The prescription monitoring program data
What it can tell you

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WHAT IS A PRESCRIPTION MONITORING PROGRAM?

A prescription monitoring program (PMP) is a state-run program that collects and distributes data about the prescription of controlled substances which are administered by a variety of state agencies, including Boards of Pharmacy, Departments of Health, and Professional Licensing Boards and Law Enforcement Agencies. The intent of PMPs is to help prevent substance misuse by providing historic data on a patient’s controlled substance prescriptions. As an example, the Massachusetts PMP, administered by the Department of Public Health and now called Massachusetts Prescription Awareness Tool (MassPAT), is a computer-based system that collects prescription data submitted by pharmacies on all schedule II through V prescriptions and provides registered users (licensed dentists can apply to their state authority for access to the database) with information about the controlled substance prescription data for their patients. Each state has its own regulations, and in Massachusetts it has been mandated since October 2016 that prescribers check this database before prescribing controlled substances for the first time for adults, and each time for patients younger than 18 years. PMP data can indicate forged and altered prescriptions, doctor shopping, prescription rings, unlawful dispensing, and prescription, distribution, and health care fraud.

All states have a PMP among which regulations vary and many are interoperable, allowing prescribers to check the controlled substance prescription history of their patients from other states. Only 35 states require use of the PMP, with data showing a greater impact on clinician adherence with this mandate in place. Although most of these programs have been in place for some time, advice on how the data can be used and interpreted is sparse, especially as it relates to dental practice. Guidance for counseling and referral for at-risk patients is also lacking.

Using MassPAT as an example for this article, we discuss the data available and use actual redacted data reports to suggest ways to understand and apply this information from a clinical, risk-assessment, and law enforcement perspective.

PRESCRIPTION MONITORING PROGRAM DATA

The MassPAT database consists of the patient’s name, date of birth, sex, address, name of the drugs prescribed, strength, quantity, number of days, prescriber name, prescription number, pharmacy where filled, number of refills, morphine equivalency per day (morphine milligram equivalents [MME]), payment type, and state where prescription was filled. It also lists the prescribers’ names, addresses, and telephone numbers, as well as the pharmacies’ name, address, and phone number. A summary provides the total number of controlled prescriptions, number of prescribers, pharmacies used, private pay numbers, and active daily MME in the last year. Each of these pieces of data can be useful and is subject to interpretation.

Name

When submitting a search, prescribers should use the minimum amount of data to identify a person. Patients may be known by nicknames or abbreviated names but are listed under their legal names, sometimes with a middle initial, in the database. Using the least amount of data will recover a wider range of possibilities and duplicate records (that is, Jackie Smith versus Jacqueline Smith versus Jacqueline M. Smith). Misspellings are also possible.
Date of birth
Date of birth is a mandatory field and will differentiate between people with the same name but
different dates of birth.

Address
Addresses can be entered with varying information (that is, apartment numbers, street names, and local
community names versus municipality [Charlestown versus Boston, MA]). Two addresses may indicate
that the person has moved but can also show that the person is registered at 2 separate locations.

Medications listed
Each US state defines which medications are listed and these lists are updated from time to time (for
example, Massachusetts added gabapentin [Neurontin] to its list of reported medications in August
2017). Generally, opioids and benzodiazepines are listed. Quantity and days prescribed allow a
calculation of number of doses per day. This helps with identification of overlapping prescriptions or
early refills. A combination of opioids with benzodiazepines is a sign of concern as 71% of pre-
scription drug overdoses involve opioids and 31% involve benzodiazepines. Medications prescribed
within a formal methadone maintenance program are not listed in MassPAT; other states also have
some limitations on the drugs that are listed.

Prescribers
Multiple prescribers for the same or similar medications could indicate “doctor shopping,” which is
one of the primary ways that people obtain prescription drugs for nonmedical use. However,
considering the organization of our health care system, numerous prescribers may not represent a
problem. As described below in case 4, the husband worked at a large institution with an imbedded
health center where the couple received their primary care. The many prescribers listed at the same
address represented physicians and nurse practitioners working in the same facility all with access to
the same medical record. Case 1 illustrates a situation in which a patient is clearly doctor shopping
from 1 medical facility to another, and case 2 demonstrates “dentist shopping” in 2 adjacent states.
Case 5 indicates that the patient traveled well outside her normal area to obtain a prescription.

Pharmacies
The number of different pharmacies used is likely a cause of concern. Be aware that patients may
legitimately use pharmacies close to home or at work for convenience or several pharmacies within
the same chain.

A combination of multiple prescribers and multiple pharmacies
Multiple prescribers and multiple pharmacies combined can indicate misuse potential. There is no
standard definition for concern but 4 prescribers and 4 pharmacies are used by some agencies to
indicate a level of concern and to generate reports for prescribers to alert them to potential issues.

MME
Opinions vary as to the definition of “high dosing.” The Centers for Disease Control and Prevention
suggest that there is a particular need to address risk at more than 50 MMED and encourages
clinicians to avoid risk at greater than MME 90 mg per day. Dunn and colleagues have stated that
more than an MME of 100 milligrams per day resulted in an 8.8-fold increase in overdose risk.

Payment type
The cost of controlled substances for legitimate purposes is usually covered under medical insurance,
sometimes with copayments or limitations of quantity, and time between refills is mandated by the
state or insurance carrier. Self-pay may suggest that the patient is avoiding these restrictions.

TYPES OF MISUSE

Doctor shopping
Doctor shopping implies that the patient is going from 1 physician’s or dentist’s office to another and
obtaining multiple prescriptions for opioids or other controlled substances for the same symptom. The
individual states' PMP elects to classify such cases as “activities of concern” as more detail is often needed before assuming illegal behavior. This behavior is typically characterized by multiple pill bottles labeled for the same medication, prescribed by multiple practitioners, with the same opioid prescribed, and frequently filled at multiple pharmacies to avoid detection. The behavior may or may not be factitious. This scam can also involve several members of a group practice especially if they have more than 1 office location and do not have a robust and timely way to communicate repeat appointments, multiple medications, and outside of business hours’ refill requests. This type of activity has been difficult to detect without the real-time data provided by the PMP. Dental practices are particularly susceptible as they are predominantly small with limited communication between practices in adjacent areas. A similar behavior was documented in a 2017 National Public Radio segment in which 2 prior abusers in a recovery program described how they maintained broken teeth in their mouths to get dentists to prescribe opioids. According to Massachusetts law, patients have the responsibility of informing their providers if they are being treated by another provider and receiving prescriptions for the same ailment. Providers can also refuse to write a prescription if they feel the patient is not being truthful. Doctor shopping and other drug-seeking behaviors point to the benefit of health care professionals’ using tools to help assess opioid addiction risk.

**Hoard ing**

In anticipation of increased pain related to upcoming surgery, patients can mislead their providers about the number of opioid pills they are taking with the result that they hoard medications for an anticipated increased need or “for a rainy day.” Such behavior also heights the risk of death by suicide or unintended overdose.

**Diversion**

Diversion occurs when legally produced controlled pharmaceuticals are illegally obtained for nonmedical use. Examples include physicians, dentists, or pharmacists selling prescriptions or drugs to nonpatients, employee theft, doctor shopping, robberies, and prescription forgeries.

**Overlapping prescriptions**

The overlapping prescriptions form of misuse can occur in different ways. The patient can request early refills from the primary provider or go to another provider for a duplicate prescription. The standard excuses are vacation requests, increased use due to special circumstances (for example, stressful unforeseen circumstances, trauma, weather changes), and so forth. Patients can also acquire prescriptions for overlapping medical or surgical conditions; for example, a dental extraction while receiving treatment for an orthopedic injury.

**CLINICAL SCENARIOS**

Following are clinical examples from a tertiary-level teaching hospital’s oral and maxillofacial surgery department. These examples do not necessarily represent the experience in general dental practice. The examples are real and are used for illustrative purposes.

**Case 1**

A 55-year-old woman with a history of temporomandibular joint pain and surgery and prescription drug misuse was evaluated for recurrence of facial pain. Her data showed that in the past year she had received 151 prescriptions, of which 97 were opioids, 20 benzodiazepines, and 19 anxiolytics. They had been written by 53 prescribers, 10 of which were recognized as dentists, and she had them filled at 27 pharmacies. She was registered under 2 different names and had 2 addresses.

**Conclusion**

Recurrence of abuse is demonstrated by the large number of controlled substance prescriptions from multiple providers filled at multiple pharmacies. Two different names and addresses in 2 states are also suspicious.

**Action**

Action includes a discussion with the patient and primary care physician, resulting in referral to a program that evaluates and treats substance use disorder.
Case 2
A 33-year-old health care professional with “jaw pain” moved from a neighboring state. The dentist was suspicious of her symptoms and her stated need for opioids. In the past 6 months, she has had 20 prescriptions, 16 for opioids and 2 benzodiazepines written by 18 prescribers, 15 of whom were dentists all practicing within a few miles of one another in a metropolitan area. The prescriptions were filled at 10 pharmacies. A check of the data from the neighboring state demonstrated the same pattern of “dentist shopping.”

Conclusion
This scenario represents dentist shopping with factitious symptoms and likely knowledge of dental practice vulnerabilities. The patient did not return to this dentist.

Case 3
A 45-year-old who had extensive facial trauma and had undergone multiple reconstructive surgeries. In the last year, she received 25 prescriptions, 20 for opioids and 5 for benzodiazepines, written by 2 prescribers and filled at 2 pharmacies. She complains of chronic mouth and face pain.

Conclusion
Appropriate long-term use of opioids for chronic pain. She is under the care of an orofacial pain dentist who sees her regularly and monitors her symptoms and medication use.

Case 4
A 70-year-old woman with long-term burning mouth syndrome and atypical facial pain has multiple additional medical symptoms, including marked anxiety and difficulty sleeping. She has had teeth removed 1 by 1 over the years and is partially edentulous and has difficulty tolerating partial dentures. The data showed that she has had 49 prescriptions in the last year, 24 narcotics and 25 benzodiazepines written by 7 prescribers and filled at 2 pharmacies.

Conclusion
No abuse was evident; however, on further evaluation it is determined that the opioids were being used to treat unresolved anxiety and depression. The 7 prescribers were all from a medical group practice, and the prescriptions were filled at their pharmacy or the pharmacy close to her home.

Action
Assess patient risk for self-harm, counsel the patient, taper opioids in conjunction with her primary care physician, and refer her for behavioral health services.

Case 5
A 40-year-old with chronic postoperative jaw pain manages pain with an “opioid contract” with decreasing doses of opioids (one-half tablet of 5 mg oxycodone/325 mg acetaminophen twice a day) and 28-day visits. In the last few months, the patient has had additional prescriptions for a 2- to 3-day supply of opioids from 3 physicians filled at different pharmacies, 1 well outside her regular travel area. Patient vehemently denies knowledge of these extra prescriptions.

Discussion
Has the patient broken her opioid contract? Is she doctor shopping, misusing, abusing, diverting, or being impersonated, or is this a reporting error?

Action
Talk to the patient, assess for substance use risk, contact other prescribers, and check pharmacy records. If circumstances suggest misuse, reports can be made to the local police, law enforcement authorities, or the Drug Enforcement Agency (http://www.DEA.gov), anonymously, if desired. A dentist has a duty to report if he or she suspects that misuse of controlled substances may be occurring.

Case 6
A 37-year-old man status post dental extraction complains of jaw pain and trismus. Patient has a history of prescription opioid misuse after orthopedic surgery several years ago. The patient received
5 mg of oxycodone (9 tablets per day) from his general dentist. An oral and maxillofacial surgeon found no evidence of temporomandibular joint pathology. Patient declined other pain management strategies, and the PMP database showed 20 prescriptions in the last year for opioids all prescribed by one dentist for a total of 2,431 tablets.

**Action**
Patient is counseled and referred to substance abuse disorder program.

**Case 7**
A 52-year-old registered nurse who received a decreasing dose of oxycodone after surgery has a chronic opioid therapy agreement with her provider. The data showed that she received additional opioid prescriptions after orthopedic surgery, after a lumpectomy for breast cancer, and after experiencing adverse effects of radiation therapy.

**Discussion**
Is this a legitimate increase in pain medication requirements? Are other providers aware, and who is responsible for coordinating care?

**Action**
Discuss with patient, inform other prescribers, coordinate with primary care provider, and recommend comprehensive pain management program.

**Case 8**
A 50-year-old health care professional came in for a preoperative visit before jaw surgery. Her data showed that she had been taking long-term narcotic medications prescribed by her primary care physician for chronic pelvic pain. In the last 12 months, she has had 26 prescriptions for controlled substances, 7 prescribers, and 3 pharmacies for an active daily MME of 19 mg. She has been taking 50 mg of tramadol, 8 times per day, and 10 mg of oxycodone/325 mg of acetaminophen 6 times per day for 25 days (150) on a monthly basis. On closer questioning, the patient indicated that she has only taken 1 tablet of 10 mg oxycodone/325 mg acetaminophen per day for the past 6 weeks and, therefore, by this calculation, she would have approximately 6 weeks’ worth of 5 tablets per day unused.

**Discussion**
Does her primary care physician know? Has the patient had a history of hoarding medications? Is this diversion or saving up for “a rainy day”? Is this appropriate?

**Action**
Discuss with the patient and the primary care physician, complete risk assessment, acknowledge spare opioids, and prescribe appropriately.

**Case 9**
A 53-year-old with a history of alcohol abuse and chronic abdominal and back pain is scheduled for surgery. Her MassPAT report shows that she is registered with 5 names; 2 names have different middle initials, 2 names are misspelled. All dates of birth are correct.

In the past 12 months, the patient has filled 25 prescriptions, 1 for 5 mg of hydrocodone, 3 for 300 mg of acetaminophen and 30 mg of codeine phosphate, 15 for 5 mg of oxycodone, and 6 for 5 mg of diazepam. They were prescribed by 13 prescribers working in 2 medical centers reducing the number of prescribers to 4. The prescriptions have been filled at 7 pharmacies. The highest mean MME was 150 per day.

The patient received 190 oxycodone 5 mg tablets within 6 days from 3 prescribers at 1 medical center. One prescription for 80 tablets was self-pay.

At her preoperative visit, perioperative pain management was discussed. A subsequent call to her primary care physician about pain control revealed that the patient had made misleading statements about her pain management issues. The patient had a chronic opioid therapy contract on file with her physician and had had random urine samples. The next day, the patient filled a prescription for 90 tablets of 5 mg hydrocodone/325 mg of acetaminophen, which had been written previously, and
she had withheld this information. In the past, the patient’s prescription history had triggered a report from her insurance company to the various prescribers.

**Discussion**
Is this diversion or misuse? Has the patient made deceptive statements and broken her chronic opioid therapy treatment agreement? Is the patient being undertreated for her pain symptoms?

**Action**
The surgeon communicated with her primary care physician to establish a plan for careful monitoring and pill counts to maintain her treatment agreement. Furthermore, her primary care physician will be the only prescriber, and she will have her prescriptions filled at 1 designated pharmacy and have further assessment by an addiction medicine specialist.

**Case 10**
A 17-year-old had a cyst removed from the right maxilla. She was given a 5-day supply of liquid oxycodone by her dental surgeon. Three days postoperatively her mother called her primary care physician requesting a refill. The physician prescribed 24 tablets of 5 mg oxycodone. The mother subsequently called the dental surgeon stating that her daughter “only has a few left” and requested more “Percocet.” When told that she had been prescribed oxycodone, the mother replies “yeah, whatever.” When requesting information on how many pills were left, the mother became hostile, yelled, and did not provide the answer. The prescription by the primary care physician had been written less than 48 hours beforehand, and the patient should have had 8 pills left. When the dentist suggested to the mother that she try acetaminophen and ibuprofen, the mother yelled, “It doesn’t work.”

**Discussion**
Was 5 days’ supply of liquid oxycodone appropriate, and what other strategies were recommended? Possible case of diversion to mother is suspected, as she made the calls to both the primary care physician and the dentist.

**Action**
There is a need for an opioid therapy treatment agreement with both the patient and mother and a discussion with the primary care physician.

**REVIEW OF MASSPAT DATA**
A brief review of data obtained from patients in a tertiary-level hospital oral and maxillofacial surgery and orofacial pain practice is by no means representative of the general patient population in oral and maxillofacial surgery or dentistry (DA Keith, BDS, FDSRCS, DMD, written communication, January 2018). However, the data do show issues that can be identified from these reports. The review sample consisted of 100 consecutive patients, and they were predominantly female (86%). Duplicate names were encountered in 10 records owing to middle initial or name misspelling. Duplicate addresses were found for 13 patients because of relocation (6), town name discrepancies (3), or apartment or post office address discrepancies (4). None of these duplications appeared to indicate a problem.

Seventeen patients met the “4 × 4 criteria” for activity of concern defined in Massachusetts as an individual who received prescriptions for 1 or more Schedule II opioid drugs from 4 or more different prescribers and had them filled at 4 or more pharmacies during the specified time period. In Massachusetts, the fatal opioid-related overdose rate for individuals with 3 or more opioid prescribers is 7 times higher than the rate for other people. Multiple providers frequently meant that patients were obtaining legitimate refills from members of the same practice group and these were considered 1 prescriber. There was limited use of the self-pay option for non-opioid medications, which may have been off the pharmacopeia for some health insurers. MME values were largely below 100 mg per day except for patients who were in a treatment program in which MME could run as high as 780 per day. If these outliers and the others who had not received opioids were removed, the average MME was 72 mg per day. This number is likely to be lower in general dental practice.
Summary: why this is important

Use of PMP data is just 1 way that clinicians can assess the risk for patients who may experience substance misuse.10 Risk assessment tools such as the National Institute on Drug Abuse quick screen11 and Opioid Risk Tool8 together with a careful history, accurate diagnosis, and pain management plan are essential elements for ensuring that patients have their pain controlled in an appropriate and safe manner.

CONCLUSIONS

Early data suggest that PMP data can be helpful in reducing the number and frequency of opioid prescriptions. A 2015 survey reported that mandatory use of the PMP database caused prescription rates to drop over the 3-month study period and 78% fewer opioid pills were prescribed.12-15 Dentists should be aware of the information that these databases can provide to ensure safe and effective pain management for their patients.

The issue of liability for using or not using the PMP databases has not been clearly defined in all states and depends on the current laws of the state. The prescribing dentist has a duty of care to the patient to warn them about the adverse effects of the medications prescribed and to act with reasonable care and in good faith when prescribing medications for pain control.16,17

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