Massachusetts Department of Public Health
Bureau of Health Care Safety and Quality
Drug Control Program
An Evaluation of the Impact of Providing Unsolicited “Questionable Activity” Reports to Prescribers
• MA PMP Background
• MA PMP Data Trends
• Unsolicited Report Analysis
• Electronic Alert Initiative
• Discussion
Purpose of the MA PMP:
- To help promote safe prescribing and dispensing
- To help prevent drug diversion and abuse.

MA PMP collects data on Schedule II-V prescriptions dispensed in MA pharmacies and from out-of-state pharmacies delivering to MA.

Over 12 million Schedule II-V prescription records were reported to MA PMP in CY 2012.
- **New Patient Identifiers**: In January 2009, the MA PMP began collecting patient identifiers (e.g., name, address). Previously, MA PMP only collected a customer identifier (e.g., driver's license number).

- **Unsolicited Reports**: In February 2010, MA PMP began providing unsolicited reports to prescribers on individuals meeting or exceeding a pre-determined threshold for suspected questionable activity (i.e., doctor/pharmacy shopping).

- **MA Online PMP**: In December 2010, the MA Online PMP became operational.

- **Expanded Schedules**: In January 2011, MA PMP expanded monitoring requirements to include Schedule III-V controlled substance prescriptions; previously only collected Schedule II prescriptions.

- **Electronic Alerts**: In July 2013, MA PMP initiated electronic alerts.
1 Population includes all individuals (identified by customer ID) who received at least one Schedule II opioid prescription in a fiscal year.

2 Questionable activity is defined as having received Schedule II opioid prescriptions from a minimum of 4 providers and 4 pharmacies during the reported fiscal year.
Comparison of Doctor Shopping Thresholds

In order to meet the doctor/pharmacy shopping thresholds a patient must have received a minimum of 1 Schedule II opioid drug prescription from each of the different prescribers and filled them at each of the different pharmacies for the given threshold during the specified calendar year.
## Percent Difference by Doctor Shopping Threshold (2009 and 2012)

<table>
<thead>
<tr>
<th>Threshold</th>
<th>CY 2009</th>
<th></th>
<th>CY 2012</th>
<th></th>
<th>% Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rate</td>
<td>Rate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>per 100,000 population</td>
<td>per 100,000 population</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;= 2 Presc &amp; 2 Pharm</td>
<td>15,144</td>
<td>14,660</td>
<td>-3.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;= 4 Presc &amp; 4 Pharm</td>
<td>1,687</td>
<td>1,403</td>
<td>-16.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;= 6 Presc &amp; 6 Pharm</td>
<td>386.2</td>
<td>256.0</td>
<td>-33.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;= 8 Presc &amp; 8 Pharm</td>
<td>124.7</td>
<td>65.1</td>
<td>-47.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;= 10 Presc &amp; 10 Pharm</td>
<td>54.3</td>
<td>24.1</td>
<td>-55.6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Rate:** Number of unique individuals who meet the specified threshold criteria per 100,000 population

**Numerator:** Includes individuals who meet the specified doctor/pharmacy threshold obtaining Schedule II (C-II) opioid drugs during the calendar year.

**Denominator:** Individuals who have received at least one Schedule II opioid drug during the specified calendar year.
Number of Patients with >= 100 or 500 Milligram Morphine Equivalent: Calendar Year 2009 - Aug 2013

Notes: Each data point represents the number of unique individuals who have received opioid controlled drug prescriptions totaling >= 100 or >= 500 morphine milligram equivalents (MME) during the specified month. The data points represent 1-month intervals, but only bi-annual data are presented.
WHY SEND UNSOLICITED REPORTS?

- Evidence from PMPs (e.g., Nevada\textsuperscript{1} and Wyoming\textsuperscript{2}) suggests that sending unsolicited reports reduces questionable activity (e.g., number of prescribers and pharmacies visited).

- The total economic cost of substance abuse has reached $245 billion. Includes treatment and prevention costs, healthcare, losses on job productivity, crime and social welfare.\textsuperscript{3}

\textsuperscript{1} PMP Center of Excellence Notes from the Field. Nevada’s Proactive PMP: The Impact of Unsolicited Reports. October 2011

\textsuperscript{2} PMP Center of Excellence Notes from the Field. Trends in Wyoming PMP Prescription History Reporting: Evidence for a Decrease in Doctor Shopping? September 2010.

\textsuperscript{3} National Institute on Drug Abuse and the National Institute on Alcohol Abuse and Alcoholism in the US.
Unsolicited reports consist of:

- Overview of initiative
- Patient prescription history
- Provider contact information
- Guidance on use of information
- Two-part optional prescriber survey
  - Part 1: Complete upon receipt of report
  - Part 2: Three month follow-up
• A total of 332 baseline surveys received
• 72% of respondents said Unsolicited Reports (both electronic and hard copy) “very” or “somewhat helpful”
• Only 8.4% said they were “aware of all or most of other prescribers” in report
• Only 9% said “based on current knowledge, including report, patient appears to have legitimate medical reason for rxs from multiple prescribers”
• Twelve percent of respondents said they were aware of most, all, or nearly all other prescribers on the report

Source: MDPH and P. Kreiner et al., Brandeis University
Purpose of Unsolicited Report Analysis

• MA PMP evaluated the impact of unsolicited reports (baseline versus follow-up time period) on the controlled prescription drug use of individuals who met specified thresholds of questionable activity for whom such reports were sent.

• A comparison group (i.e., group for whom no unsolicited reports were sent) was included to provide more accurate measures of the impact of unsolicited reports.
METHODOLOGY
Identifying Individuals for Unsolicited Reports

• Minimum questionable activity (doctor/pharmacy shopper) threshold

• A small percentage (< 5 percent) of all the eligible “at risk” individuals in MA were selected for an unsolicited report.

• Prescribers received the selected individual’s prescription history for the most current 1-year time period.

• The individuals (i.e. case population) included in the analysis were identified between January and August, 2010.
METHODOLOGY (Continued)

Selection of Comparison Group

- A comparison group was selected from the same pool of eligible individuals who were selected (i.e., cases) for unsolicited reports.

- Any individual who was selected for an unsolicited report was ineligible to be in the comparison group.

- A methodology referred to as “propensity scoring” was used to identify suitable matches so that key measures and other characteristics were similar to the distribution of the case group.
# RESULTS

## Demographics of Study Population

<table>
<thead>
<tr>
<th></th>
<th>Intervention Group (N = 84)</th>
<th>Comparison Group (N = 84)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Males</strong></td>
<td>39 (46.4%)</td>
<td>40 (47.6%)</td>
</tr>
<tr>
<td><strong>Females</strong></td>
<td>45 (53.6%)</td>
<td>44 (52.4%)</td>
</tr>
<tr>
<td><strong>Average Age</strong></td>
<td>42.2 Years</td>
<td>41.7 Years</td>
</tr>
<tr>
<td></td>
<td>Range: 19-74 Years</td>
<td>Range: 23-76 Years</td>
</tr>
</tbody>
</table>
### RESULTS (continued)
#### Pre-Intervention (12 months prior to sending unsolicited reports*)

<table>
<thead>
<tr>
<th></th>
<th>Case Group (N = 84)</th>
<th>Comparison Group (N = 84)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of Prescriptions</strong></td>
<td>Average = 48.3</td>
<td>Average = 49.1</td>
</tr>
<tr>
<td></td>
<td>Min = 14</td>
<td>Min = 12</td>
</tr>
<tr>
<td></td>
<td>Max = 134</td>
<td>Max = 156</td>
</tr>
<tr>
<td><strong>Number of Prescribers</strong></td>
<td>Average = 18.5</td>
<td>Average = 18.0</td>
</tr>
<tr>
<td></td>
<td>Min = 4</td>
<td>Min = 3</td>
</tr>
<tr>
<td></td>
<td>Max = 85</td>
<td>Max = 60</td>
</tr>
<tr>
<td><strong>Number of Pharmacies</strong></td>
<td>Average = 11.0</td>
<td>Average = 11.7</td>
</tr>
<tr>
<td></td>
<td>Min = 3</td>
<td>Min = 3</td>
</tr>
<tr>
<td></td>
<td>Max = 54</td>
<td>Max = 41</td>
</tr>
</tbody>
</table>

*Pre-Intervention data includes all Schedule II prescription records reported to MA PMP for a specified 12 month time period prior to sending a case report for a specified 12 month time period prior to when the comparison individual is selected.
## RESULTS (continued)

<table>
<thead>
<tr>
<th></th>
<th>Intervention Group*</th>
<th></th>
<th>Comparison Group*</th>
<th></th>
<th></th>
<th>(p value)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre</td>
<td>Post</td>
<td>% Decrease</td>
<td>Pre</td>
<td>Post</td>
<td>% Decrease</td>
</tr>
<tr>
<td><strong>Average # of Schedule II Rx</strong></td>
<td>48.3</td>
<td>27.4</td>
<td>50.3</td>
<td>49.1</td>
<td>30.0</td>
<td>38.9</td>
</tr>
<tr>
<td><strong>Average # of Prescribers</strong></td>
<td>18.5</td>
<td>8.3</td>
<td>55.7</td>
<td>18.0</td>
<td>9.7</td>
<td>46.1</td>
</tr>
<tr>
<td><strong>Average # of Pharmacies</strong></td>
<td>11.0</td>
<td>5.5</td>
<td>51.8</td>
<td>11.7</td>
<td>7.0</td>
<td>40.2</td>
</tr>
<tr>
<td><strong>Average Dosage Units</strong></td>
<td>2,309</td>
<td>1,697</td>
<td>39.2</td>
<td>2,428</td>
<td>1,700</td>
<td>30.0</td>
</tr>
<tr>
<td><strong>Average days Supply</strong></td>
<td>473</td>
<td>326</td>
<td>42.6</td>
<td>475</td>
<td>359</td>
<td>24.4</td>
</tr>
<tr>
<td><strong>Total morphine equivalents</strong></td>
<td>50,504</td>
<td>34,468</td>
<td>31.8</td>
<td>51,475</td>
<td>33,565</td>
<td>34.8</td>
</tr>
</tbody>
</table>

* Excludes individuals where no controlled prescription records were found in the post-intervention period; cases: n = 78, controls: n = 77

† Statistically significant at p < 0.05
CONCLUSIONS

• Findings suggest that sending unsolicited reports reduces key proxy measures of questionable activity.

• All key measures declined more in the case group compared with the comparison group.

• There was a statistically significant difference, between the case and comparison group, in the decline in the number of pharmacies visited from the pre- and post-intervention period and in the average days supply.

• The results validate other studies (without a comparison group) that showed declines in measures of questionable activity for individuals for whom unsolicited reports were sent.
• Difficulty in identifying suitable comparison population.

• MA PMP only collected Schedule II Rx during the pre-intervention time frame; therefore pre- and post-intervention comparisons for Schedule III-V are not possible.

• Limited patient health information - no way to confirm whether all individuals in the study were engaging in inappropriate use of controlled drugs; also no way to follow up on individuals who did not have any controlled prescription activity during the post-intervention period.

• Incomplete prescription records - some controlled drug prescription records may not be included in the analysis; (e.g., individual may intentionally conceal or misrepresent identifying information.)
Electronic Alert Initiative
Efficiencies of Electronic Unsolicited Reports

- Identify questionable activity for providers without need for single patient lookup
- New patient who meets criteria automatically generates alert
- DCP blocks multiple alerts on a patient to already notified providers to prevent alert fatigue
- An existing alert for a patient will be automatically sent to a new provider for that patient
From: dcp.dph@state.ma.us
To: dhouser@medicaloffice.com

Massachusetts Department of Public Health
Online Prescription Monitoring Program

Drug Utilization Report
Record ID: 133641925

This is to inform you that analysis of records of the Massachusetts Online Prescription Monitoring Program (Online PMP) indicates that a patient to whom you have prescribed or dispensed a controlled substance appears to have obtained prescriptions for controlled substances from multiple sources and in potentially harmful quantities.

The Department recommends that you review the prescription history of this patient by logging in to the Online PMP and using the Record ID number above.

A Drug Utilization Report is issued for the purpose of assisting providers in delivering optimal care for their patient, including assessing the possibility of drug abuse or diversion. You are not required to use the information nor are you required to take any action that you believe to be contrary to the patient's best interests.

IMPORTANT: The Record ID contained in this report is a static view of your patient's prescription history. Future monitoring of this patient should be accomplished by entering the patient's information in the Single Patient Look-up.

The Record ID can be searched by entering the number in the search window on the top-right corner of the main page…next to "Open"

Your feedback is extremely important. We ask that you take a moment to complete the survey concerning these electronic alerts. It will help us improve PMP operations and understand how PMP data are used by prescribers.

<a href="https://www.surveymonkey.com/s/MA_Online_PMP">Click here to take survey</a> A follow-up survey will be sent out in 2 months concerning this particular Record ID


For further information on Online PMP Drug Utilization Reports, please go to the Online PMP website at www.mass.gov/dph/dcp/onlinepmp. To send a comment or ask a question about the report, you may reply to this email.

NOTICE: This communication contains confidential information from the Massachusetts Department of Public Health. This information is intended only for the use by the recipient listed above. If you are not the intended recipient or the employee or agent of the intended recipient responsible for the delivery of this information, you are hereby notified that the disclosure, copying, use or distribution of this information is strictly prohibited. If you have received this communication in error, please notify the Department immediately by replying to this email.
Welcome to the Massachusetts Online Prescription Monitoring Program

Single Patient Lookup

Logging into the Massachusetts Online Prescription Monitoring Program constitutes agreement to abide by the terms and conditions of use.

Announcements

Data Availability:

- The database includes Schedule II prescription records for the most recent 12 months.

- Records for Schedules III-V prescriptions have been reported since January 2011. There are no records prior to that date.

- In general, it takes up to two to three weeks between dispensing of a prescription and its inclusion in the Online PMP.

Data Limitations:

- Prescription records are dependent upon quality and completeness of data submitted.

- Patient identifiers may not be consistent across pharmacies or pharmacies may not have been given correct information.

Help Desk Support:

- For questions about your username or password, please call the Virtual Gateway help desk at 800-421-0830.

- For all other questions, please call 617-963-6700 or send an email to dcp.dph@state.ma.us

VG Assistance TTY call 617-847-6578

Web Resources

- MA Online PMP Homepage
Electronic Alert Results

- Electronic alerts were activated in July 2013
- We applied a questionable activity threshold in collaboration with the PMP Medical Review Group (MRG) comprised of pharmacists and prescribers.
- Using this threshold, an electronic alert would have been sent to 5,716 prescribers if all prescribers were enrolled in the MA Online PMP.
- Forty-two percent (2,385) of the prescribers who met the threshold and would have received an alert are enrolled and actually received an alert email.*

*This includes a number of emails that were undeliverable due to changes in emails or otherwise incorrect email addresses in the system.
Discussion

• How should undeliverable emails (i.e. changes/errors in email addresses) be handled when activating electronic alerts?

• Frequency of sending electronic alerts (what do other states do?)

• What resources should be provided to assist providers in interpreting patient “unsolicited” reports

• Other considerations/experiences initiating electronic alerts by other states
Acknowledgement

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