Maximizing the Wisconsin Prescription Drug Monitoring Program through Analytics and User-Led Enhancements

Harold Rogers National Meeting
June 27, 2019

Agenda

1. WI PDMP Background

2. User-Led Enhancements

    - Methods

    - Enhancements

3. Analytics

    - Patient Matching

    - Data Validation

    - Prescribing Practice Metrics

Wisconsin's PDMP

Department of Safety and Professional Services

- Controlled Substance Board
- Related Boards: Medical, Pharmacy, Nursing, Dentistry, Optometry, Podiatry
- Credentialing and Licensing
- Division of Legal Services and Compliance
- PDMP operational since 2013

WI ePDMP

- Data for controlled substances in schedules II-V dispensed in WI
- 2,000 dispenser submitters
- 9 million records per year
- Over 55,000 healthcare users
- 650,000 patient queries per month
- Prescriber requirement to query before issuing controlled substance prescription

Wisconsin's PDMP

WI ePDMP

- Enhanced system launched January 2017
- Custom .net application
- Streamlined navigation based on user feedback
- Visualizations and analytics of patient data
  - Concerning patient history alerts
  - Prescriber Metrics
  - Public Statistics Dashboard

WI ePDMP Components

Clinical Decision Support Tool
- Patient Prescription Histories
- Prescribing, Treatment, Dispensing Decision Support

Interdisciplinary Communication Tool
- Law Enforcement Alerts
- Law Enforcement Investigations

Prescribing Practice Assessment Tool
- Prescriber Metrics Report
- Medical Coordinator Access

Public Health Tool
- Interactive Statistics Dashboard
- Dispensing Data Trends (State- and County- Level)

User-Led Enhancements

2017 HR Grant Timeline

October 2017
Grant period began

February 2019
Patient search enhancements

May 2019
Prescriber metrics improvements

2018
User feedback obtained

April 2019
RxCheck connection established (2018 HR Grant)

2019
Development of user-led enhancements (3 releases)

Gathering Feedback

In-Person

- Stakeholder roundtables
- 9 events (March 2018-January 2019)
- Locations throughout WI
- Interdisciplinary
  - Healthcare
  - Law Enforcement
  - Public Health

Surveys

- Online user survey (April 2018)
- 30,000 survey recipients
- Over 6,000 responses (20% response rate)
- Variety of healthcare professions represented
- User satisfaction (77% "satisfied" or "very satisfied")
- Identification of enhancements

Gathering Feedback

Focus Groups

- Online focus groups (January 2019)
- 1,480 survey recipients
- 320 responses (21% response rate)
- Variety of healthcare professions represented
- Prioritization of identified enhancements
- Identification of SMEs (35) to provide feedback on prototypes
  - Physician, APNP, PA, Pharmacist, Delegate

Scheduled Enhancements

User Management

- Edit username
- Annual T&C review
- Annual delegate review
- Annual Medical Coordinator/prescriber linkage review

Pharmacy

- Improved record identification for revise/void
- Improved PDMP admin access for submission troubleshooting

New Design

- Patient Report improvements to maximize space and reduce scrolling
- Proactive MME calculator
- Additional overdose alerts/naloxone administration indicator
- Additional data elements on Patients Panel
- Patients Panel available to Delegates

Patients Panel Improvements

Patients Panel

Available to delegates based on patients previously searched

Patients Prescribed to in the Last 100 Days

Exportable for further manipulation

⟳ Refresh

Patient Info				Alerts								
Last Name	First Name	Date Of Birth	Current MME	High MME	Benzo-Opioid	LT Opioid Use	Early Refill	Multiple Provider	Multiple Same Day	Law Enforcement	Actions
HOLMES	SHERLOCK	01/06/1954	0	0	0	1	0	1	0	8	View
TWO	TESTPATIENT	12/31/1980	0	0	0	0	0	0	0	0	View

Cancel

Additional fields:
- Date of last dispensing
- Dispensing counts by drug class

Patient Report Improvements

Patient History Report Results - Query by

Search Date Range: 01/31/2017 - 01/31/2019

[🔄 Clear] [🖨 Print]

[+ Add a Prescriber Alert]   [📖 Learn More About Addiction Resources]

❗ ALERT
Report of a Stolen Controlled Substance Prescription

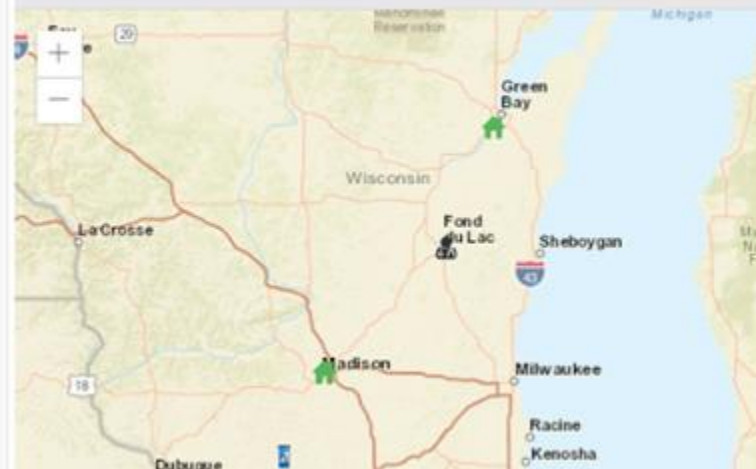## Patient Demographics

SHERLOCK HOLMES

Age
63 years old

Date of Birth
1/6/1954

Gender

Most Recent Address
1400 E WASHINGTON AVE
MADISON, WI 53703

Prescription History Locations
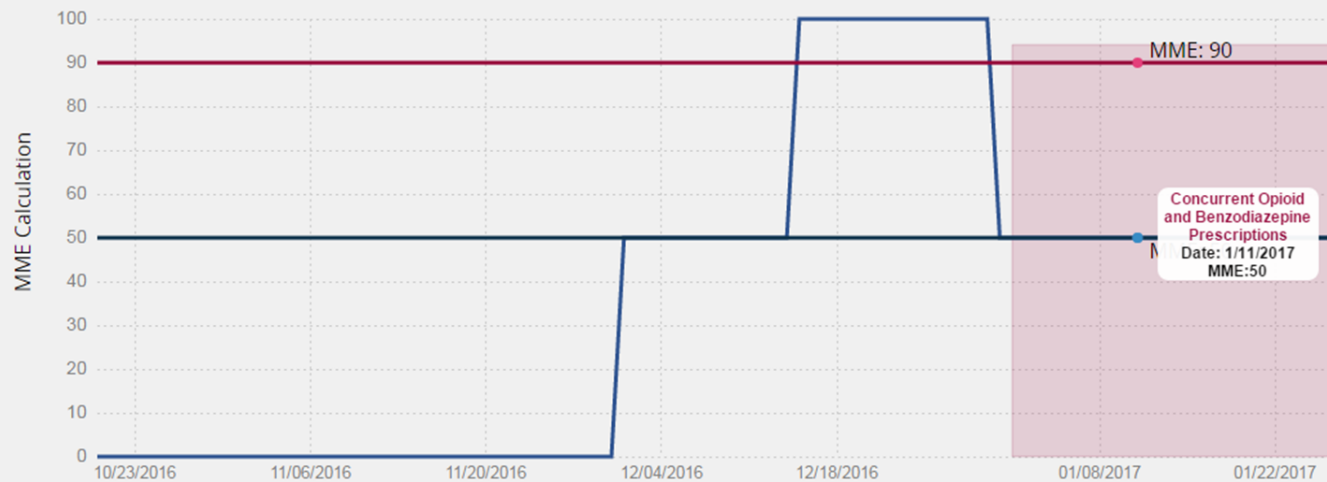
Maximize space, reduce scrolling
- Expand/collapse
- Default load based on dispensings

Patient Report Improvements

Total Opioid Daily Dose and Opioid-Benzodiazepine Concurrence for the Past 100 Days

According to the CDC, calculating the total daily dose of opioids helps identify patients who may benefit from measures to reduce risk of overdose. Concurrent use of benzodiazepines and opioids can place an individual at an increased risk for severe respiratory distress that can lead to overdose death. On the chart below, the line indicates the patient's cumulative daily dose of opioids and the red shading indicates when the patient had concurrent opioid and benzodiazepine prescriptions.

MME: 90

Concurrent Opioid and Benzodiazepine Prescriptions
Date: 1/11/2017
MME:50

y-axis: MME Calculation (0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100)
x-axis: 10/23/2016, 11/06/2016, 11/20/2016, 12/04/2016, 12/18/2016, 01/08/2017, 01/22/2017

The total daily dose of opioids is calculated using the morphine milligram equivalent (MME) conversion values from the national Prescription Drug Monitoring Program Training and Technical Assistance Center at Brandeis University. The federal centers for disease control and prevention provides more information about the importance of MME calculations in calculating total daily dose.

Maximize space, reduce scrolling
- Expand/collapse
- Default load based on dispensings

Dispensing Detail Improvements

Dispensing History Details

| In State | IL | MN |

Highlight available states

Search | Refresh | Columns ▾ | Export ▾

Highlight relevant dispensings
- Active
- Early refill

Drug Details	Drug Class	Drug Qty	Rx Dates	Prescriber	Dispenser	Patient	Patient Details
Clonazepam 0.5MG / Tablet Rx# 111	Benzodiazepine	Qty: 30 Days: 30 Refills: 0	Prescribed: 5/1/2018 Dispensed: 5/1/2018	SMITH, JOE 10 1ST AVE ANYTOWN WI 54321	XYZ PHARMACY 123 MAIN ST, ANYTOWN WI 54321	HOLMES, SHERLOCK DOB: 1/6/1954	1400 E WASHINGTON AVE MADISON WI, 53703 Pay Type: Commercial Insurance
Hydrocodone-Acetaminophen 10MG / Tablet Rx# TEST123	Opioid	Qty: 10 Days: 10 Refills: 0	Prescribed: 11/14/2015 Dispensed: 11/14/2015	JONES, JOHN 543 MAIN AVE ANYTOWN WI 54321	XYZ PHARMACY 123 MAIN ST, ANYTOWN WI 54321	HOLMES, SHERLOCK DOB: 1/6/1954	1400 E WASHINGTON AVE MADISON WI, 53703 Pay Type: Commercial Insurance
Clonazepam 0.5MG / Tablet Rx# 222	Benzodiazepine	Qty: 30 Days: 30 Refills: 0	Prescribed: 4/1/2018 Dispensed: 4/1/2018	SMITH, JOE 1 1ST AVE ANYTOWN WI 54321	XYZ PHARMACY 123 MAIN ST, ANYTOWN WI 54321,	HOLMES, SHERLOCK DOB: 1/6/1954	1400 E WASHINGTON AVE MADISON WI, 53703 Pay Type: Commercial Insurance
Clonazepam 0.5MG / Tablet Rx# 222	Benzodiazepine	Qty: 30 Days: 30 Refills: 0	Prescribed: 4/1/2018 Dispensed: 4/1/2018	SMITH, JOE 1 1ST AVE ANYTOWN WI 54321	XYZ PHARMACY 123 MAIN ST, ANYTOWN WI 54321,	HOLMES, SHERLOCK DOB: 1/6/1954	1400 E WASHINGTON AVE MADISON WI, 53703 Pay Type: Commercial Insurance
Amphetamine-Dextroamphetamine 30MG / Capsule Extended Release 24 Hour Rx# 3023848	Stimulant	Qty: 30 Days: 30 Refills: 0	Prescribed: 12/1/2017 Dispensed: 12/3/2017	SMITH, JOE 1 1ST AVE ANYTOWN WI 54321	XYZ PHARMACY 123 MAIN ST, ANYTOWN WI 54321,	HOLMES, SHERLOCK DOB: 1/6/1954	1400 E WASHINGTON AVE MADISON WI, 53703 Pay Type: Commercial Insurance

WI ePDMP Analytics

Data Quality Efforts

- Increased data validation in 2017 with implementation of WI ePDMP
- Additional submission validations to be put in place with 2019 enhancements
  - Date fields
  - Quantity
  - Days Supply
  - Partial fill
- Data transparency in dispensing history
  - Display of Date Sold when provided
  - Display of MME value
- Patient search/patient matching efforts
  - Better accommodate names with hyphens, punctuation, spaces on search
  - Next steps: mechanism to manually join/separate patient records (twins automatically joined)
- Metrics calculation validations
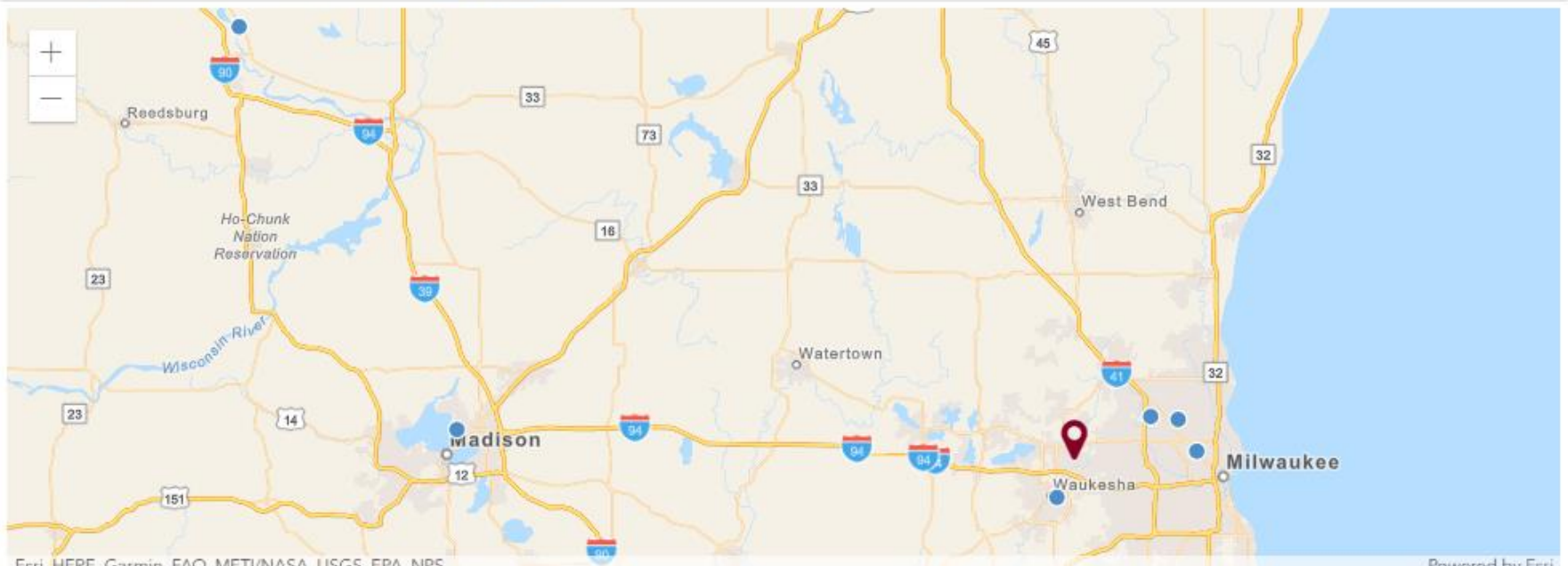 - Peer percentile

Prescriber Metrics
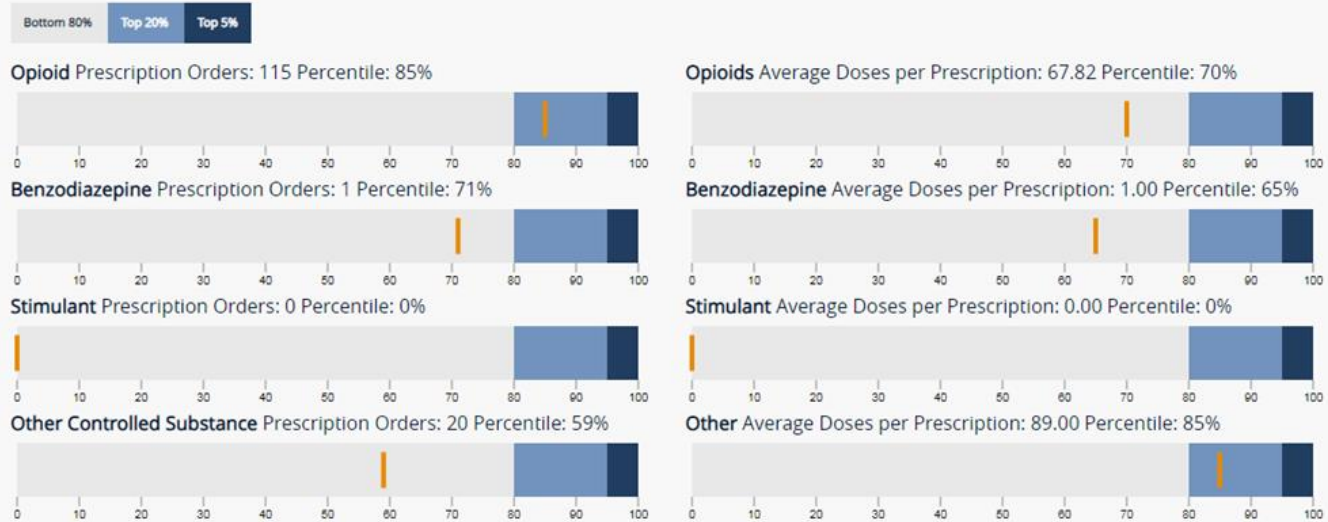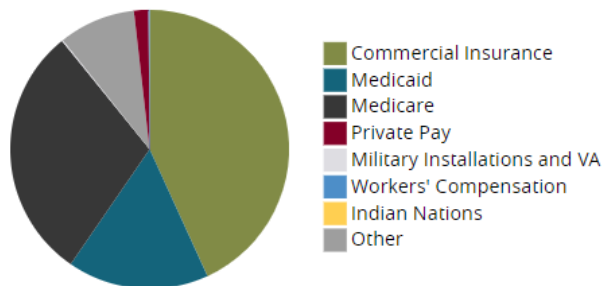
Average Distance Travelled

Average Distance Travelled By Patient

Average distance travelled by Patients : 30.72 miles

Alert and Usage Summary

Concerning Patient History Alerts

Generated during the past 100 days

1 Patients with Concurrent Benzodiazepine and Opioid Prescriptions

5 Patients with Multiple Prescribers or Pharmacies

4 Patients with Early Refill

0 Patients with High Current Daily Dose of Opioids

1 Patients with Long-Term Opioid Therapy with Multiple Prescribers

1 Patients with Multiple Same-Day Prescription or Dispensing Events

Law Enforcement Alerts

Reported during the past 100 days

0 Patients with Suspected Non-Fatal Opioid-Related Drug Overdose

1 Patients with Suspected Fatal Narcotic Overdose

0 Patients with Report of a Stolen Controlled Substance Prescription

0 Patients with Suspected Violation of the Controlled Substances Act involving Rx Drugs

Summary of ePDMP Usage

Based on usage since 9/17/2017

60 Queries by User

90 Queries completed by Delegates

191 Prescription Orders Written (excluding orders for 3-day supply or less)

85% Estimated ePDMP Usage Compliance Rate

USE NON-OPIOID TREATMENT
Opioids are not first-line or routine therapy for chronic pain

In a systematic review, opioids did not differ from non-opioid medication in pain reduction, and non-opioid medications were better tolerated, with greater improvements in physical function.

REVIEW PDMP
Check PDMP for high dosages and prescriptions from other providers

A study showed patients with one or more risk factors (4 or more prescribers, 4 or more pharmacies, or dosage >100 MME/day) accounted for 55% of all overdose deaths.

OFFER TREATMENT FOR OPIOID USE
Offer or arrange evidence-based treatment for patients with opioid user disorder

(e.g. Medication-assisted treatment and behavioral therapies)

START LOW AND GO SLOW
When opioids are started, prescribe them at the lowest effective dose

AVOID CONCURRENT PRESCRIBING
Avoid prescribing opioids and benzodiazepines concurrently whenever possible

Dispensing Detail for Prescriber

Search   🗘 Refresh   ▦ Columns ▾   ⬆ Export ▾

Drug Details	Drug Class	Drug Qty	Rx Dates	Prescriber	Dispenser	Patient	Patient Details
Hydrocodone-Acetaminophen 5-325MG / Tablet Rx# 98765	Opioid	Qty: 60 Days: 30 Refills: 0	Prescribed: 12/15/2018 Dispensed: 12/15/2018	SMITH, JOHN 123 MAIN ANYTOWN, WI	XYZ PHARMACY 456 2nd ST ANYTOWN, WI	PATIENT1, TEST1 DOB: 08/08/1962	600 5TH ST ANYTOWN, WI Pay Type: Commercial Insurance
Hydrocodone-Acetaminophen 5-325MG / Tablet Rx# 54321	Opioid	Qty: 60 Days: 30 Refills: 0	Prescribed: 11/10/2018 Dispensed: 11/12/2018	SMITH, JOHN 123 MAIN ANYTOWN, WI	ABC PHARMACY 123 LAKE ST MILWAUKEE, WI	PATIENT5, TEST5 DOB: 07/17/1973	1200 Main ST Milwaukee, WI Pay Type: Medicaid
Lorazepam 0.5MG/Tablet Rx# 123456	Benzodiazepine	Qty: 30 Days: 30 Refills: 0	Prescribed: 11/10/2018 Dispensed: 11/12/2018	SMITH, JOHN 123 MAIN ANYTOWN, WI	123 PHARMACY 1000 12TH AVE BROOKFIELD, WI	PATIENT9, TEST9 DOB: 12/15/1982	206 8TH AVE BROOKFIELD, WI Pay Type: Commercial Insurance

Medical Coordinator Metrics Summary

Metrics
- Based on last 100 days
- WI prescribers of the same self reported specialty

Prescriber List
- Status of request
- Prescriber Detail
- Summary of Opioids (csv. export includes benzo and stimulants)
- Patient Alerts (csv. export includes additional alert types)
- Estimated PDMP Usage

Prescribing Practice Metrics Summary

🛈 Metrics last updated: 03/02/2019

Prescribing metrics data is based on the last 100 days of dispensing information in the WI ePDMP. See the Additional Detail on Prescriber Metrics Data at the bottom of the page for definitions of the data provided.

Prescriber List

Search   ⟳ Refresh   ▦ Columns   ⬇ Export ▾

| | Prescriber Detail | | | | Metrics | | | | # of Patients with Alerts | | | | |
Status	DEA #	Prescriber Name	Employer	Specialty	Opioid Orders	Peer % Orders	Avg. Opioid Doses	Peer % Doses	Opioid-Benzo Overlap	High Daily MME	Long-Term Opioid	PDMP Usage	Actions
Approved	MB00000001	Name, Sample1	Health Clinic1	Family Practice	100	60	30	40	5	0	0	80	Remove / View Report
Approved	MC00000002	Name, Sample1	Health Clinic1	Pain Management	351	55	50	70	0	10	5	85	Remove / View Report
Pending	MF00000003	Name, Sample1	Health Clinic2	Family Practice	0	0	0	0	0	0	0	0	Remove
Denied	MS00000004	Name, Sample1	Health Clinic1	Family Practice	0	0	0	0	0	0	0	0	Remove
Not Registered	MS00000005	Name, Sample1			0	0	0	0	0	0	0	0	Remove

🔍 Add Prescriber by DEA Number   ⬆ Upload New Prescriber List   ✖ Remove Selected Prescriber(s)

WI ePDMP
Statistics Dashboard

https://pdmp.wi.gov/statistics

For More Information

Andrea Magermans
Managing Director

pdmp@wisconsin.gov

Website: https://pdmp.wi.gov/