 unsolicited reports

<sup>5</sup> Amendments include, among other provisions, expanding Schedules of records collected from Schedule II to Schedules II-V; expanding customer ID requirement from Schedule II to Schedule II-V; increasing pharmacy reporting frequency from monthly to weekly; and requiring reporting by out-of state mail order pharmacies.

<sup>6</sup> Amendments include, among other provisions, broadening criteria for provider use of PMP information; mandating provision of PMP information to providers and investigative agencies; expanding the types of investigative agencies that may obtain PMP information directly; and expanding Schedules of prescription records collected to include certain Schedule VI pharmaceuticals as determined and ordered by the Commissioner.

<sup>7</sup> Amendments include, among other provisions, mandating use of the MA Online PMP by participants prior to seeing a new patient, including circumstances where participants would not be required to utilize the prescription monitoring program prior to seeing a new patient; a requirement that pharmacists be trained in the use of the prescription monitoring program as part of the continuing education requirements mandated for licensure by the board of registration in pharmacy and a requirement that allows authorized support staff to use the prescription monitoring program on behalf of a registered participant.

<sup>8</sup> Amendments include requiring PMP participants to utilize the PMP prior to the issuance, to a patient for the first time, of a prescription for a narcotic drug that is contained in schedule II or III, or benzodiazepine or any other schedule IV or V prescription drug, which is commonly abused, in order to identify individuals in need of intervention or treatment, and define those situations in which a participant would not be required to utilize the PMP prior to the issuance, to a patient for the first time, of a prescription for a narcotic drug that is contained in schedule II or III.

were sent to the prescribers associated with these individuals' prescriptions, with some prescribers receiving reports on two or more individuals.

Unsolicited reporting has also enabled DCP to collect survey feedback from prescribers that provide valuable insight as to the need for PMP data, as well as, identify at-risk patient demographic information. In collaboration with Brandeis University, DCP developed a prescriber survey to evaluate the need for providing unsolicited reports. Preliminary findings of this survey suggested that prescribers are typically unaware of their patients' controlled substance prescription profiles. Specifically, survey feedback data showed that only eight percent of respondents were "aware of all or most other prescribers" identified in the unsolicited reports provided. Furthermore, only nine percent of the respondents said "based on current knowledge, including report, patient appears to have legitimate medical reason for controlled drug prescriptions from multiple prescribers" (DPH and Brandeis 2012). This suggests that unsolicited reports serve an important informational function by alerting prescribers to the possibility of questionable activity by patients. Moreover, 72 percent of survey respondents said that unsolicited reports are "very" or "somewhat" helpful (DHHS 2009; DPH and Brandeis 2012).

Additionally, survey data showed that the average age of the 106 individuals (48 males and 58 females) who were subjects of the unsolicited reports was 42 years (range = 22-74 years). Furthermore, these individuals received an average of 50 prescriptions, visited an average of 22 different prescribers, and filled their controlled substance prescriptions from an average of 12 different pharmacies during a six month period. Analyses also indicate a clustering of these individuals in the Springfield, Worcester, and Fall River/New Bedford areas of the Commonwealth. These findings highlight the importance of the MA Online PMP as a clinical tool to inform safe prescribing.

Recognizing the value of unsolicited reporting and due to the encouraging feedback from provider surveys, DCP has started a pilot study that will go towards establishing a system of electronic email alerts set to go live by the end of CY 2013. By implementing custom-designed software algorithms, the MA PMP will be capable of performing more efficient identification of those exhibiting questionable activity according to preset database criteria established by DCP based on PMP data analyses and in consultation with the program's Advisory Council.

## **LAW ENFORCEMENT AND REGULATORY AGENCY USERS OF THE MA PMP**

DCP allows law enforcement and regulatory agencies to obtain case reports in support of open and ongoing controlled-substances related investigations. Case reports must be specific to a particular prescriber, pharmacy or person. In accordance with the terms and conditions of use, investigators registered with the PMP may also use the online system to obtain this information. However, it is strictly prohibited to use the MA Online PMP as part of routine inspections, for general screening, or any other manner not in support of an already open and ongoing investigation. In fact, DCP requires regulatory and law enforcement employees to provide background case information relevant to a specific PMP request via an online form.

**Training:** All personnel from law enforcement and regulatory agencies must complete in-person training provided by DCP personnel on how to request and interpret PMP data and acceptable uses prior to being authorized to gain access to the MA Online PMP. In FY 2012, DCP staff began in-person training and enrolling representatives of state and federal agencies. Currently, approximately 100 law enforcement and regulatory agency personnel are trained and enrolled in the MA Online PMP. During the last 3 quarters of FY 2012, MA Online PMP recorded 607 law enforcement/ regulatory agency requests.

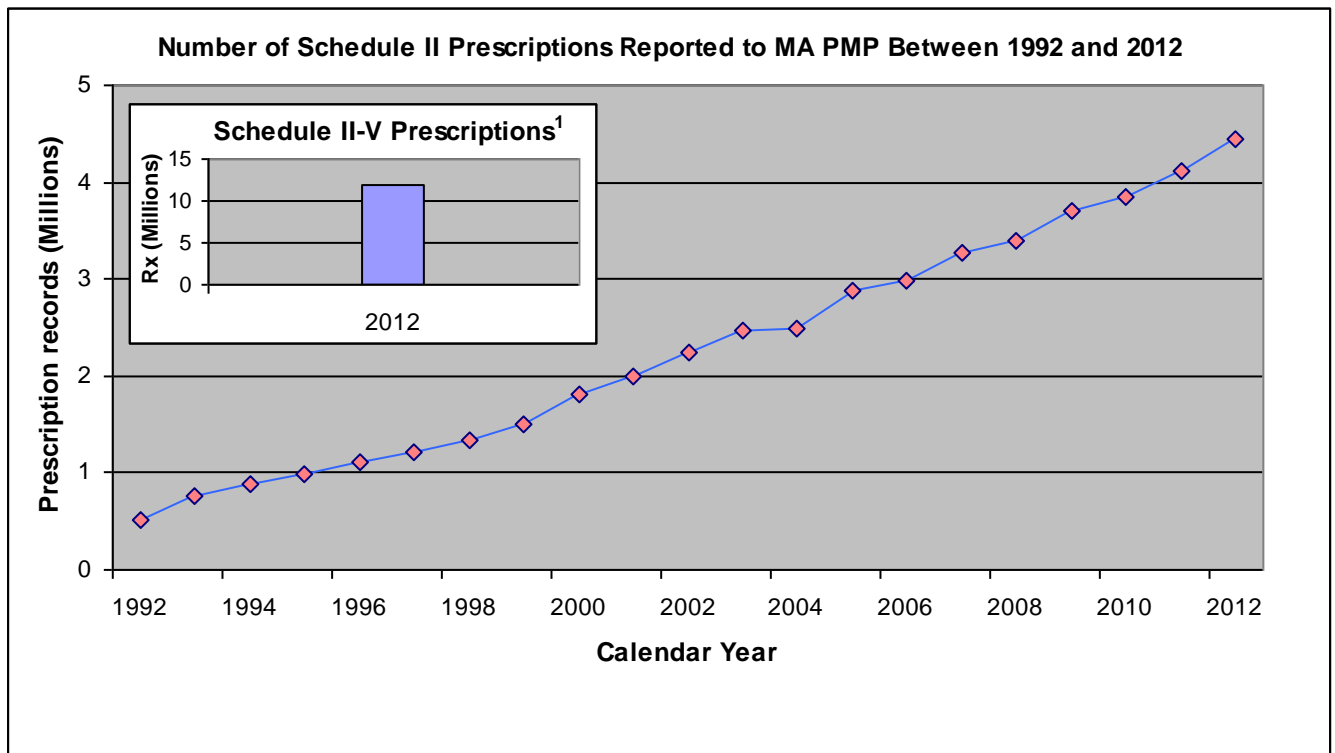
Chapter 283 of the Acts of 2010 enabled new categories of law enforcement personnel to become authorized end users of the MA Online PMP. DCP is committed to training additional end users on the PMP and has developed a comprehensive curriculum, including the basics of addiction behavior, use of MA PMP data in a criminal investigation, specifics related to use of the online system, and information on referring individuals to substance abuse treatment. All materials will be adapted as more trainings are held.

## PMP TREND DATA, IMPACT OF THE PMP

The MA PMP requires reporting of Schedule II-V prescription data from Massachusetts community, hospital outpatient, and clinic pharmacies, as well as from 105 out-of-state mail order pharmacies that deliver to patients in Massachusetts. By collecting this data, DCP has been able to conduct epidemiological surveillance of the reported information (e.g., changes in rates of estimated doctor/pharmacy shopping over time) to study patient activities indicative of prescription drug abuse, as well as, spot trends in such behaviors.

**Trends in Controlled Drug Prescribing in MA:** From 1992 to 2012, the number of Schedule II prescriptions dispensed in MA has steadily increased (Figure 1). From 2001 to 2012, the number of Schedule II prescriptions reported to the MA PMP has more than doubled; from approximately 2 to 4.4 million prescription records. In 2011, MA PMP expanded its reporting requirements and began collecting Schedules III-V prescriptions dispensed in MA. In 2012, nearly 12 million Schedule II-V prescription records (9.4 million new prescriptions and nearly 2.6 million refills) were reported to MA PMP.

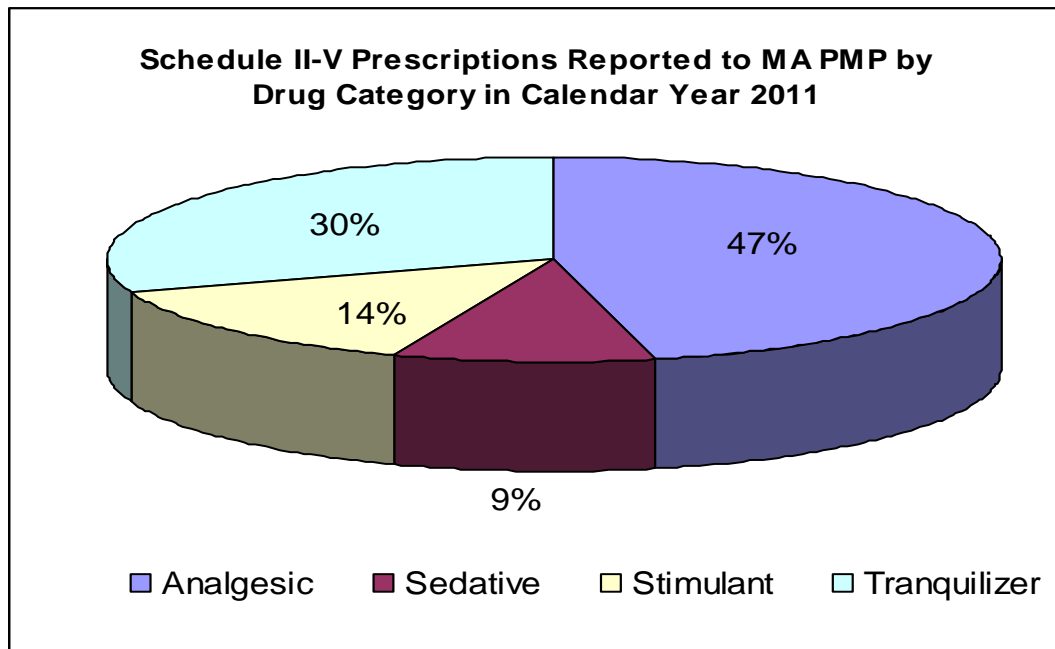
Figure 1



The number of prescriptions for Schedule II opioids also steadily rose during the same period. In the most recent four year reporting period (2009-2012), the analgesic drug category, which includes all opioid drug products, comprised nearly two-thirds of all Schedule II prescriptions dispensed in MA. This is consistent with the national trend of increasing opioid prescription drug use.

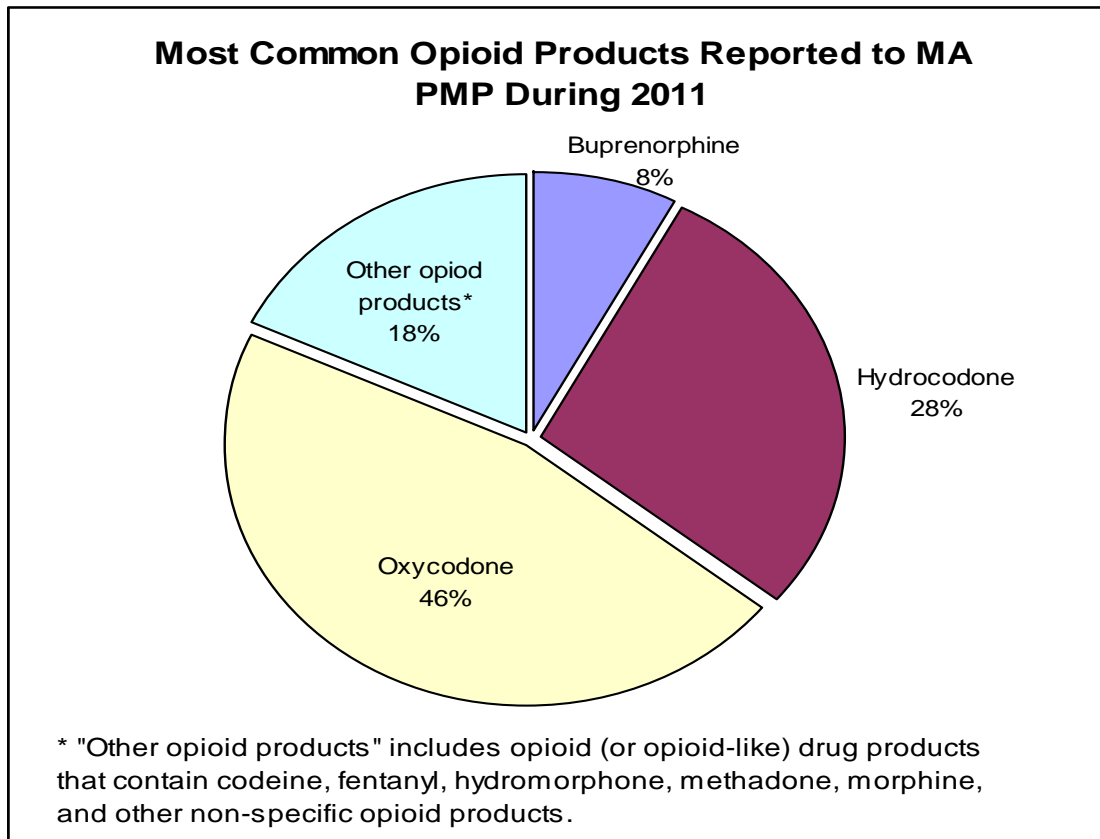
In 2011, pain relievers/analgesics (oxycodone [Oxycontin®] and methadone) were the most frequently prescribed drug category, accounting for nearly 47 percent of all Schedule II-V prescriptions reported to MA PMP. Tranquilizers were second, accounting for approximately 30 percent of all the Schedule II-V prescriptions, followed by stimulants (14 percent), and sedative-hypnotics (medications for sleep disturbances) (nine percent) (Figure 2). Aprazolam (Xanax®) and Diazepam (Valium®) are examples of tranquilizers. Methylphenidate (Ritalin®) and amphetamine salts (Addrerall®) are examples of stimulants. Zolpidem (Ambien®) and flurazepam (Dalmane®) are examples of sedative-hypnotics. As 2011 was the first year MA PMP began collecting the additional schedules (i.e., Schedules III-V), trend data are not available. Future reports will begin monitoring trends over time for these additional schedules.

**Figure 2**



In 2011, the most frequently dispensed category of opioid products in MA was oxycodone. Oxycodone products (Oxycontin®, oxycodone with acetaminophen, Percocet®) accounted for almost one half (46 percent) of the opioid prescriptions reported in calendar year 2011. Hydrocodone products (hydrocodone combined with acetaminophen or ibuprofen, e.g., Vicodin® Vicoprofen® respectively) were the second most frequently prescribed opioid in 2011 (26 percent) followed by buprenorphine (most commonly used for substance abuse treatment) (Figure 3).

**Figure 3**



**Trends in Questionable Activity (i.e., Doctor/Pharmacy Shopping) in MA:** Doctor/pharmacy shopping is one way in which individuals can obtain controlled substances for abuse and misuse. Doctor/pharmacy shopping is a widely used term used to describe when controlled drug prescriptions are acquired by deception. MA PMP uses the term “questionable activity” to identify individuals in the PMP database who meet specified doctor/pharmacy thresholds that are often consistent with this type of behavior. The MA PMP threshold criteria for identifying individuals with questionable activity aims to only identify patients at high risk for prescription

drug abuse. However, some patients with chronic pain may use multiple prescribers and pharmacies due to complex medical condition, and therefore, may have legitimate reasons for such activity.

Using criteria for doctor shopping for Schedule II opioids established by DCP, analyses of PMP data demonstrated that the estimated number of possible doctor and pharmacy shoppers increased 256 percent from fiscal year 1996 to FY 2008 (DPH 2011). In Calendar Year (CY) 2011, over 17,600 individuals showed possible doctor and pharmacy shopping activity for Schedule II–V opioids and over 11,000 showed such activity for Schedule II opioids alone (an estimated 1.4 percent of opioid patients) (DPH 2011).

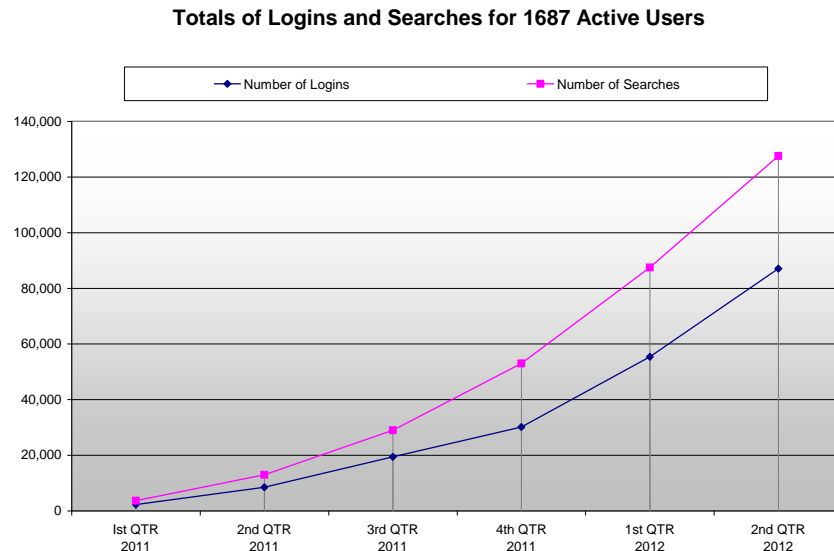
Recently, however, *rates* of doctor shopping (and actual number of individuals who meet the doctor shopping threshold) have declined; dropping from 1,680 per 100,000 persons in July in calendar year 2009 to 1,461 per 100,000 persons in calendar year 2011. This represents nearly a 14 percent decline during this time period. This suggests that sending out unsolicited reports (initiated in February 2010) and the use of the MA Online PMP (the MA Online PMP became operational in December 2010) may be having a positive impact on prescribing, helping to curtail doctor shopping.

***Enrollment, Usage and User Satisfaction:*** The DCP launched the MA Online PMP in December 2010. DCP has employed a phased approach to enroll practitioners and is continuing its effort to voluntarily enroll pharmacists and mid-level prescribers (i.e., physician assistants and advanced nurse practitioners) in the Online PMP. There has been a steady increase in the number of enrollments and active end users (those who have logged in at least once) since the online system became fully operational in January 2011. As of July 2011, 7.4 percent of all providers who have prescribed at least one CII-V prescription drug during CY 2011 have enrolled in the MA Online PMP. Furthermore, the total number of logins and patient searches has also steadily increased in the past two years (Figure 4). Based on the most recent results, identified active users have logged in an average of 50 times and conducted an average of 74 searches. In August 2012, Chapter 244 of the Acts of 2012<sup>9</sup> (the Act) was signed into law, which *mandates*

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<sup>9</sup> An Act Relative to Prescription Drug Diversion, Abuse and Addiction

practitioner enrollment and participation in the PMP.<sup>10</sup> DCP expects a significant increase in prescriber enrollment and participation in the PMP as a result of this new requirement.



**Figure 4.**

DCP analyses revealed that 90 percent of the controlled substances prescriptions were issued by only 30 percent of the total prescribers with a Massachusetts Controlled Substance Registration. DCP initiated efforts to encourage the prescribers in the top 30 percent to access PMP patient data in order to increase awareness of their patients’ prescription histories. Recently accumulated data has shown that DCP has been successful in this effort. Specifically, Table 2 shows that the top three prescriber deciles, which account for nearly 90 percent of all the Schedule III-V prescriptions dispensed in MA (see blue highlighted cells), are enrolled on the MA PMP at considerably higher percentages compared to the bottom six prescriber deciles. The percent online enrollment ranges from 20.2 percent for the top prescribing decile to 0.7 percent for the bottom prescribing decile.

Moreover, overall satisfaction with the PMP has consistently remained high. DCP routinely asks end users to complete a satisfaction survey three weeks after they have first logged on to the system. Through these surveys, 89 percent of respondents indicated they were satisfied with

<sup>10</sup> The Acts of 2012 Chapter 244 Sections 1 and 8, respectively

their overall experience using the system and 97 percent reported they would continue using it (n=158).

<b>Table 2. MA Online PMP Enrollment Percentages by Prescriber Decile* in CY 2011</b>					
<b>Decile</b>	<b>Percent of total CII-V Rx</b>	<b>Minimum # CII-V Rx</b>	<b># CII-V Rx Median</b>	<b># CII-V Rx Maximum</b>	<b>Percent Enrolled in MA Online PMP</b>
Top	60.4	821	1,430	16,800	20.2
2 <sup>nd</sup>	18.9	386	544	821	16.3
3 <sup>rd</sup>	9.7	210	285	386	12.2
4 <sup>th</sup>	5.3	115	155	210	8.6
5 <sup>th</sup>	2.9	61	85	115	5.8
6 <sup>th</sup>	1.5	33	45	61	4.3
7 <sup>th</sup>	0.8	16	23	33	2.8
8 <sup>th</sup>	0.4	7	11	16	2.0
9 <sup>th</sup>	0.2	2	4	7	1.2
Bottom	0.05	1	1	2	0.7

\*Prescribers were divided into 10 separate groups (i.e., deciles), each group having the same number of prescribers, based on the number of Schedule II-V prescriptions they prescribed during calendar Year 2011.  
 Each decile has 3,445 providers  
 Total number of prescribers with >= 1 Rx in CY 2011 = 34,468  
 Total enrolled in MA Online PMP as of July 13, 2012 = 2,550

***PMP Initiatives to Reduce Prescription Drug Abuse/Misuse:*** Although the capacity for generating MA PMP reports has expanded considerably over the last few years, there is an increasing need to develop analyses that can be used in assessing the magnitude of the prescription drug epidemic at the community level. DCP is planning to develop specific PMP products for the purpose of enabling health care professionals, law enforcement and other community leaders to evaluate the magnitude of the prescription drug problem in their communities and assess any specific initiatives they have implemented to address the problem. DCP has piloted county-level analyses for Berkshire County, which has shown a decrease in questionable activity from 2009 to 2011. Based on encouraging results from this study, DCP is currently working to enhance its capabilities to provide community-level data in addition to Berkshire County.

## ONGOING IMPROVEMENT EFFORTS

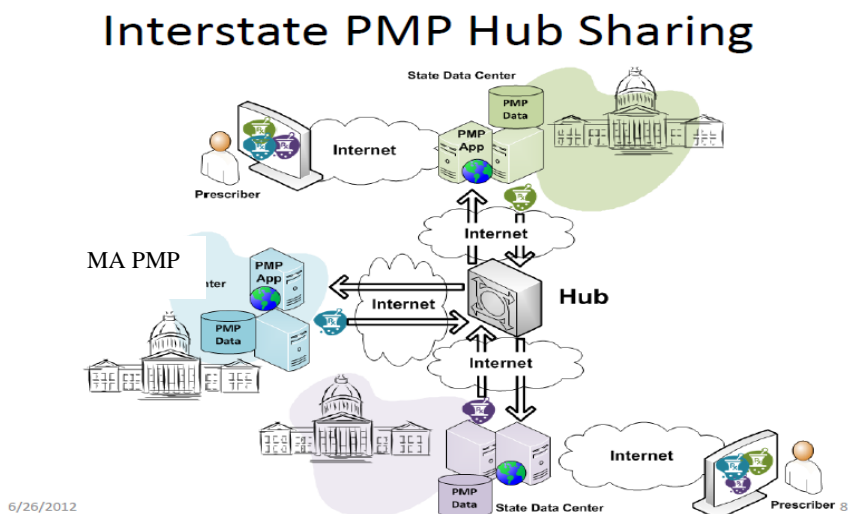
Continuous improvement efforts on the part of the Legislature and the DCP have helped shape the MA PMP into the tool that it is today, and ongoing efforts will ensure that the program continues to meet the needs of all of its end-users. Specific improvements are currently being developed in the areas of health information technology and interstate data sharing.

**Health Information Technology:** DPH is undertaking major initiatives to leverage health information technology (Health IT) to increase PMP usability and efficiencies for clinician end users. User-friendly technologies and workflow integration will permit the Online PMP to support functions beyond the current single-patient look-up, including:

- Electronic Unsolicited Reports/Alerts (available July 2013): emails concerning high risk patients identified using PMP data; no patient information emailed (described above under Unsolicited Reporting, p. X)
- Batch Lookup: enable prescribers to save time by providing the ability to do multiple lookups at one time, e.g., all the patients with appointments on a particular day or week;
- Prescriber Self-Lookup: allow prescribers to obtain records for all Schedule II – V prescriptions written by the prescriber over the previous 12 months for the purpose of conducting self-assessments and identifying forgery; and
- HIE Integration: integration of the MA Online PMP with Electronic Health Records (EHRs) and pharmacy systems through Health Information Exchange (HIE) and adopting the American Society for Automation in Pharmacy's (ASAP) 4.1 PMP reporting standard. DPH has been awarded a grant from the Substance Abuse Mental Health Services Administration (SAMHSA) for federal fiscal years 2014 through 2015 to support this work.

The Executive Office of Health and Human Services (EOHHS) is undertaking the first phase of building a HIE infrastructure that will enable connections between the PMP and many EHRs through a single interface. Developing this infrastructure is the first step in creating a comprehensive statewide HIE capability that will enable data normalization and aggregation as well as query based exchange. DCP is currently exploring development of an interface between the MA Online PMP and one or two EHR systems to test feasibility and usability. At the same time, DCP is exploring development of an interface with the proposed EOHHS HIE infrastructure. Thus, the MA Online PMP would be integrated with EHR, e-prescribing and other electronic patient management systems to enable easy look up of PMP data, both in the state and across state lines.

**Interstate Data Sharing:** Inter-state data sharing allows reciprocity for data exchange between authorized users in MA and those from a cooperating state. A set of consensus-based national standards, known as Prescription Monitoring Information Exchange (PMIX) specifications, has already been created to enable PMPs to share data. RxCheck is the operational interstate data sharing hub that implements the PMIX specifications and provides for the interstate exchange of data (see diagram below).



Source: Alliance of States with PMPs. April 2012

DCP has initiated operations for admission into the RxCheck Hub, including developing work specifications for IT vendors, hiring a PMIX IT project manager and drafting a variety of Memoranda of Understanding (MOU) to establish formal data sharing agreements with other state PMPs. Draft MOUs have been developed for Kentucky, Maine and Connecticut and are being reviewed by DPH IT security. DCP anticipates coding and preliminary implementation of the system to begin upon completion of the Virtual Gateway (VG) 4.0 upgrade, which is expected by the end of 2013. Following implementation of the system, DCP will begin pilot testing PMP data requests by MA for Kentucky, Maine and Connecticut PMP data and reciprocal requests for MA PMP data.

## SUMMARY

MA DCP remains committed to integrating PMP use into existing clinical practice workflow and technology in an effort to ensure appropriate use of prescription controlled substances.

Specifically, DCP has actively engaged in soliciting and evaluating user feedback to guide strategic and effective program improvements. Since implementing a variety of user friendly program enhancements such as, launching an MA Online PMP, DCP has observed a nearly two-fold decrease in doctor shopping rates from July 2010 to June 2012. With additional system enhancements DCP expects to further expand PMP use and looks forward to collaborating with the legislature in its efforts to curb the prescription drug abuse epidemic in the Commonwealth.

## REFERENCES

- Birnbaum HG, White, AH, Schiller M, et al., 2011. "Societal Costs of Prescription Opioid Abuse, Dependence, and Misuse in the United States," *Pain Medicine* (2011) 12:657-667.
- Brandeis University, Schneider Institutes for Health Policy. 2012. Online PMP Registration Rates Averaged for CY 2011, for BJA Grantee States. July 2012.
- Centers for Disease Control and Prevention (CDC). 2011. Vital Signs: Overdoses of Prescription Opioid Pain Relievers—United States, 1999-2008. *MMWR* 2011; 60: 1-6.
- Commonwealth of Massachusetts. 2010. Substance Abuse Strategic Plan Update FY 2011 – FY 2016. Available on the Web: <http://www.mass.gov/governor/docs/strategic-plan-update-july-2010.pdf>.
- Massachusetts Department of Public Health (DPH). 2009. Drug Analysis Laboratory, Western Massachusetts Public Health Center, Amherst, MA.
- [DPH] 2011. Drug Control Program. Epidemiological Surveillance of Prescription Monitoring Program Data. 1996-2011.
- [DPH]. 2012a. A Decade of Mortality Massachusetts: 2000 – 2009." Division of Research and Epidemiology, Bureau of Health Information, Statistics, Research and Evaluations. July 11, 2012.
- [DPH]. 2012b. Massachusetts Deaths 2009. Registry of Vital Records and Statistics, Massachusetts Department of Public Health, July 11, 2012.
- [DPH] and Brandeis University, Schneider Institutes for Health Policy. 2012. Prescriber Survey on Unsolicited Reports Sent by DPH, DCP. July, 2012.
- Substance Abuse and Mental Health Services Administration (SAMHSA). 2011. Results from the 2010 National Survey on Drug Use and Health: Summary of National Findings, NSDUH Series H-41, HHS Publication No. (SMA) 11-4658. Rockville, MD: Substance Abuse and Mental Health Services Administration, 2011.
- [SAMHSA]. 2012a. Results from the 2011 National Survey on Drug Use and Health: Summary of National Findings, NSDUH Series H-44, HHS Publication No. (SMA) 12-4713. Rockville, MD: Substance Abuse and Mental Health Services Administration.
- [SAMHSA]. 2012b. Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality. (July 2, 2012). The DAWN Report: Highlights of the 2010 Drug Abuse Warning Network (DAWN) Findings on Drug-Related Emergency Department Visits. Rockville, MD.

[SAMHSA]. 2013. Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality. (January 8, 2013). The NSDUH Report: State Estimates of Nonmedical Use of Prescription Pain Relievers. Rockville, MD. Available at: <http://www.samhsa.gov/data/2k12/NSDUH115/sr115-nonmedical-use-pain-relievers.htm>

United States Department of Health and Human Services (DHHS). 2009. Public Health Service, Food and Drug Administration, Center for Drug Evaluation and Research Office of Surveillance and Epidemiology. Extended-Release/Long-Acting and Immediate-Release Opioid Utilization Trends, 2000-2009. June, 2010. Available at: <http://www.fda.gov/downloads/AdvisoryCommittees/CommitteesMeetingMaterials/Drugs/AnestheticAndLifeSupportDrugsAdvisoryCommittee/UCM217510.pdf>

[DHHS]. Substance Abuse and Mental Health Services Administration. Office of Applied Studies. National Survey on Drug Use and Health, 2008-2009. No Date.