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Introduction

Title 21, Subtitle 2A of the Health-General Article [enacted by Senate Bill (SB) 883, Chapter 166 of the Acts of 2011] requires that the Maryland Department of Health (Department) create a Prescription Drug Monitoring Program (PDMP or Program) to reduce the misuse, abuse, and diversion of prescription drugs throughout the State. The duties of the PDMP, as outlined in the PDMP law, include:

- Monitoring dispensed prescriptions that contain controlled dangerous substances (CDS);
- Maintaining an electronic database of CDS prescription information; and
- Making these data available to statutorily-defined groups of individuals and entities responsible for ensuring the health and welfare of patients and the lawful use of CDS.

In 2020, the Program expanded outreach to clinical users to support the implementation of the PDMP use mandate, supported the integration of the PDMP into provider's clinical workflow, and expanded sharing and receiving of PDMP data from other states.

Section 21-2A-05 of the Health-General Article provides for the creation of the Advisory Board on Prescription Drug Monitoring (Board). The Board is composed of a diverse array of stakeholders. The Board has met regularly since the membership was first appointed in autumn 2011, and has provided feedback and recommendations on several topics, including regulations, information technology (IT), interstate data sharing and interoperability, program evaluation, funding, and educational initiatives. The current Board membership is listed in **Attachment A**.

Section 21-2A-05(f)(3) of the Health-General Article requires that the Board provide annually to the Governor and, in accordance with § 2–1246 of the State Government Article, the General Assembly a report that includes:

I. The number of prescribers and prescriber delegates registered with and using the Program
II. The number of pharmacists and pharmacist delegates registered with and using the Program
III. The number of disclosures made to federal law enforcement agencies or State or local law enforcement agencies
IV. An analysis of the impact on the Program on patient access to pharmaceutical care and on curbing prescription drug diversion in the State; and
V. 1. The number of providers, by provider type, who received outreach and education from the Program
2. The number of cases for which the providers received outreach and education from the Program
VI. 1. The number of cases that were identified for Technical Advisory Committee review before referral to Office of Controlled Substances Administration (OCSA)
2. The number of providers, by provider type, involved in the cases
VII. 1. The number of cases that were referred to the OCSA for further evaluation and the outcomes of the OCSA evaluations
2. The number of providers, by provider type, involved in the cases
VIII. Any recommendation related to modification or continuation of the Program.

In addition to sections I-VIII listed in Section 21-2A-05(f)(3) of the Health-General Article, the 2020 Maryland PDMP Annual Report includes a new section on the PDMP's response to recommendations in the 2018 "Sunset Review: Evaluation of the Prescription Drug Monitoring Program." HB466 (Chapter 364, 2019) requires the 2020 Annual Report to report on the recommendations made by the Department of Legislative Services in the Sunset Review not enacted by Section 1 of Chapter 364.

Clinical User Registration and Access of PDMP Data

The first two requirements of the report rely on registration and user statistics as follows:

I. The number of prescribers and prescriber delegates registered with and using the Program

II. The number of pharmacists and pharmacist delegates registered with and using the Program

As the largest group of end users, Maryland clinicians are key PDMP stakeholders. The Chesapeake Regional Information System for our Patients (CRISP), the State-designated health information exchange (HIE), provides registration and access services for healthcare providers to view PDMP data. Clinical users access PDMP data through CRISP's clinical query portal in a view called 'PDMP Search' or increasingly through an integration within an electronic health record (EHR). Integrations can take multiple forms and may navigate a registered PDMP clinical user to the PDMP search view from their EHR or may display PDMP data in a view without any further clicks. In 2020, the Program continued to implement enhancements to clinical user access to PDMP data. The program enhancements, funded by a combination of Federal grants and State general funds, were necessary to support clinical user adoption of the use mandate, build clinical tools to support prescribing practices, and improve the quality and timeliness of PDMP data.

Under HB437 (Chapter 147, 2016), all CDS prescribers and pharmacists licensed to dispense CDS in Maryland must be registered with the PDMP by July 1, 2017. Effective February 15, 2018, a prescriber must be PDMP-registered before being issued a new or renewal CDS Registration by OCSA. Prescribers must renew their CDS Registration every three years. Delegates, for both prescribers and pharmacists, are not subject to a registration mandate. As of August 31, 2020, 87% of the individuals (85% of prescribers and 93% of pharmacists) have registered as required by the mandate.

Table 1 shows the total number of registered accounts, by user type including providers who may reside out of state but have a Maryland CDS registration. Of those prescribers and pharmacists subject to the registration mandate, 85% prescribers and 93% pharmacists were registered as of August 31, 2020. **Table 2** shows the number of total registrants across all user categories as of August of 2020. **Table 3** shows the number of registered prescribers and pharmacists by jurisdiction of the registrant.

The use mandate, impacting both prescribers and pharmacists went into effect July 1, 2018. Prescribers and pharmacists are required to query the PDMP in certain prescribing and dispensing situations. Delegates, for both prescribers and pharmacists, are not subject to the use mandate. **Table 4** shows the monthly total clinical PDMP queries across all user categories between January 2019 and June 2020.

Table 1. Registered Clinical PDMP Users.

Type of User	# of Registered Users*	# Individuals subject to Registration Mandate	% of Individuals who are PDMP Registered
Prescriber	33,217	39,131	84.89%
Pharmacist	11,489	12,419	92.51%
Total Subject to Mandate			
Prescriber Delegates	6,266	N/A	N/A
Pharmacist Delegates	1,213	N/A	N/A

* Number of Registered Users is current as of August 31, 2020

Table 2. CRISP Number of Registrants by User Category as of August 2020

Month	Number of Registered Users	Prescriber	Prescriber Delegate	Pharmacist	Pharmacist Delegate
August 2020	52,486	33,773	6,266	11,234	1,213

Table 3. Prescriber and Pharmacist Registration Rates by Local Jurisdiction

Jurisdiction*	Prescriber Registration Rate (# registered active CDS prescribers / # active CDS prescribers)	Pharmacist Registration Rate (# registered licensed pharmacists / # licensed pharmacists)
Allegany	**76.68%** (411/536)	**93.85%** (61/65)
Anne Arundel	**88.19%** (2,546/2,887)	**91.30%** (567/621)
Baltimore	**84.47%** (4,733/5,603)	**91.16%** (1,010/1,108)
Baltimore City	**78.23%** (6,403/8,185)	**80.91%** (411/508)
Calvert	**87.10%** (270/310)	**98.15%** (53/54)
Caroline	**78.33%** (47/60)	**100.00%** (14/14)
Carroll	**89.03%** (568/638)	**93.36%** (197/211)
Cecil	**74.10%** (309/417)	**100.00%** (44/44)
Charles	**79.88%** (520/651)	**93.02%** (80/86)
Dorchester	**88.42%** (84/95)	**100.00%** (23/23)
Frederick	**84.32%** (1,054/1,250)	**94.96%** (264/278)
Garrett	**69.12%** (94/136)	**95.65%** (22/23)
Harford	**88.47%** (905/1,023)	**95.80%** (319/333)
Howard	**87.41%** (1,499/1,715)	**91.20%** (1,005/1,102)
Kent	**92.41%** (73/79)	**90.00%** (9/10)
Montgomery	**85.06%** (6,284/7,388)	**85.36%** (1,353/1,585)
Prince George's	**80.68%** (2,844/3,525)	**84.30%** (671/796)
Queen Anne's	**81.90%** (86/105)	**92.31%** (36/39)
Saint Mary's	**73.82%%** (282/382)	**93.75%** (45/48)
Somerset	**85.00%** (51/60)	**100.00%** (11/11)
Talbot	**85.60%** (309/361)	**90.91%** (40/44)
Washington	**79.80%** (735/921)	**94.38%** (84/89)
Wicomico	**83.75%** (603/720)	**94.97%** (151/159)
Worcester	**82.85%** (198/239)	**94.29%** (66/70)

* Registered prescriber jurisdiction is assigned based on the zip code of the address self-reported to the OCSA.

Table 4. Number of PDMP Queries in CRISP Across all User Categories by Month

Month	InContext: Data Calls for Integrations[1]	PDMP Search - Prescribers[2]	PDMP Search - Prescriber Delegates[2]	PDMP Search - Pharmacists[2]	PDMP Search - Pharmacist Delegates[2]

2019					
January	1,123,924	130,801	62,464	63,580	3,920
February	1,054,010	111,131	50,119	56,930	3,399
March	1,115,675	120,586	55,195	59,899	3,835
April	1,075,672	125,564	54,761	59,016	3,903
May	1,366,567	121,445	52,270	60,050	4,128
June	1,370,660	107,250	54,677	55,552	3,906
July	1,349,621	111,252	67,307	61,480	4,048
August	1,822,935	101,842	73,228	58,969	4,608
September	1,453,615	99,276	67,020	53,746	4,952
October	1,806,306	111,562	76,499	53,028	4,720
November	1,468,250	95,656	65,111	50,756	4,015
December	1,435,435	91,704	69,477	53,591	3,961
2019 Total	16,442,670	1,328,069	748,128	686,597	49,395
2020					
January	1,913,289	102,177	75,928	56,788	4,837
February	1,642,363	96,841	67,510	53,162	4,678
March	1,223,207	96,165	64,169	51,076	4,576
April	1,054,296	91,581	55,307	47,824	3,653
May	1,080,330	94,665	54,261	49,129	3,545
June	1,162,564	102,489	64,615	53,599	3,929
2020 6-Month Total	8,076,049	583,918	381,790	311,578	25,218

1. 'InContext' total includes all calls for PDMP data from a 'zero-click' integration by a registered PDMP clinical user, **regardless** of whether PDMP data was returned and displayed.
2. 'PDMP Search' totals include queries made by a user in the PDMP Search user interface hosted within the CRISP clinical query portal.

In 2020, the Program continued to expand the data and resources available for clinical users through CRISP. The program partnered with a new data-sharing hub which expanded the options for sharing data with other states. In 2020, CRISP completed programming to accommodate a state-by-state list, allowing providers to select states' prescription data they wish to view when querying a patient's CDS prescription history. Maryland now shares data with twenty states, in addition to Washington, D.C. and the Military Health System:

- Expansion in 2019-2020 included the following states: Colorado, Florida, Illinois, Kentucky, Maine, Massachusetts, Nebraska, New Jersey, New York, North Carolina, South Carolina, Texas, Washington, and the Military Health System.
- This is in addition to the states with which that the Program was previously sharing: Arkansas, Connecticut, Delaware, Minnesota, Pennsylvania, Virginia, West Virginia, and Washington, D.C.

In September of 2020, the Program started sharing Maryland PDMP data with EHRs and pharmacy management systems in other states. Before Chapter 364 and promulgated regulations (2020) the Program only shared data with other state's PDMPs not directly with authorized users of other state's PDMPs. Integrating Maryland PDMP data into the EHRs and pharmacy management systems in other states allows prescribers and pharmacists access to relevant clinical data when making prescribing or dispensing decisions in the care of Maryland patients. EHRs and pharmacy management systems in 47 healthcare facilities outside of Maryland have been approved to receive Maryland

PDMP data:

- Delaware: 8 facilities
- Pennsylvania: 27 facilities
- Washington, DC: 12 facilities

Analysis of Impact of the Program

This section of the report addresses the following reporting requirement:

III. The number of disclosures made to federal law enforcement agencies or State or local law enforcement agencies

IV. An analysis of the impact on the Program on patient access to pharmaceutical care and on curbing prescription drug diversion in the State; and

Key components of the Program include enabling end users to make better use of the PDMP data in decision-making or actions to combat the opioid crisis.

INVESTIGATIVE USER REGISTRATION AND USE DATA

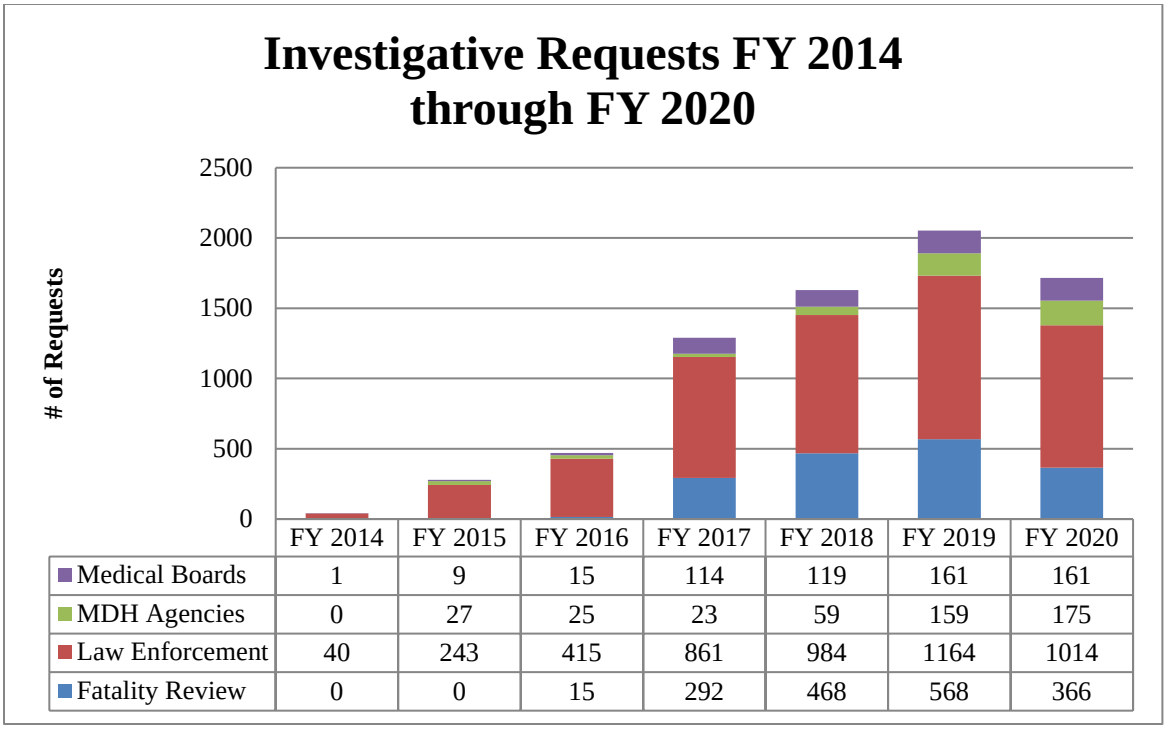
Under the PDMP law, the Program may disclose PDMP data to local, State, or Federal law enforcement agencies, certain Maryland health professional Licensing Boards, and four agencies within the Department (Office of the Inspector General, Office of Health Care Quality, Medicaid, and Office of Controlled Substances Administration), to further existing, bona fide, individual investigations. Under HB466 (Chapter 364, 2019), the Office of the Chief Medical Examiner was moved from the above list of Departmental agencies to a separate provision that allows for more direct access to prescription monitoring data in accordance with §5-309 of the Health General Article.

PDMP data is also disclosed to fatality review teams to further existing case review. **Table 5** shows the breakdown of investigative user accounts and total number of valid investigative data requests by user type: Federal, State, or local law enforcement; licensing board; Department agency or fatality review team. All individuals who receive prescription data on behalf of the aforementioned investigative entity are trained by the Program on the purposes and uses of the PDMP and how to electronically submit investigative requests to the PDMP. This training is required prior to receiving a unique investigative user account. Individuals who receive prescription monitoring data in support of Overdose Fatality Review (OFR) access PDMP data through an OFR Dashboard. Access to the OFR Dashboard is limited to Local Health Department Overdose Fatality Review teams and Department of Health staff who offer program support and technical assistance. **Figure 1** and **Figure 2** shows fiscal year and monthly requests by requestor type submitted to the Maryland PDMP from state fiscal year 2014 through 2020.

Table 5. Total Number of Cumulative Investigative User Accounts and Cumulative Requests Submitted to Maryland PDMP

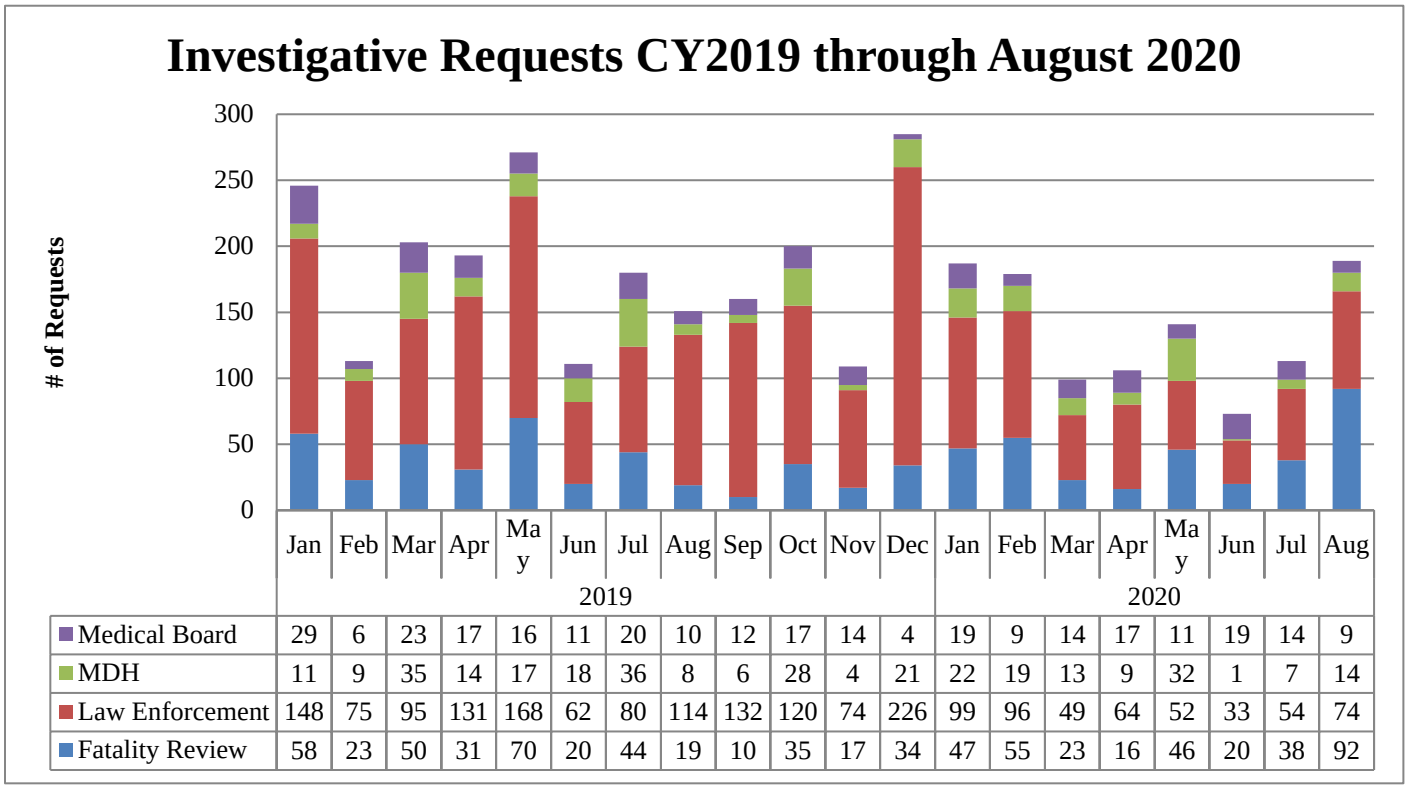
Investigative Agency Type	# of Registered Users		# of Requests Total	
	Current Credentialed Users Aug 2020	Entire Program	Fiscal Year 2020	Entire Program through June 2020
Federal, State, Local Law Enforcement	76	193	1,014	4,721
Licensing Board	16	74	161	580
Department Agency	4	33	175	468
Overdose Fatality Review	64*	94*	366*	1,640*
Other Fatality Review	6	7	0	69
Total	**166**	**401**	**1,716**	**7,478**

*Before May 2019, Overdose Fatality Review requests were submitted in both RxSentry, the platform before RxGov, and the OFR Dashboard. OFR PDMP requests and users from both platforms have been combined for the total.



	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Medical Boards	1	9	15	114	119	161	161
MDH Agencies	0	27	25	23	59	159	175
Law Enforcement	40	243	415	861	984	1164	1014
Fatality Review	0	0	15	292	468	568	366

Figure 1. Investigative Data Requests by Investigative Agency by State Fiscal Year



	2019												2020							
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Medical Board	29	6	23	17	16	11	20	10	12	17	14	4	19	9	14	17	11	19	14	9
MDH	11	9	35	14	17	18	36	8	6	28	4	21	22	19	13	9	32	1	7	14
Law Enforcement	148	75	95	131	168	62	80	114	132	120	74	226	99	96	49	64	52	33	54	74
Fatality Review	58	23	50	31	70	20	44	19	10	35	17	34	47	55	23	16	46	20	38	92

Figure 2. Monthly Investigative Data Requests by Investigative Agency

DISPENSED PRESCRIPTION DATA

Tracking population-level changes in the volume of prescriptions dispensed in or into Maryland is important for assessing the impact of the Program. The number of all Schedule II – V CDS prescriptions dispensed in or into Maryland and reported to the PDMP in corresponding time periods of years 2015 - 2020 is shown in **Table 6**.

Prescriptions reported to the PDMP were dispensed in or into Maryland to a recipient with a Maryland address linked to the prescription but could have been prescribed by a provider who practices outside of Maryland. Breakdowns of dispensed prescriptions by therapeutic classes of interest can be found in **Tables 7 – 9** for fiscal years 2015-2020. On October 8, 2018, PDMP regulatory updates impacting reporting requirements of dispensers went into effect requiring dispensers to report at least every 24 hours, including a "zero" report or an indication that no controlled substance was dispensed during the previous 24 hours. The regulatory change from three days to every 24 hours ensures prescribers are viewing timely dispense history when they query a patient in the PDMP to better support their clinical decision making.

Table 6. Total Controlled Substance Prescriptions Dispensed to Maryland Recipients

Fiscal Year (July 1 – June 30)	Prescription Count	% Change (Year to Year)
2015	9,171,791	N/A
2016	9,019,276	-1.66%
2017	8,806,519	-2.36%
2018	8,253,612	-6.28%
2019	7,767,441	-5.89%
2020	7,454,378	-4.03%

Table 7. Total Opioid* Prescriptions Dispensed to Maryland Recipients

Fiscal Year (July 1 – June 30)	Prescription Count	% Change (Year to Year)
2015	4,408,677	N/A
2016	4,249,479	-3.61%
2017	4,014,208	-5.54%
2018	3,495,029	-12.93%
2019	3,049,051	-12.76%
2020	2,770,548	-9.13%

*Total opioids include all prescriptions containing a medication in the opioid class of drugs, except medications containing buprenorphine in a formulation indicated for the treatment of opioid use disorder. Indication was determined based on FDA indication for approved use for treatment of opioid use disorder. Strict adherence to approved indications may not occur. Prescriptions were not compared with diagnoses for patients to whom they were prescribed as PDMP does not have this information, and thus this measurable proxy was used.

Table 8. Total Buprenorphine-containing Prescriptions Dispensed by Treatment Indication* to Maryland Recipients

Fiscal Year (July 1-June 30)	SUD Treatment		Pain Treatment	
	Prescription Count	% Change (Year to Year)	Prescription Count	% Change (Year to Year)
2015	254,015	N/A	8,912	N/A
2016	261,665	+3.01	8,456	-5.12
2017	289,809	+10.76	9,285	+9.80
2018	338,417	+16.77	8,796	-5.27
2019	410,356	+21.26	10,497	+19.34
2020	448,600	+9.32	12,585	+19.89

*Buprenorphine is a medication within the opioid class of drugs, but which is prescribed in specific formulations for the treatment of pain as well as for the treatment of opioid use disorder (OUD). Indication was determined based on FDA indication for approved use for either the treatment of pain or treatment of OUDs. Strict adherence to approved indications may not occur. Prescriptions were not compared with diagnoses for patients to whom they were prescribed as PDMP does not have this information, and thus this measurable proxy was used.

Table 9. Total Benzodiazepine Prescriptions Dispensed to Maryland Recipients

Fiscal Year (July 1 – June 30)	Prescription Count	% Change (Year to Year)
2015	1,845,633	N/A
2016	1,817,971	-1.50%
2017	1,751,967	-3.63%
2018	1,643,774	-6.18%
2019	1,527,092	-7.10%
2020	1,454,935	-4.73%

There are some important considerations when reviewing PDMP data output.

- Most data are reported in total number of prescriptions, which should not serve as a surrogate for number of patients. Additionally, changes from fewer prescriptions for large quantities of pills to more frequent small quantity prescriptions, as well as diagnosis or age-specific differences in prescribing trends, may skew reports based on total number of prescriptions. The PDMP will continue to work with State and national partners to apply best practices in reporting prescription data.

Provider Education and Referral for Investigation

This section of the report is intended to address the following reporting requirement:

V. 1. The number of providers, by provider type, who received outreach and education from the Program
2. The number of cases for which the providers received outreach and education from the Program

VI. 1. The number of cases that were identified for Technical Advisory Committee review before referral to the Office (Office of Controlled Substances Administration)
2. The number of providers, by provider type, involved in the cases

VII. 1. The number of cases that were referred to the Office for further evaluation and the outcomes of the Office evaluations
2. The number of providers, by provider type, involved in the cases

HB025 (Chapter 531, Prescription Drug Monitoring Program – Revisions, 2019) expands the scope and responsibilities of the Program and establishes reporting requirements V-VII. Unsolicited Reporting Notifications are a key component of the Program's responsibilities and the primary method in which the Program offers education to providers.

UNSOLICITED REPORTING NOTIFICATIONS

Unsolicited reporting is considered a best practice by the Department of Justice Bureau of Justice Assistance's Prescription Drug Monitoring Program Center of Excellence at Brandeis University, and has been or is currently being adopted by a majority of states. States vary on the types of PDMP users who may receive PDMP data or notifications and the types of questionable patterns identified by the Program that are used to generate notifications. Proactive reporting to prescribers and pharmacists allows the Program to support clinical decision-making around prescribing CDS, improve legitimate patient access to pharmaceutical care, and assist prescribers and dispensers in identifying prescription drug diversion. Chapter 651 (HB 1296, An Act concerning Prescription Drug Monitoring Program – Review and Reporting of Possible Misuse or Abuse of Monitored Prescription Drugs) was passed during the 2014 legislative session. The statute originally established the discretionary authority for the Program to review the PDMP for indications of possible misuse or abuse of a monitored prescription drug, and proactively report to the prescriber or dispenser of the prescription drug if the review indicates possible misuse or abuse. Under HB 025 (Chapter 531, 2019), the Program is now required to review prescription monitoring data for indications of possible misuse or abuse of a monitored prescription drug; possible violations of law and possible breaches of professional standards by a prescriber or a dispenser. The PDMP's Technical Advisory Committee (TAC) may review the prescription drug monitoring data regarding possible misuse or abuse of a monitored prescription drug by a patient prior to the issuance of a notification and education to prescribers or dispensers. Furthermore, the TAC must provide clinical guidance regarding the methods used to identify indications of possible violations of law and possible breaches of professional standards by a prescriber or a dispenser. Under HB 025 (Chapter 531, 2019), the Program is required to notify and provide education to providers who are identified during the data review process.

Unsolicited Reporting Notifications are the primary method by which the Program offers education to providers. The goal of the Unsolicited Reporting Notifications is to inform a provider about their prescribing practices, or patient specific activities that could be addressed by a provider, and offer resources to improve their CDS prescribing or dispensing decisions. The intended outcomes of Unsolicited Reporting Notifications include increased use of the PDMP, improved relationships between providers and patients, adoption of improved CDS prescribing and dispensing behaviors, and implementation of overdose prevention activities. Each Unsolicited Reporting Notification includes, but is not limited to, the following educational resources: Centers for Disease Control and Prevention (CDC) guidelines and resources for prescribing opioids, information on naloxone, information on the PDMP, how to access the Maryland Addiction Consultation Services (MACS), how to implement Screening, Brief Intervention, and Referral to Treatment (SBIRT), and Substance Abuse and Mental Health Services Administration (SAMHSA) approved

screening tools.

Implementation of this unsolicited reporting authority (under HB1296 / Chapter 651, 2014 and expanded under HB025/Chapter 531) occurred in 2016 and notifications are sent monthly. The Program currently sends four types of Unsolicited Reporting Notifications to providers: Multiple Provider Episode, Fatal Overdose Notifications, High Amount of Opioid Prescriptions, and Dangerous Drug Combination. **Table 10** shows a breakdown of the 1,516 Unsolicited Reporting Notifications sent in Fiscal Year 2020. Effective October 1, 2016 (HB437 / Chapter 147, 2016 and expanded under HB025/Chapter 531), analysis of PDMP data for possible violations of law and possible breaches of professional standards by prescribers and pharmacists is used as the basis for proactive notification to prescribers and pharmacists for educational purposes. The PDMP's TAC is required to review the prescription drug monitoring data prior to issuing a notification to the prescriber or dispenser of a CDS. The TAC advises on the methods the Program can use to identify prescribers and dispensers, allowing the program to expand the types of unsolicited reporting notifications sent to Maryland providers.

Multiple Provider Episodes

The Program is using a standard approach deployed by many states to identify patients receiving prescriptions from the greatest number of prescribers and filled at the greatest number of pharmacies over specified time periods. Providers identified as having prescribed a controlled substance prescription to that patient during the specified period receive a notification that the patient met or exceeded the set threshold. The threshold used for multiple provider episodes is calculated by identifying unique individuals who have obtained CDS prescriptions from a certain number prescribers and a certain number of dispensers in a three (3)-month time period. This type of notification has been actively sent since summer 2016.

Fatal Overdose Notifications

In 2019, the Program began sending a new type of unsolicited reporting notification when possible misuse or abuse of monitored prescription drugs is identified. The program now informs providers about the death of a patient when the cause of death is opioid-related and the provider prescribed an opioid or a benzodiazepine within three months of the death. Through an agreement with the Maryland Office of the Chief Medical Examiner (OCME) and the Vital Statistics Administration, the Program partners with CRISP to match OCME data with PDMP data. The program sends notifications monthly and the notifications are dependent on the new decedents provided monthly by OCME. Depending on the time needed for the Medical Examiner to complete the investigation and the required time to match the data, prescribers receive a notification one to three months after the fatal overdose.

High Amount of Opioid Prescriptions

In 2019, the Program began sending notifications to providers who were identified as writing a high amount of opioid prescriptions. The TAC identified 2,000 prescriptions within a three-month timeframe as an indicator of possible outlier prescribing practices. These notifications are based on the number of prescriptions dispensed and may not have the benefit of other relevant information such as the prescriber's practice specialty or patient condition and therefore may lack clinical context. The TAC recommended the Program pause sending these notifications until specialty data has improved.

Dangerous Drug Combinations

In 2020, the Program began sending notifications to providers who wrote an opioid, benzodiazepine, and a muscle relaxer (specifically Carisoprodol) to the same patient on the same day. This drug combination increases a patient's risk of experiencing an overdose. Similar to the 'High Amount of Opioid Prescriptions' metric, the TAC identified this drug combination as a possible indication of outlier prescribing practices. These notifications are based on the combination of prescriptions dispensed and may not have the benefit of other relevant information such as the prescriber's practice specialty or patient condition and therefore may lack clinical context

Table 10. Unsolicited Reporting Prescriber Notifications, through September 2020

Type of Unsolicited Reporting Notification	Number of Unsolicited Reporting Notifications Sent in Fiscal Year 2020	Total Number of Unsolicited Reporting Notifications Sent Since Activity Started Through September 2020
Multiple Provider Episode	599	4,126
Fatal Overdose Notification	880	1,263
High Amount of Opioid Prescriptions	10	10
Dangerous Drug Combination	27	59

REFERRAL TO OCSA

HB025 (Chapter 531, Prescription Drug Monitoring Program – Revisions, 2019) allows proactive data sharing with an investigative entity, OCSA. Updated regulations in response to Chapter 531 were promulgated May 8, 2020. The TAC met twice in 2020 after the regulations were promulgated, July 27 and October 16, to discuss when outreach and education through an unsolicited reporting notification would be inadequate to address possible violations of law or breach of professional standards identified in a review of PDMP data. The Program will continue to work with the TAC to make this determination and set parameters for referrals to OCSA. The Program continues to expand educational outreach by increasing the types of unsolicited reporting notifications sent to providers.

The Program did not refer a case to OCSA in fiscal year 2020. During this year, the Program worked with the TAC to expand the metrics used to send unsolicited reporting notifications and discussed metrics used by PDMPs in other states to refer cases to investigative entities like OCSA. In 2021, the Program will continue to work with the TAC to establish policies and procedures to facilitate the referral of cases to OCSA.

Recommendations from the 2018 "Sunset Review: Evaluation of the Prescription Drug Monitoring Program

The Department of Legislative Services (DLS) completed an evaluation of the PDMP in 2018 as required by the Maryland Program Evaluation Act. As part of the evaluation, DLS collected and analyzed information from a wide array of sources and reported findings and recommendations in the "Sunset Review: Evaluation of the Prescription Drug Monitoring Program" report. Based on the findings, DLS made a total of 15 recommendations. HB466 (Chapter 364, 2019) requires the 2020 Annual Report to report on the actions taken in response to the recommendations made by the Department of Legislative Services in the Sunset Review not enacted by Section 1 of Chapter 364. The following recommendations were made by the 2018 Sunset Review:

Recommendation 1: PDMP should institute a formal training program for new advisory board members on the responsibilities of members, including meeting protocols, and an overview of PDMP. This training should be applied consistently to new appointees on the advisory board.

The Program instituted a new policy to virtually train new advisory board members. Program staff created a PowerPoint template for the training that covers the following objectives: the responsibilities of Advisory Board members, attendance requirements, meeting protocols, an overview of the PDMP and data, review of current Board members, list of upcoming meeting dates, and how Board members can contact Program staff. The training is updated as needed.

Recommendation 2: As the role of TAC is clarified and the committee becomes operational; PDMP should establish written protocols for TAC, including meeting requirements and the procedures for reviewing unsolicited reports and investigative data requests. PDMP should require at least one in-person meeting of TAC each year.

The Program finalized the "Maryland Prescription Drug Monitoring Program Technical Advisory Committee Protocol and Procedures" report in 2019. The document includes a review of TAC roles and responsibilities, structure of the TAC, and appointments and terms. This document was shared as Attachment B in the "2019 Annual Prescription Drug Monitoring Program Report." The Program requires at least one in person meeting of the TAC each year; in 2020 all TAC meetings were held virtually due to social distancing requirements or precaution due to Coronavirus.

Recommendation 3: In the annual report required under §21-2A-05 of the Health-General Article in 2019, PDMP should report to the General Assembly on TAC. The report should include (1) the written protocols for TAC meetings and procedures for reviewing unsolicited reports and investigative data requests; (2) a summary of TAC meetings since the implementation of Chapter 147; and (3) recommendations on any changes necessary for TAC to meet the needs of PDMP.

The Program provided an update on the TAC in the "2019 Annual Prescription Drug Monitoring Program Report" (pages 16-18 and Attachment B). The 2019 Annual Report included the "Maryland Prescription Drug Monitoring Program Technical Advisory Committee Protocol and Procedures" document as Attachment B, a summary of TAC meetings since its implementation, and recommendations on improvements to TAC processes.

Recommendation 4: PDMP should continue outreach efforts to prescribers and pharmacists and monitor such efforts until full compliance with the mandatory registration mandate is achieved.

Effective February 15, 2018, a prescriber must be PDMP-registered before being issued a new or renewal CDS Registration by OCSA. Prescribers must renew their CDS Registration every three years. The OCSA application for CDS registration asks if providers are registered with the PDMP. The Program has facilitated a process with OCSA and CRISP to verify registration status as OCSA staff review applications. In October 2020, the Program and OCSA staff sent an

email to every provider not currently registered with the PDMP but who has a CDS permit via GovDelivery to remind them of the registration requirements.

Recommendation 5: Statute should be amended to remove the requirement for the vote of a quorum of the board or disciplinary panel when a licensing entity requests prescription monitoring data.

Recommendation 5 was enacted by Section 1 of Chapter 364.

Recommendation 6: The State Board of Physicians should continue to work with PDMP to address concerns regarding the accuracy of PDMP data.

The Program remains open to working with the Board of Physicians to address concerns regarding the accuracy of PDMP data. Since the release of the 2018 report, the Program has implemented several efforts to improve the quality of data available to providers in the PDMP. In 2018 regulatory changes required dispensers to report to the PDMP every 24 hours including a "zero" report if no dispenses occurred within that time period. The Program shared the regulatory changes through fact sheets, emails, and faxes to all impacted dispensers including pharmacists and dispensing prescribers. PDMP's Data Quality Specialist conducts outreach when data quality issues are reported. In the past year PDMP's epidemiologists have identified and referred data quality concerns to the PDMP Data Quality Specialist who subsequently reaches out to individual dispensers to improve the quality of data reported.

Recommendation 7: To allow more meaningful analysis, PDMP should collect additional data, specifically provider specialty information, before implementing unsolicited reporting on prescribers and dispensers.

The Program continues to work with CRISP to improve the quality of specialty data to support the Program's ongoing data analysis to identify metrics for unsolicited reporting notifications. The Program is currently using federal funding to develop a Provider Directory with CRISP. The Provider Directory will support data analysis efforts conducted by the Program including an assessment of prescribing based on specialty.

Recommendation 8: PDMP should work with the State Board of Pharmacy to determine the feasibility of gathering information on the identification of the individual picking up a monitored prescription at the time it is dispensed.

During the November 18, 2020 Board of Pharmacy meeting the Board assessed the feasibility of reporting the identification of the individuals picking up a prescription to the PDMP. The Board of Pharmacy is not in favor of adding this to the mandatory reporting fields at this time, as it would be difficult to operationalize and require capital investment from individual pharmacies and software providers. Due to the potential financial burden on individual pharmacies and software providers, the Program has determined the collection of identifiable information of individuals picking up a monitored prescription drug at the time of dispense is not feasible.

Recommendation 9: Statute should be amended to allow authorized users of other states' prescription drug monitoring program to access Maryland's prescription monitoring data.

Recommendation 9 was enacted by Section 1 of Chapter 364.

Recommendation 10: Interstate data sharing agreements should be modified to ensure access of Maryland's PDMP users to other connected States' prescriptions drug monitoring program data.

Data sharing agreements between the Program and other States' PDMPs or PDMP data sharing hubs allow for authorized users of Maryland's PDMP to access prescription monitoring data from other states. Data from other PDMP's are available for Maryland healthcare providers alongside Maryland data in CRISP. As of September 2020, Maryland

receives PDMP data from 20 states, Washington DC and the Military Health System.

Recommendation 11: PDMP should work with Chesapeake Regional Information System for our Patients (CRISP) to simplify the PDMP user experience, specifically the log-in process and password issues. PDMP and CRISP should investigate the feasibility of implementing single sign on and improving password issues related to resetting the password.

Over the past two years, CRISP has made several key updates to improve the user experience. CRISP updated the Unified Landing Page (ULP) site to add a password reset feature and added clear instructions to CRISP's helpline on how to reset passwords. These changes led to a significant reduction in password reset specific calls, which in 2018, accounted for 13.2% of calls, and in 2020 (as of September 2020), accounted for 3.1% of calls. CRISP has increased the number of providers who can access PDMP data through a zero-click or single-click integration within their EHR from 2018 to 2020. EPIC, Cerner and Athena EHR systems are now using integrations with zero-click access, supporting a seamless integration of the PDMP into providers' workflow.

Recommendation 12: PDMP should continue to expand upon educational outreach efforts for registrants. This education should include a clear explanation of the individuals who are required to use PDMP, how to use PDMP, the exception to using PDMP, and information on the states from which prescription drug monitoring data can be accessed and how to access information.

The Program expanded efforts to educate Maryland healthcare providers on the PDMP. Since the release of the 2018 Sunset Review, the Program has presented at several professional conferences and meetings of healthcare providers including the CRISP User Conference, Maryland Academy of Physician Assistants Annual Conference, a public meeting held by the Board of Physicians, a public meeting held by the Board of Podiatric Medical Examiners, and a meeting of stakeholders from the Maryland dental community.

Using funds from federal grants, the Program has partnered with the state medical society, MedChi, to host continuing medical education (CME) approved trainings and webinars on the PDMP. Since January 2019, MedChi has reached over 1,200 providers through CME trainings, recently connecting virtually with the provider community on opioid prescribing during COVID emphasizing the continued use of the PDMP. Since April 2019, MedChi has offered a recorded webinar for members on the PDMP and awarded over 900 CME credit hours for completing the course. As of October 1, 2018, all prescribers who are applying for a new or renewal registration to dispense or prescribe CDS from OCSA must attest to the completion of two hours of continuing education in prescribing or dispensing of controlled substances. The CME credits offered by MedChi have been used by Maryland CDS prescribers to obtain or renew a registration to dispense or prescribe CDS from OCSA.

The Program has expanded the number and type of unsolicited reporting notifications to healthcare providers since the 2018 Sunset Review. Every notification includes useful information to providers on how to access and use the Maryland PDMP.

In 2019, the Program expanded healthcare provider educational efforts by establishing the Maryland Opioid Academic Detailing Project. With funds from federal grants, the Program coordinates with local health department staff, the University of Maryland School of Pharmacy, and the National Resource Center for Academic Detailing to offer educational resources to healthcare providers. Trained Academic Detailers, public health professionals, offer brief visits with practitioners to discuss their needs in prescribing CDS, supporting patients with pain management needs, and referring or offering substance use disorder treatment. A core message in the Academic Detailing Project is how to use the PDMP to coordinate care and reduce the patient's risk for opioid related overdose. The Program implements the Project with 13 local health departments and has offered over 120 visits with Maryland healthcare providers.

Recommendation 13: PDMP should work with the state Board of Veterinary Medical Examiners to provide clear information to veterinarians who are required to register with PDMP as a condition of receiving their CDS license on whether and how veterinarians are to access PDMP.

In October 2020, the Program worked with the Board of Veterinary Medical Examiners to send an email to every registered veterinarian in Maryland describing the PDMP registration requirement.

Recommendation 14: Statute should be amended to remove PDMP from the list of governmental units subject to sunset evaluation under the Maryland Program Evaluation Act and to repeal the program's termination date.

Recommendation 14 was enacted by Section 1 of Chapter 364.

Recommendation 15: In the annual report required under §21-2A-05 of the Health-General Article in 2020, PDMP should report to the Senate Finance Committee and the House Health Government Operations Committee on the program's implementation of the nonstatutory recommendations contained in this report.

The 2020 Maryland PDMP Annual Report includes a new section on the PDMP's response to recommendations in the 2018 "Sunset Review: Evaluation of the Prescription Drug Monitoring Program."

Recommendations on Modification or Continuation of the Program

This section of the report is intended to address the following reporting requirement:

VIII. Any recommendation related to modification or continuation of the Program

The Board continues to recommend items that were included in the 2019 report such as increase in adoption of PDMP use by clinical users through expanding interstate data sharing to other priority states and improving the clinical user interface to display relevant alerts based on PDMP data. The Board continues to recommend the Program conduct analyses investigating the possible impact of PDMP on access to and utilization of substance use disorder treatment services. The Board also continues to recommend the Program assess national trends in incorporating veterinarian CDS dispensing data into state PDMPs and whether there is a use case for providing veterinarians access to PDMP data. In 2021, the Board anticipates engaging in policy conversations related to use cases that may add value to veterinarians and reducing CDS specific adverse events. Board members support continuation of the Program and its activities, with several areas for possible focus in the future. Supporting clinical users remains a major focus of the Board. Similar to 2019, the Board recommends a focus on ensuring systems performance on all ends, including integrating PDMP data into hospital and ambulatory providers' EHRs and other electronic provider tools such as alerts and summaries of a prescriber's prescribing practices. Finally, the Board continues to recommend expanding the PDMP specific clinical resources available to pharmacists through CRISP.

The Board has a new recommendation for the 2020 report; members recommend the Program assess the feasibility of "real time" reporting from dispensers. The Program will provide updates on Board recommendations during 2021 scheduled meetings.

Conclusion

During the past year, the Department made substantial progress implementing new Program activities, increasing visibility and uptake of the Program, and continues to work with the Board to increase the Program's ability to meet the evolving roles of the PDMP within the State's opioid strategy. Therefore, the Board recommends that the Governor and General Assembly continue to support ongoing development of the PDMP. Over the next year, the Board will continue to support the Department by providing ongoing advice about emerging stakeholder PDMP needs, and issue guidance on key priority areas to improve health and safety outcomes related to CDS prescriptions in Maryland. These priorities include expansion of education and outreach to clinical users and other relevant stakeholders, implementing new referral for investigation protocols, and disseminating clinical tools to support healthcare providers.

Attachment A: Advisory Board on Prescription Drug Monitoring – Membership

Chair
Richard A. Debenedetto, PharmD, MS AAHIVP
Assistant Professor of Pharmacy Practice & Administration
University of Maryland Eastern Shore School of Pharmacy & Health Professions

Current Members (As of October, 2020)
Daniel M. Ashby, M.S., FASHP
President's designee, Board of Pharmacy
Vice President and Chief Pharmacy Officer
The Johns Hopkins Health System

Deondra P. Asike, MD
Physician
Johns Hopkins Hospital

Amit Bhargava, MD, MS, RMSK, Medical Director
Advanced International Pain & Sports Medicine

Thomas C.C. Bond, III
President & CEO
Summit Community Health, Inc.

Matthew Crisafulli
Worcester County Sheriff's Office

Lenna Israbian-Jamgochian, PharmD, RPh
District Pharmacy Manager
Albertsons Safeway Inc-Eastern Division

Arthur C. Jee, DMD
President's designee, Board of Dental Examiners
Oral Maxillofacial Surgery

Stephen A. Nichols, MD, FAAP, FAAPMR
Senior Attending Physician for Rehabilitation Services
Mt. Washington Pediatric Hospital

Mark D. Olszyk, MD, MBA, CPE, FACEP, FACHE, FFSMB
Chair designee, Board of Physicians
Chief Medical Officer/Vice President Medical Affairs Carrol Hospital
Vice President Carroll County Health Group

Orlee Panitch, MD
Physician, Medical Emergency Professionals
US Acute Care Solutions

Marcia Parris, MD
Physician, Medical Emergency Professionals

Derek Peck, Captain
Secretary's designee, Maryland State Police
Criminal Enforcement Division

Laurence Polsky, MD, MPH
President's Designee, Maryland Association of County Health Officers
Health Officer, Calvert County

Joseph Scalese III, MSPC, RPh
Pharmacist, Weis Pharmacy

David Sharp, Ph.D.
Chairman's designee, Maryland Health Care Commission
Director, Center for Health Information Technology & Innovative Care Delivery

Alexander Shekhdar, JD, MHS
Senior Director, Medicaid Initiatives
Maryland Department of Health

D. Gail Shorter, DNP
Nurse Practitioner, University of Maryland Shore Medical Group

Jenell Steele, MSN, RN
President's Designee, Maryland Board of Nursing

Yvonne U. Umerzurike, DPM
Vice President, Board of Podiatric Medical Examiners

Vacant Seats
An academic or research professional
Maryland resident representing the patient perspective