Prescription Drug and Heroin Abuse Taskforce
Data/Monitoring Workgroup Meeting Agenda
February 25, 2015, 1:00-5:00 P.M.
Perimeter Center Conference Center
Board Room 4

Welcome and Introductions: Dr. Carol Forster and Katya Herndon

Review Minutes from December 16, 2014 (Pages 1-3)

Status of Short Term Recommendations approved by the Task Force:

1. Legislative Action Items
    a. Amend §54.1-2522.1: HB 1841 introduced by Delegate Herring (Page 4)
    b. Amend §54.1-2521: No legislation was introduced
    c. Amend §54.1-2523: HB1810 introduced by Delegate Herring (Page 5)
2. Non-legislative Action Items
    a. Placement of Morphine Equivalent Doses per Day on PMP reports
    b. Develop clinically oriented criteria for unsolicited reports
    c. Develop individual prescriber feedback reports
    d. Direct applicable agencies to share data related to prescription drug and heroin abuse

Long Term Recommendations of the Workgroup: Status update

In Depth Discussion Topics:

1. Discuss development of guidance on use of MEDD information by healthcare practitioners (Pages 7-13)
2. Discuss amending requirements to reporting to the PMP such as adding NPI number, species code, and daily reporting of dispensing (Pages 14-23)
3. Discuss data collection/sharing needs (Pages 24-54, 55-58, 59-66)
4. Explore the use of data and monitoring to help prisoners with substance abuse problems and/or mental health issues with the purpose of breaking the cycle with this population

Prioritize Future In-Depth Discussion Topics:

- Expand access to PMP information to pharmacists and prescribers involved in team healthcare
- Expand mandatory use of the Prescription Monitoring Program (PMP)
- Report drug overdoses to Law Enforcement
- Review ID Verification requirement when dispensing controlled substances
- Develop clinically oriented criteria for unsolicited reports: (i.e. reporting /identification of Pts taking concurrent carisoprodol, opiates, and benzodiazepines)
- Develop individual prescriber feedback reports
- Other

Next Meeting:

Governor's Task Force on Prescription Drug and Heroin Abuse

Data and Monitoring Workgroup

Meeting Three, Minutes (DRAFT)

December 16, 2014

Members/Staff Present:
Co-Chair: Carol Forster, M.D. Mid-Atlantic Permanente Medical Group
Co-Chair: Katya Herndon, Chief Deputy Director, Department of Forensic Science
Staff: Ralph Orr, Director, Virginia Prescription Monitoring Program
Baron Blakely, Research Analyst, Department of Criminal Justice Services
Timothy Coyne, Public Defender
Delegate Charniele Herring, Virginia House of Delegates
Brian Hieatt, Sheriff, Tazewell County
Rosie Hobron, MPH, Statewide Forensic Epidemiologist, VDH-OCME
Major Rick Jenkins, Deputy Director, BCI, Virginia State Police
Rusty Maney, RPh, Richmond District Pharmacy Supervisor, Walgreens
Lisa Miller, DVM
Amanda Wahnich, MPH, Enhanced Surveillance Analyst, VDH
Anne Zehner, MPH, Epidemiologist, VDH
Marty Mooradian, Impacted Family Member

Members/Staff Absent:
Greg Cherundolo, ASAC, Richmond DEA-US DOJ
Marissa Levine, M.D., State Health Commissioner
David Sarrett, DMD, MS, Dean, VCU School of Dentistry
Deborah Waite, Ops Manager, Virginia Health Information
Staff: Chris Palmer, Graduate Student Intern, Health and Human Resources

Guests:
Enrique Cancel, DEA (representing Greg Cherundolo)

Meeting Agenda
Welcome and Introductions
Review Minutes from December 1, 2014
Review Recommendation Worksheet and Prioritize
Review Presentation for Task Force
Determine next meeting

Workgroup mission: To advance solutions to share and integrate data among relevant licensing boards, state and local agencies, law enforcement, courts, health care providers and organizations, and programs such as the PMP, in order to clarify and address public safety and public health concerns, understand emerging trends, and utilize data-driven decision-making to mitigate harm.

The meeting was called to order at 10:03 A.M.

Welcome & Introductions
All Workgroup members and guests introduced themselves to fellow attendees.

Review of Minutes from December 1, 2014
Dr. Forster asked Workgroup members to briefly review the minutes from the previous meeting and make comments/suggestions. The minutes were amended, and approved as amended.

Review of Worksheet Recommendations and Prepare Presentation for Task Force

The Workgroup discussed the potential recommendations listed on the worksheet (Appendix 1) as well as a new development regarding availability of PMP data for use in civil proceedings and the need for support from the Secretariat level to enable/authorize data sharing between agencies and programs. A number of the potential recommendations listed on the worksheet will be discussed at the next meeting of the workgroup.

A presentation was developed breaking several recommendations into 5 broad recommendations (Appendix 2) for immediate consideration by the Task Force members. These recommendations were broken down further into Legislative Short Term Action Items and Short Term Action Items (not requiring legislative action but support or action by the applicable agencies in the various Secretariat(s)).

The short term action items presented were as follows:

Legislative Short Term Action Item: Amend 54.1-2522.1
- Add Pharmacists to mandatory PMP registration requirement
- Allow for registration not based on renewal cycle
- Remove language potentially discouraging use of treatment agreements

Legislative Short Term Action Item: Amend 54.1-2521
- Require reporting of prescriber National Provider Identifier (NPI) for prescriptions for human patients
- Add "Species Code" as a required data element

Legislative Short Term Action Item: Amend 54.1-2523
- Clarify that PMP data shall not be available for civil subpoena nor shall such records be deemed admissible as evidence in any civil proceeding

Short Term Action Item: Placement of Morphine Equivalent Doses per Day Information on PMP Reports
- Direct applicable licensing boards to develop improved guidance on use of MEDD information in making treatment or dispensing decisions

Short Term Action Item: Develop clinically oriented criteria for unsolicited reports to prescribers on specific patients
- Identify patients with high risk combinations of controlled substances
- Identify patients receiving more than 100-120 morphine milligram equivalent doses/day

Short Term Action Item: Develop Individual Prescriber Feedback Reports

- Will contain up to 7 data points such as the number of a prescriber's patients receiving over 100-120 morphine equivalent doses/day
  NOTE: NPI and Species Code reporting to PMP a requirement to fully implement this recommendation

Short Term Action Item: Direct applicable agencies to share (based on existing authority) data on prescription drug and heroin abuse, overdoses, drug seizures, arrest information, etc. so that information may be analyzed to mitigate harm from prescription drug and heroin abuse

The next meeting of the Workgroup will be determined once the next meeting(s) of the Task Force are announced.

The meeting was adjourned at 12:10 P.M.

15104091D

HOUSE BILL NO. 1841
AMENDMENT IN THE NATURE OF A SUBSTITUTE
(Proposed by the House Committee on Health, Welfare and Institutions
on January 27, 2015)
(Patron Prior to Substitute—Delegate Herring)

A BILL to amend and reenact § 54.1-2522.1, as it shall become effective, of the Code of Virginia and to amend the Code of Virginia by adding a section numbered 54.1-2522.2, relating to the Prescription Monitoring Program; requirements for dispensers.

Be it enacted by the General Assembly of Virginia:

1. That § 54.1-2522.1, as it shall become effective, of the Code of Virginia is amended and reenacted and that the Code of Virginia is amended by adding a section numbered 54.1-2522.2 as follows:

§ 54.1-2522.1. (Effective July 1, 2015) Requirements of prescribers.

A. Any prescriber who is licensed in the Commonwealth to treat human patients and is authorized pursuant to §§ 54.1-3303 and 54.1-3408 to issue a prescription for a covered substance shall be registered with the Prescription Monitoring Program by the Department of Health Professions ~~upon filing an application for licensure or renewal of licensure, if the prescriber is not already registered~~.

B. Prescribers registered with the Prescription Monitoring Program shall, at the time of initiating a new course of treatment to a human patient that includes the prescribing of benzodiazepine or an opiate anticipated *at the onset of treatment* to last more than 90 consecutive days ~~and for which a treatment agreement is entered into~~, request information from the Director for the purpose of determining what, if any, other covered substances are currently prescribed to the patient. In addition, any prescriber who holds a special identification number from the Drug Enforcement Administration authorizing the prescribing of controlled substances approved for use in opioid addiction therapy shall, prior to or as a part of execution of a treatment agreement with the patient, request information from the Director for the purpose of determining what, if any, other covered substances the patient is currently being prescribed. Nothing in this section shall prohibit prescribers from making additional periodic requests for information from the Director as may be required by routine prescribing practices.

C. The Secretary of Health and Human Resources may identify and publish a list of benzodiazepines or opiates that have a low potential for abuse by human patients. Prescribers who prescribe such identified benzodiazepines or opiates shall not be required to meet the provisions of subsection B. In addition, a prescriber shall not be required to meet the provisions of subsection B if the course of treatment arises from pain management relating to dialysis or cancer treatments.

§ 54.1-2522.2. Requirements for dispensers.

The Department shall register every dispenser licensed by the Board of Pharmacy pursuant to Article 3 (§ 54.1-3310 et seq.) of Chapter 33 with the Prescription Monitoring Program.

2. That the provisions of this act amending subsection A of § 54.1-2522.1 of the Code of Virginia and adding a section numbered 54.1-2522.2 shall become effective on January 1, 2016.

INTRODUCED

15102859D

HOUSE BILL NO. 1810
Offered January 14, 2015
Prefiled January 13, 2015

A BILL to amend and reenact § 54.1-2523 of the Code of Virginia, relating to Prescription Monitoring Program; subpoenas.

Patron—Herring

Referred to Committee for Courts of Justice

Be it enacted by the General Assembly of Virginia:

1. That § 54.1-2523 of the Code of Virginia is amended and reenacted as follows:

§ 54.1-2523. Confidentiality of data; disclosure of information; discretionary authority of Director.

A. All data, records, and reports relating to the prescribing and dispensing of covered substances to recipients and any abstracts from such data, records, and reports that are in the possession of the Prescription Monitoring Program pursuant to this chapter and any material relating to the operation or security of the program shall be confidential and shall be exempt from the Virginia Freedom of Information Act (§ 2.2-3700 et seq.) pursuant to subdivision 15 of § 2.2-3705.5. *Information in possession of the Prescription Monitoring Program shall not be available for civil subpoena, nor shall such information be disclosed, discoverable, or compelled to be produced in any civil proceeding, nor shall such records be deemed admissible as evidence in any civil proceeding for any reason.* Further, the Director shall only have discretion to disclose any such information as provided in subsections B and C.

B. Upon receiving a request for information in accordance with the Department's regulations and in compliance with applicable federal law and regulations, the Director shall disclose the following:

1. Information relevant to a specific investigation of a specific recipient or of a specific dispenser or prescriber to an agent who has completed the Virginia State Police Drug Diversion School designated by the superintendent of the Department of State Police or designated by the chief law-enforcement officer of any county, city, or town or campus police department to conduct drug diversion investigations pursuant to § 54.1-3405.

2. Information relevant to an investigation or inspection of or allegation of misconduct by a specific person licensed, certified, or registered by or an applicant for licensure, certification, or registration by a health regulatory board; information relevant to a disciplinary proceeding before a health regulatory board or in any subsequent trial or appeal of an action or board order to designated employees of the Department of Health Professions; or to designated persons operating the Health Practitioners' Monitoring Program pursuant to Chapter 25.1 (§ 54.1-2515 et seq.).

3. Information relevant to the proceedings of any investigatory grand jury or special grand jury that has been properly impaneled in accordance with the provisions of Chapter 13 (§ 19.2-191 et seq.) of Title 19.2.

4. Information relevant to a specific investigation of a specific recipient, dispenser, or prescriber to an agent of a federal law-enforcement agency with authority to conduct drug diversion investigations.

C. In accordance with the Department's regulations and applicable federal law and regulations, the Director may, in his discretion, disclose:

1. Information in the possession of the program concerning a recipient who is over the age of 18 to that recipient. The information shall be mailed to the street or mailing address indicated on the recipient request form.

2. Information on a specific recipient to a prescriber, as defined in this chapter, for the purpose of establishing the treatment history of the specific recipient when such recipient is either under care and treatment by the prescriber or the prescriber is initiating treatment of such recipient. In a manner specified by the Director in regulation, notice shall be given to patients that information may be requested by the prescriber from the Prescription Monitoring Program.

3. Information on a specific recipient to a dispenser for the purpose of establishing a prescription history to assist the dispenser in determining the validity of a prescription in accordance with § 54.1-3303 when the recipient is seeking a covered substance from the dispenser or the facility in which the dispenser practices. In a manner specified by the Director in regulation, notice shall be given to patients that information may be requested by the dispenser from the Prescription Monitoring Program.

4. Information relevant to an investigation or regulatory proceeding of a specific dispenser or

prescriber to other regulatory authorities concerned with granting, limiting or denying licenses, certificates or registrations to practice a health profession when such regulatory authority licenses such dispenser or prescriber or such dispenser or prescriber is seeking licensure by such other regulatory authority.

5. Information relevant to an investigation relating to a specific dispenser or prescriber who is a participating provider in the Virginia Medicaid program or information relevant to an investigation relating to a specific recipient who is currently eligible for and receiving or who has been eligible for and has received medical assistance services to the Medicaid Fraud Control Unit of the Office of the Attorney General or to designated employees of the Department of Medical Assistance Services, as appropriate.

6. Information relevant to determination of the cause of death of a specific recipient to the designated employees of the Office of the Chief Medical Examiner.

7. Information for the purpose of bona fide research or education to qualified personnel; however, data elements that would reasonably identify a specific recipient, prescriber, or dispenser shall be deleted or redacted from such information prior to disclosure. Further, release of the information shall only be made pursuant to a written agreement between such qualified personnel and the Director in order to ensure compliance with this subdivision.

8. Information relating to prescriptions for covered substances issued by a specific prescriber, which have been dispensed and reported to the Program, to that prescriber.

D. The Director may enter into agreements for mutual exchange of information among prescription monitoring programs in other jurisdictions, which shall only use the information for purposes allowed by this chapter.

E. This section shall not be construed to supersede the provisions of § 54.1-3406 concerning the divulging of confidential records relating to investigative information.

F. Confidential information that has been received, maintained or developed by any board or disclosed by the board pursuant to subsection A shall not, under any circumstances, be available for discovery or court subpoena or introduced into evidence in any medical malpractice suit or other action for damages arising out of the provision of or failure to provide services. However, this subsection shall not be construed to inhibit any investigation or prosecution conducted pursuant to Article 1 (§ 18.2-247 et seq.) of Chapter 7 of Title 18.2.

TENNESSEE CONTROLLED SUBSTANCE MONITORING PROGRAM: BOARD OF PHARMACY - DEPARTMENT OF HEALTH

665 MAINSTREAM DRIVE NASHVILLE, TENNESSEE 37243

Phone:(615) 253-1305 Email:CSMD.admin@tn.gov Fax:(615) 253-8782

Patient RX History Report

Date: 02-25-2014

Search Criteria: [redacted]

Patients that match search criteria

Pt ID	Name	DOB	Address
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]

Active Cumulative Morphine Equivalent
See explanation provided at the end of the report

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Prescriptions

Fill Date	Product, Str, Form	Quantity	Days	Pt ID	Prescriber	Written	Rx #	Daily MED[1]	Active[2]	N/R	Pharm	Pay
01/29/2014	APAP/HYDROCODONE BITARTRATE, 325 MG-10 MG, TAB	120.00	30	6417	ST22 NP	01/29/2014	04091015	40.00	Y	N	1022374	04
01/29/2014	ALPRAZOLAM, 1 MG, TAB	30.00	10	6417	ST22 NP	01/29/2014	04091016	-	N	N	022374	01
12/30/2013	APAP/HYDROCODONE BITARTRATE, 325 MG-10 MG, TAB	120.00	30	6417	ST22 NP	12/30/2013	04090765	40.00	N	N	1022374	04
12/30/2013	ALPRAZOLAM, 1 MG, TAB	30.00	30	6417	ST22 NP	12/30/2013	04090766	-	N	N	022374	01
11/26/2013	APAP/HYDROCODONE BITARTRATE, 325 MG-10 MG, TAB	120.00	30	6417	ST22 NP	11/26/2013	04090513	40.00	N	N	022374	04
11/26/2013	ALPRAZOLAM, 1 MG, TAB	30.00	30	6417	ST22 NP	11/26/2013	04090514	-	N	N	022374	01
10/09/2013	HYDROCODONE BITARTRATE AND ACETAMIN, 500 MG-10 MG,	120.00	30	6417	ST22	10/09/2013	04090128	40.00	N	N	1022374	04

TENNESSEE CONTROLLED SUBSTANCE MONITORING PROGRAM: BOARD OF PHARMACY - DEPARTMENT OF HEALTH

665 MAINSTREAM DRIVE NASHVILLE, TENNESSEE 37243

Phone:(615) 253-1305 Email:CSMD.admin@tn.gov Fax:(615) 253-8782

Patient RX History Report

Search Criteria: [redacted]

Disclaimer: Information contained in the report results from the search criteria entered and incorporated by the user and from the data entered by the dispenser. Any clinical notifications incorporated into this report are the result of information submitted by the dispenser. Therefore, the Tennessee Department of Health and the Board of Pharmacy do not express or imply any warranty regarding the accuracy, adequacy, completeness, reliability, or usefulness of the data provided. Additionally, neither the Tennessee Department of Health nor the Board of Pharmacy make recommendations, or give any legal advice, to the user as to actions, if any, that might be required as a result of viewing the report or the information contained in the report.
For more information about a prescription, please contact the dispenser or prescriber identified in the report.

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Drug	Morphine Equivalent Multiplier	Drug	Morphine Equivalent Multiplier
Buprenorphine	10	Methadone	3
Codeine	0.15	Morphine	1
Fentanyl	7.2	Oxycodone	1.5
Hydrocodone	1	Oxymorphone	3
Hydromorphone	4	Tramadol	0.1

US Department of Health and Human Services, Center for Disease Control

Rx#	Drug	Strength		Multiplier		Quantity		Days		Daily MED
04091015	APAP/HYDROCODONE BITARTRATE, 325 MG-10 MG, TAB	10 MG	X	1	X	120.00	÷	30	=	40.00
								Active Cumulative Morphine Equivalent		40.00

State Medical Board of Ohio

30 E. Broad Street, 3rd Floor, Columbus, OH 43215-6127

(614) 466-3934 med.ohio.gov

Guidelines for Prescribing Opioids for the Treatment of Chronic, Non-Terminal Pain 80 mg of a Morphine Equivalent Daily Dose (MED) "Trigger Point"

May 9, 2013

These guidelines address the use of opioids for the treatment of ***chronic, non-terminal pain****. "Chronic pain" means pain that has persisted after reasonable medical efforts have been made to relieve the pain or cure its cause and that has continued, either continuously or episodically, for longer than three continuous months. The guidelines are intended to help health care providers review and assess their approach in the prescribing of opioids. The guidelines are points of reference intended to supplement and not replace the individual prescriber's clinical judgment. The 80 mg MED is the maximum daily dose at which point the prescriber's actions are triggered; however, this 80 mg MED trigger point is not an endorsement by any regulatory body or medical professional to utilize that dose or greater.*

Recent analysis by the Centers for Disease Control and Prevention (CDC) shows that "patients with mental health and substance use disorders are at increased risk for nonmedical use and overdose from prescription painkillers as well as being prescribed high doses of these drugs." Drug overdose deaths increased for the 11th consecutive year in 2010. Nearly 60% of the deaths involved pharmaceuticals, and opioids were involved in nearly 75%. Researchers also found that drugs prescribed for mental health conditions were involved in over half. These findings appear consistent with research previously published in the *Annals of Internal Medicine* that concluded that "patients receiving higher doses of prescribed opioids are at an increased risk for overdose, which underscores the need for close supervision of these patients" (Dunn, et al., 2010).

Health care providers are not obligated to use opioids when a favorable risk-benefit balance cannot be documented. Providers should first consider non-pharmacologic and non-opioid therapies. Providers should exercise the same caution with tramadol as with opioids and must take into account the medication's potential for abuse, the possibility the patient will obtain the medication for a nontherapeutic use or distribute it to other persons, and the potential existence of an illicit market for the medication.

Providers must be vigilant to the wide range of potential adverse effects associated with long-term opioid therapy and misuse of extended-release formulations. That vigilance and detailed attention has to be present from the outset of prescribing and continue for the duration of treatment. Providers should avoid starting a patient on long-term opioid therapy when treating chronic pain. Providers should also avoid prescribing benzodiazepines with opioids as it may increase opioid toxicity, add to sleep apnea risk, and increase risk of overdose deaths and other potential adverse effects.

Providers can further minimize the potential for prescription drug abuse/misuse and help reduce the number of unintentional overdose deaths associated with pain medications by recognizing times to "press pause" in response to certain "trigger points." This pause allows providers to reassess their compliance with accepted and prevailing standards of care. The 80 mg Morphine Equivalent Daily Dose (MED) "trigger point" is one such time.

Providers treating chronic, non-terminal pain patients who have received opioids equal to or greater than 80 mg MED for longer than three continuous months should strongly consider doing the following to optimize therapy and help ensure patient safety:

- ✓ Reestablish informed consent, including providing the patient with written information on the potential adverse effects of long-term opioid therapy.
- ✓ Review the patient's functional status and documentation, including the 4A's of chronic pain treatment:
  - Activities of daily living;
  - Adverse effects;
  - Analgesia; and
  - Aberrant behavior.
- ✓ Review the patient's progress toward treatment objectives for the duration of treatment.
- ✓ Utilize OARRS as an additional check on patient compliance.
- ✓ Consider a patient pain treatment agreement that may include: more frequent office visits, different treatment options, drug screens, use of one pharmacy, use of one provider for the prescription of pain medications, and consequences for non-compliance with terms of the agreement.
- ✓ Reconsider having the patient evaluated by one or more other providers who specialize in the treatment of the area, system, or organ of the body perceived as the source of the pain.

The 80 MED "trigger point" is an opportunity to review the plan of treatment, the patient's response to treatment, and any modification to the plan of treatment that is necessary to achieve a favorable risk-benefit balance for the patient's care. If opioid therapy is continued, further reassessment will be guided by clinical judgment and decision-making consistent with accepted and prevailing standards of care. The "trigger point" also provides an opportunity to further assess addiction risk or mental health concerns, possibly using Screening, Brief Intervention, and Referral to Treatment (SBIRT) tools, including referral to an addiction medicine specialist when appropriate.

For providers treating acute exacerbation of chronic, non-terminal pain, clinical judgment may not trigger the need for using the full array of reassessment tools.

Providers treating patients with acute care conditions in the emergency department or urgent care center should refer to the *Ohio Emergency and Acute Care Facility Opioids and Other Controlled Substances Prescribing Guidelines* at http://www.healthyohioprogram.org/ed/guidelines.

Approved by Medical Board: May 9, 2013

WAC 246-919-860 Agency filings affecting this section

Consultation—Recommendations and requirements.

(1) The physician shall consider, and document the consideration, referring the patient for additional evaluation and treatment as needed to achieve treatment objectives. Special attention should be given to those chronic noncancer pain patients who are under eighteen years of age, or who are at risk for medication misuse, abuse, or diversion. The management of pain in patients with a history of substance abuse or with comorbid psychiatric disorders may require extra care, monitoring, documentation, and consultation with, or referral to, an expert in the management of such patients.

(2) The mandatory consultation threshold for adults is one hundred twenty milligrams morphine equivalent dose (MED)(oral). In the event a physician prescribes a dosage amount that meets or exceeds the consultation threshold of one hundred twenty milligrams MED (orally) per day, a consultation with a pain management specialist as described in WAC 246-919-863 is required, unless the consultation is exempted under WAC 246-919-861 or 246-919-862. Great caution should be used when prescribing opioids to children with chronic noncancer pain and appropriate referrals to a specialist is encouraged.

(a) The mandatory consultation shall consist of at least one of the following:

(i) An office visit with the patient and the pain management specialist;

(ii) A telephone consultation between the pain management specialist and the physician;

(iii) An electronic consultation between the pain management specialist and the physician; or

(iv) An audio-visual evaluation conducted by the pain management specialist remotely, where the patient is present with either the physician or a licensed health care practitioner designated by the physician or the pain management specialist.

(b) A physician shall document each mandatory consultation with the pain management specialist. Any written record of the consultation by the pain management specialist shall be maintained as a patient record by the specialist. If the specialist provides a written record of the consultation to the physician, the physician shall maintain it as part of the patient record.

(3) Nothing in this chapter shall limit any person's ability to contractually require a consultation with a pain management specialist at any time. For the purposes of WAC 246-919-850 through 246-919-863, "person" means an individual, a trust or estate, a firm, a partnership, a corporation (including associations, joint stock companies, and insurance companies), the state, or a political subdivision or instrumentality of the state, including a municipal corporation or a hospital district.

[Statutory Authority: RCW 18.71.450, 18.71A.100, 18.71.017, and 18.71A.020. WSR 11-12-025, § 246-919-860, filed 5/24/11, effective 1/2/12.]

Morphine Milligram Equivalent (MME) Calculator

Instructions:

For each opioid, select the strength from the drop down menu and enter the number of tablets per day (for fentanyl transdermal, see instructions below). Remember to enter all opioids the patient is taking. The total daily morphine milligram equivalents (MME) will be displayed.

Total daily morphine milligram equivalents (MME) =

0.0

Opioid / Strength / Dosage:	**Morphine Milligram Equivalents:**
Codeine	
per day	
Add Additional	
Fentanyl transdermal (in mcg/hr)	
per patch (each patch used for 3 days)	
Add Additional	
Hydrocodone	
per day	
Add Additional	
Hydromorphone	
per day	
Add Additional	
Methadone	
per day	
Add Additional	
Morphine	
per day	
Add Additional	
Oxycodone	

per day

Add Additional

Oxymorphone

per day

Add Additional

Tramadol

per day

Add Additional

Total daily morphine milligram equivalents (MME) =

0.0

Clear All

Disclaimers:

This tool is not intended for use in the setting of end-of-life care.

If dosing reaches 100 MME/day, the New York City Department of Health and Mental Hygiene recommends thorough reassessment of the patient's pain status and treatment plan, and reconsideration of other approaches to pain management.

Dosages >=20 MME/day can also increase overdose risk compared to dosages of 1-20 MME/day, however the overdose risk is even higher for dosages >=100 MME/day.

This tool is not for use in children due to unpredictable metabolism and risk for possible harm.

If initiating therapy, remember to take into account whether the patient is opioid naive or opioid tolerant. Use additional caution with opioid-naive patients to prevent overdose.

Long-acting opioids (fentanyl transdermal, methadone) should not be used in opioid naive patients.

Do not use this tool to convert from one opioid to a different opioid.

The following source was used for morphine equivalent conversion factors per mg of opioid: Korff MV, Saunders K, Thomas Ray G, et al. De facto long-term opioid therapy for noncancer pain. Clin J Pain. 2008 Jul-Aug;24(6):521-7.

The following source was used for overdose risk associated with dosage: Dunn KM, Saunders KW, Rutter CM, et al. Opioid prescriptions for chronic pain and overdose: a cohort study. Ann Intern Med. 2010 Jan 19;152(2):85-92.

COMMONWEALTH of VIRGINIA

David E. Brown, D.C.
Director

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MEMORANDUM

TO: The Honorable Stephen H. Martin
Chairman, Senate Committee on Education and Health

The Honorable Ralph K. Smith
Senate of Virginia

FROM: Ralph A. Orr
Director
Virginia Prescription Monitoring Program

DATE: October 29, 2014

RE: **Report on the Frequency of Reporting to the Prescription Monitoring Program pursuant to Senate Bill 638 of the 2014 General Assembly**

During the 2014 Session of the General Assembly, Senate Bill 638 was introduced by Senator Ralph Smith to require reporting of covered substances to the Virginia Prescription Monitoring Program (PMP) within three days of dispensing. The Senate Committee on Education and Health decided to pass the bill by indefinitely but to refer the subject matter to the Virginia Board of Pharmacy. It was requested by letter from the Clerk of the Senate that a written report be submitted to the committee chair and bill patron by November 1, 2014.

On behalf of the Board, the following report was prepared by the Director and Deputy Director of the Prescription Monitoring Program. The report summarizes the reporting requirements of all states and the District of Columbia. It does not conclude with a recommendation on the frequency of reporting the dispensing of a covered substance but does note that the trend is toward shorter time frames as the value of the PMP becomes more accepted by prescribers and dispensers.

We appreciate your review of the report and are available to answer any questions you may have or provide additional information if necessary.

REPORT OF THE VIRGINIA
DEPARTMENT OF HEALTH PROFESSIONS

Compilation of the Frequency of Collection of Data of Prescription Drug Monitoring Programs pursuant to SB 638 (2014)

To the Senate Committee on Education and Health

COMMONWEALTH OF VIRGINIA
RICHMOND
2014

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I. Executive Summary

During the 2014 Session of the General Assembly, Senate Bill 638 was introduced by Senator Ralph Smith to require reporting of covered substances to the Virginia Prescription Monitoring Program (PMP) within three days of dispensing. The Senate Committee on Education and Health decided to pass the bill by indefinitely but to refer the subject matter to the Virginia Board of Pharmacy. On behalf of the Board, the following report was prepared by the Director and Deputy Director of the Prescription Monitoring Program.

Virginia's Prescription Monitoring Program was implemented in response to a prescription drug abuse epidemic that began in Southwest Virginia. The program is one of many tools that assist prescribers and dispensers in making more informed treatment and dispensing decisions. It is also designed to be a tool for authorized law enforcement and regulatory personnel to assist them in investigations related to prescription drug abuse and diversion.

The PMP started operations in September 2003 as a fax-based system covering only Schedule II prescriptions in Virginia's southwest region. In 2006, the PMP went statewide and began using a web-based platform. At that time, the Virginia PMP required reporting of all Schedule II, III and IV controlled substances dispensed by both resident and non-resident pharmacies as well as dispensing physicians. However, the system was still not available to registered users during evenings, nights and weekends.

In October 2009, the PMP enabled automated response software that provided access 24/7. Ease of use and increased availability of the program prompted huge growth in the program. In 2013, the program processed greater than one million requests; and during calendar year 2014, program staff anticipates the program may process approximately two million requests. As request volume increases, the number of individuals obtaining prescriptions from a relatively large number of both prescribers and dispensers continues to decrease.

As perceived added value of the PMP also increases, expectations with respect to timely data have also been increasing. There is a current trend in reporting toward submission of data more frequently than once per week, though the great majority of states (including Virginia) require weekly reporting at the present time (59%). Very few states require reporting less than once per week (10%), and fewer still require on-line real-time reporting (2%).

This report identifies the reporting time frames for each state as obtained from information provided by the National Alliance for Model State Drug Laws (NAMSDL). These reporting time frames are current as of 8/29/2014. Refer to page 8 of this document for the map of current reporting intervals as collected by NAMSDL.

II. Authority for the Prescription Monitoring Program

The law governing Virginia's Prescription Monitoring Program is found in Chapter 25.2 of Title 54.1 of the Code of Virginia. Regulations governing the program are found at 18 VAC 76-20-10 et seq.

III. Evaluation of Current Reporting Intervals

As of July 2014, forty-nine states and the District of Columbia have either a functional prescription drug monitoring program (PDMP) or have legislation in place to establish one. Forty-seven states currently collect PMP data. At present, only one state requires reporting of prescription data in real time (Oklahoma). Ten states (Arizona, Delaware, Kansas, Kentucky, Michigan, Minnesota, New York, North Dakota, South Carolina and West Virginia) and the District of Columbia require reporting on a daily basis or within 24 hours of dispensing. Two states require reporting within three days of dispensing (Maryland, North Carolina), and the remaining states require weekly, bimonthly or monthly reporting. The majority require weekly reporting (thirty states, or 59%, including Virginia). Current trends are toward shorter intervals. A summary of each state's reporting requirements is included in Table 1.

Table 1. Summary of State Reporting Frequency Requirements

State	Real Time	Daily/24 Hours	3 Days	Weekly/7 Days	Bimonthly/Monthly
Alabama				X	
Alaska					X
Arizona		X			
Arkansas				X	
California				X	
Colorado					X
Connecticut				X	
Delaware		X			
District of Columbia		X			
Florida				X	
Georgia				X	

Table 1. Summary of State Reporting Frequency Requirements

State	Real Time	Daily/24 Hours	3 Days	Weekly/7 Days	Bimonthly/Monthly
Hawaii				X	
Idaho				X	
Illinois				X	
Indiana				X	
Iowa				X	
Kansas		X			
Kentucky		X			
Louisiana				X	
Maine				X	
Maryland			X		
Massachusetts				X	
Michigan		X (July 14, 2014)			
Minnesota		X			

4

Mississippi				X	
Missouri	No authorizing legislation.				
Montana				X	
Nebraska	Do not collect prescription data.				
Nevada				X	
New Hampshire				X	
New Jersey					X
New Mexico				X	
New York		X			
North Carolina			X		
North Dakota		X			
Ohio				X	
Oklahoma	X				
Oregon				X	
Pennsylvania					X
Rhode Island					X
South Carolina		X			
South Dakota				X	
Tennessee				X	
Texas				X	

Table 1. Summary of State Reporting Frequency Requirements

State	Real Time	Daily/24 Hours	3 Days	Weekly/7 Days	Bimonthly/Monthly
Utah				X	
Vermont				X	
Virginia				X	
Washington				X	
West Virginia		X			
Wisconsin				X	
Wyoming				X	
TOTAL	1	11	2	30	5
Percentage	2%	22%	4%	59%	10%

IV. States' Individual Experience

Oklahoma is the only state that requires reporting at the point of service (on-line, real time.) According to the National Alliance for Model State Drug Laws (NAMSDL), New York requires reporting at the point of service by statute, but interprets the law by regulation to mean that everything must be reported within 24 hours of dispensing.

Arizona, Delaware, the District of Columbia, Kansas, Kentucky, Michigan, Minnesota, North Dakota, South Carolina and West Virginia require reporting on a daily basis (and New York by

interpretation of the regulation). Arizona's expectation is that dispensers must report by the end of the business day or the following morning prior to the start of the next business day. The Kansas experience is while they require reporting once every 24 hours, some pharmacies report as they are filled; Kansas' software vendor has data available for queries via the Clearinghouse within 2 hours of dispensing, while other pharmacies "batch report" once per day. Regardless, each Kansas pharmacy is held responsible for consistency in reporting within a 24 hour window from their previous report. Kentucky allows a bit of a cushion in that they define daily reporting as the expectation that all data is received by the close of business the following day, though most pharmacies submit their data once per day toward the end of the business day. Their vendor then uploads all data they receive by midnight each day to their site by 2 a.m. the following morning. Michigan just began this reporting requirement in July 2014 (from bi-monthly). In Minnesota, all data is expected to be reported within 24 hours though that may be the end of the business day, the middle of the night or 8 am the following day. North Dakota also allows pharmacies to report within 24 hours, and it is their experience that most pharmacies report either the evening the prescriptions are dispensed or the following morning. West Virginia indicates their experience is similar; the statute requires reporting within 24 hours of dispensing, and while some report as they fill, most pharmacies batch their prescriptions, reporting once per day at the end of the day or early the following morning. In Louisiana, beginning August 1, 2014, pharmacies were required to report the "next business day" (they previously had a weekly reporting requirement).

Maryland and North Carolina require reporting no later than three business days after the prescription is dispensed. Maryland indicates they are still working to ensure that all pharmacies are reporting in compliance with the regulations. In North Carolina, while this requirement exists, dispensers are encouraged to report their data no later than 24 hours after the prescription was delivered, so they are trending toward daily reporting. The 72-hour requirement was a compromise because the North Carolina Retail Merchants Association was opposed to the 24-hour requirement.

As indicated previously, the majority of states, including Virginia (59%), require weekly reporting. Only 5 states (10%) require reporting of data either bi-monthly or monthly.

V. Virginia Experience

The Virginia PMP is one of 30 states that require reporting within 7 days. In order to determine whether there would be significant advantage to a greater reporting frequency, PMP staff looked at the prescriber and pharmacy visitation frequency of individuals whose data was collected in the Virginia PMP over the first 6 months of 2014. Data showed that an average of 9 individuals visited 2 or more pharmacies within a 24-hour period and that an average of 25 individuals visited 2 more prescribers within a 24-hour period. Refer to Table 2 for the rate/day for individuals visiting 2 or more of each within 3 days and 2 or more of each within 7 days.

Table 2. Individuals Using Two or More Pharmacies/Prescribers During the First 6 Months of 2014		
Location Individual Visiting	Total for Range	Rate/Day
Pharmacies - Range - Cumulative Individual Visits -		
Less Than 24 Hours	1,592	9 individuals

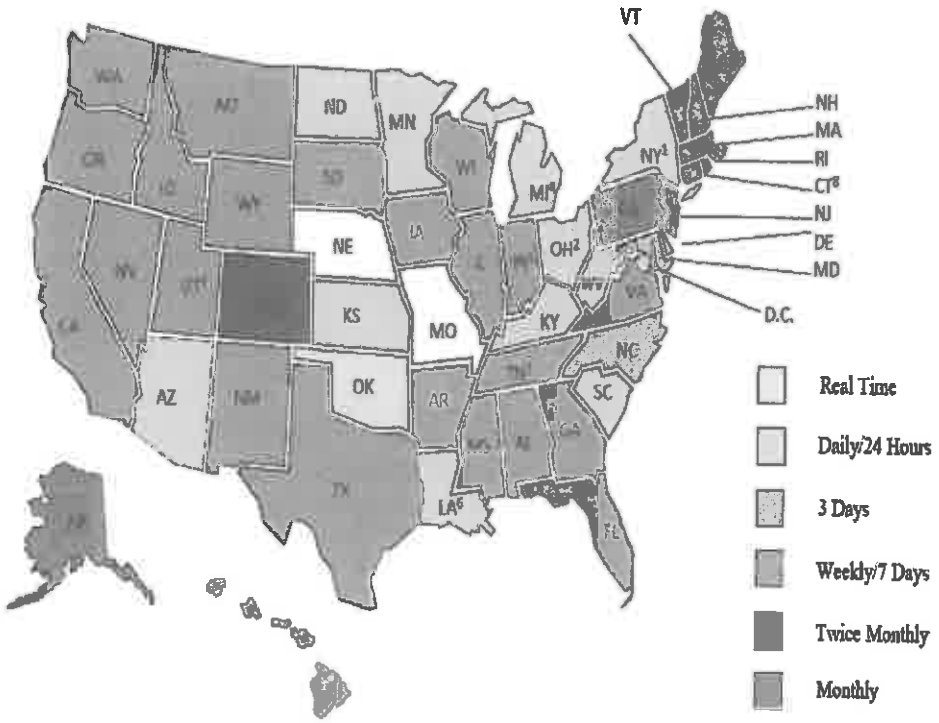
0-3 Days	7,649	42 individuals
0-7 Days	15,536	86 individuals
Prescriber Office – Range -Cumulative Individual Visits		
Less Than 24 Hours	4537	25 individuals
0 – 3 Days	21661	120 individuals
0-7 Days	43708	243 individuals

VI. Conclusion

Fifty-nine percent (59%) of states require weekly reporting of PMP data. The trend is toward shorter time frames. Those requiring daily reporting or reporting of data at the point of service have not communicated that they have experienced difficulty obtaining the data, though some states indicate they allow reporting of data by the following morning or the close of the next business day. As the perceived value of PMP data increases, there is an increasing expectation that data be available to authorized users in a more timely fashion.

7

Data Collection Interval



[1] New York requires the submission of data in real time by statute, but that has been interpreted by regulation to mean no later than 24 hours after the substance is delivered. [2] Ohio requires submission of data from pharmacies daily and from wholesalers monthly. [3] Utah requires submission weekly, but for those participating in the statewide pilot program, submission is required daily. [4] Michigan requires daily reporting for online reporting of dispensing information and weekly for mail-in submission of data. [5] Indiana will begin requiring the submission of data within 3 days by July 1, 2015 and within 24 hours by January 1, 2016. [6] Louisiana begins daily reporting on August 1, 2014. [7] Tennessee will begin requiring daily submission on January 1, 2016. [8] Connecticut requires marijuana dispensaries to report marijuana dispensing to the PMP daily.

8

INTRODUCED

14102546D

SENATE BILL NO. 638

Offered January 17, 2014

A BILL to amend and reenact § 54.1-2521 of the Code of Virginia, relating to the Prescription Monitoring Program; reporting requirements.

Patron—Smith

Referred to Committee on Education and Health

Be it enacted by the General Assembly of Virginia:

1. That § 54.1-2521 of the Code of Virginia is amended and reenacted as follows:

§ 54.1-2521. Reporting requirements.

A. The failure by any person subject to the reporting requirements set forth in this section and the Department's regulations to report the dispensing of covered substances shall constitute grounds for disciplinary action by the relevant health regulatory board.

B. Upon dispensing a covered substance, a dispenser of such covered substance shall report the following information:

1. The recipient's name and address.
2. The recipient's date of birth.
3. The covered substance that was dispensed to the recipient.
4. The quantity of the covered substance that was dispensed.
5. The date of the dispensing.
6. The prescriber's identifier number.
7. The dispenser's identifier number.
8. The method of payment for the prescription.
9. Any other non-clinical information that is designated by the Director as necessary for the implementation of this chapter in accordance with the Department's regulations.
10. Any other information specified in regulations promulgated by the Director as required in order for the Prescription Monitoring Program to be eligible to receive federal funds.

C. The reports required herein shall be made and transmitted *within three days of dispensing a covered substance and* in such manner and format and according to the standards ~~and schedule~~ established in the Department's regulations.

INTRODUCED

SB638

1/20/14 8:15

RxStat

A public health and
public safety collaboration
for responding to problem drug
use at the municipal/county level

TECHNICAL ASSISTANCE MANUAL

EXECUTIVE SUMMARY

RxStat is a model for advancing a shared understanding of the patterns and characteristics of problem drug use – including prescription opioid misuse – in a local jurisdiction. In New York City, RxStat was initially developed with the goal of preventing overdose mortality. RxStat uses existing datasets to generate information which can be used to tailor targeted interventions and policy responses to reduce deaths and illness involving prescription opioid and other drug misuse.

This manual is designed to support local jurisdictions in the establishment of an RxStat initiative. It is organized as a technical assistance resource and guide for creating similar initiatives in other cities and counties around the United States. This manual is informed by the first two years of experience with RxStat in New York City, where the initiative was established in 2012.

The initiative relies on the collaboration of public health and public safety agencies in a jurisdiction. RxStat incorporates data from local, state, and federal government sources and applies a public health analysis for comparing and triangulating findings across datasets. These efforts require an investment in data analysts to conduct the work, and a willingness among agencies to share data for analysis.

Section One of the manual identifies and describes key elements in the five stages of RxStat development: Basics, Getting Started, Building Content, Managing Process, and Moving Forward. This section includes practical suggestions for structuring the work and observations and examples from the New York City experience in its first two years. To develop the content for this section, interviews were conducted during late 2013 with 23 individuals who have been key players in the ongoing work of New York City's RxStat. A checklist for RxStat implementation is presented at the end of the section.

In Section Two, readers will find detailed information on each of the datasets that have proven useful to the New York City initiative, including guidance for accessing, preparing, and analyzing similar datasets available in other jurisdictions. Because RxStat relies principally on standard administrative datasets as its sources of data, it can be replicated as an initiative in other jurisdictions.

III. BUILDING CONTENT

1. Data

The practical work of RxStat involves a wide range of datasets, most of which are generated for administrative, rather than research, purposes. As a consequence, data ownership, variable selection, data collection, and information management are all organized to meet the functional needs of their agencies. Negotiating access to and use of the data represents one of the main operational hurdles for implementing RxStat.

> "Data is the glue that brings everything together."
>
> —*PUBLIC SAFETY REPRESENTATIVE*

a. Silos

The problem of separately operating silos is not new to government, but for a collaborative initiative such as RxStat, it presents a particular structural challenge. The initiative uses information from many different agencies where it is already collected, and standardizes the way it is presented for side-by-side consideration.

Although the primary datasets of interest for RxStat are held within the public health agency, they are usually collected and maintained by different offices. For example, in New York City, death data is managed by the vital statistics office, hospitalization data is maintained by the state health department, and emergency department visits are tracked and maintained principally as a monitoring tool for communicable disease. RxStat relies on effective communication and coordination with the primary owners of each dataset to establish parameters for accessing and analyzing the data.

b. Data-sharing and sensitivity

As such, data-sharing is a central issue for RxStat. Many agencies lack the capacity to analyze their own datasets, while this expertise is often well-developed in the public health department. Consequently, the need to share or transfer datasets from the ownership agency to the RxStat office is likely to arise.

The problem of identifiable data is the most common, but resolvable, data-sharing issue for RxStat. Because the initiative focuses on patterns in the data, rather than on specific individuals, all datasets are de-identified for the purposes of RxStat. Agencies may also have concerns regarding the sensitivity of specific variables in the data they gather and will need to distinguish these in relation to the variables of interest to RxStat. Finally, the potential for data misinterpretation may threaten agencies' willingness to share data. These types of concerns may need to be explicitly addressed and will help to build trust among RxStat participants.

A data use agreement can resolve concerns related to data-sharing. A standard agreement should specify that data will be de-identified prior to sharing, that the itemized, agreed-upon variables

will be shared, and that some form of penalty will be levied for any violation of the agreement or its terms by either user. Formal memoranda of understanding are sometimes needed, but such agreements can become bound up in inter-agency legal negotiations for an extended period of time, preventing the work from moving forward.

Data use agreements specify:

- de-identified data
- itemized variables
- penalty to be levied for violation

In addition, detailed data-sharing guidelines from the ownership agency for each dataset of interest can guide the development of a data use agreement. Such guidelines should include a complete codebook for the dataset and specify any exclusions for data-sharing or potential analyses, the preferred methods for addressing confidentiality issues (e.g., de-identification, encryption, HIPAA), and other issues relevant to data ownership and transfer.

Clarifying processes and expectations for data-sharing early in the development of RxStat can smooth implementation considerably. These discussions provide an opportunity to address agency and analytic concerns up front and with transparency, beginning to map analyses together in ways that will be most useful. Ideally, ownership agencies can bring sample analyses or data tables to the group for informal review and planning before data-sharing is formalized and initiated. This process can help to establish agreement on what and how data will be shared, prepared, and analyzed.

c. *Methods*

RxStat applies epidemiologic methods for preparing and presenting data regardless of source. While this approach is standard to public health, it is notably different from the methods law enforcement uses to examine data. For example, data available through the prescription drug monitoring program are generally used to identify patients meeting specific criteria (e.g., receiving opioid prescriptions from more than one doctor in a single month), with the goal of curbing medication misuse and diversion. By contrast, a public health analysis is concerned with the relative distribution of all opioid prescriptions by geography, patient age, frequency or quantity of prescriptions, etc.

RxStat applies population-level public health analyses to non-public health data. Law enforcement examines information at the individual level, similar to health care providers. This contrasts with an epidemiologic approach, which reports data in relationship to similar phenomena – i.e., as a proportionate value, rather than a simple number.

RxStat establishes a standard, epidemiologic approach for considering the characteristics, patterns, and trends in public safety data involving prescription opioid misuse and other

SECTION TWO – DATASETS

OVERVIEW

Data is the core focus and content of RxStat. It is the principal work of the initiative: sharing, preparation, analysis, and presentation of drug-related indicators.

Most of the datasets included in RxStat are generated for administrative purposes by the government agencies who own them. The fact that data are not produced for the specific or sole purpose of tracking and monitoring patterns associated with prescription opioid or other drug misuse has important implications for the initiative. The work of RxStat involves considerable preparation of the datasets before any analysis is possible. In some cases, this process is quite extensive and time intensive. This section of the manual is designed to assist analysts working with these datasets to isolate and present drug-related information from standard administrative datasets.

RxStat's reliance on administrative datasets permits its replication in other jurisdictions, because these data are standardized. Each of the datasets included in RxStat is produced in a similar format at the county or state level throughout the country. This section is structured to provide suggestions and direction for accessing similar datasets in other jurisdictions and for anticipating issues involved in this process.

In the following pages, each RxStat dataset is presented and described. The sources are presented in a hierarchical fashion to reflect the relative importance of each drug-related indicator in a public health framework. The mortality dataset is discussed first, followed by datasets assessing morbidity, and completed with datasets reflecting different aspects of drug use prevalence (i.e., treatment admissions, jail-based health intakes, arraignments, etc.).

The information is presented in a table format and includes considerations for working with each dataset, including: data ownership, access, drugs included, how content is produced, the data request for RxStat, potential lag-time in the data, caveats regarding the particular dataset, data preparation, and the analysis plan for RxStat. Where possible, case selection code and definitions are also provided to assist analysts working directly with these data. Administrative datasets managed by public health agencies are presented first, followed by administrative datasets managed by public safety agencies. The availability and utility of survey data for incorporation into RxStat is briefly discussed in the final chapter of this section.

I. PUBLIC HEALTH ADMINISTRATIVE DATASETS

a. Accidental overdose deaths

NAME	Unintentional (accidental) drug poisoning (overdose) deaths.
AGENCY OWNER	Health department vital statistics office and local medical examiner's office.
ACCESS	Vital statistics records are maintained by the state health department, which receives case reports of overdose deaths from the county medical examiner's or coroner's offices. In smaller jurisdictions, it may be easier to go directly to the medical examiner's or coroner's offices to select the case files of interest and gather information. Due to the higher volume of cases, larger jurisdictions should initiate case-finding with the vital statistics office.
DRUGS INCLUDED	All poisoning deaths in the jurisdiction.
HOW CONTENT IS PRODUCED	Premature deaths or those of unspecified or unnatural cause are investigated by the jurisdiction medical examiner's or coroner's office, including toxicology analyses, the setting of death, and any related information which can be collected through investigation. Based on findings, the medical examiner or coroner assigns the cause and manner of death, and files a case report with the office of vital statistics in the state health department. Here, the case is coded by a nosologist, and a final case record is filed with the vital statistics office.
DATA REQUEST FOR RXSTAT	From the vital statistics office, request all cases with drug-related cause of mortality. See Case Selection Code section below for detailed definition using ICD-10 codes and a case selection protocol. Alternately, in a smaller jurisdiction, request all unintentional or accidental cases from the medical examiner's or coroner's office.
POTENTIAL LAG-TIME	Minimum 4-6 weeks due to toxicology testing and confirmation, and maximum 1.5 years, as vital statistics reports are generally published annually.

DATA NOTES AND CAVEATS	a. The protocol for case selection described here was developed in NYC and provides an exhaustive, specific approach for confirming the identification of all possible unintentional drug poisoning cases, as labeled. Other jurisdictions have adopted different approaches, including reporting on all poisoning cases, regardless of intent, and reporting specific drug involvement in cases based upon vital statistics record reports alone, rather than from toxicology reports examined in case file review. b. In NYC, specific standards have been established for labeling information abstracted from toxicology reports during the case file review. All cases with "morphine" should list "heroin" as a case-involved drug, and all cases with "ethylbenzoylecognine" should list both "cocaine" and "alcohol" as case-involved drugs. Moreover, wherever "alcohol" is found in a drug-involved case, it should be reported and listed as a drug in that case.
DATA PREPARATION	From the final set of cases selected, abstract the following information for each case: decedent sex, age at death, race/ethnicity, zip code of residence, zip code of death, setting of death, drugs involved.
ANALYSIS PLAN FOR RXSTAT	RxStat indicators: Age, sex, race/ethnicity distribution by neighborhood of residence, by drug type involved, by drug type combinations involved. Neighborhood of residence by drug type involved, by drug type combinations involved.

Case selection code

Definition: Unintentional (or accidental) drug poisoning deaths – Using vital statistics records*

*Note: Using multiple cause cases, in addition to underlying cause cases, provides the most comprehensive approach for using vital statistics records to identify unintentional drug poisoning deaths. It is reasonable to restrict this analysis to underlying cause cases only, thus eliminating step 5 below.

1. Select all poisoning cases for the period of interest.
   a. Select the following codes, both underlying and multiple cause (X40-X49; X60-X69; X85-X90; Y10-Y19; U01{.6-.7}; F11-F16; F18-F19; R99)
2. Restrict "manner" to accident.
3. Restrict age of decedent to be 15-84 years.
4. Break out cases that have underlying cause of X40-X44, F11-F16, F18-F19 (excluding F codes where the third digit is .2 or .6), R99.

5. Using file of cases that do not have X40-X44, F11-F16, F18-F19 (excluding F codes where the third digit is .2 or .6), R99 as an underlying code.
    a. Break out those cases that have X40-X44, R99 in the multiple cause file with any underlying code.
    b. Review cases that have an X40-X44, R99 in the multiple cause field, with any other underlying code. These cases should be reviewed manually by reviewing the literal cause of death in both Part 1 and Part 2. Cases should be excluded for the following reasons:
        i. Drug is mentioned in Part 2 of the death certificate only
        ii. Death is due to a non-drug poisoning such as carbon monoxide
        iii. Death is due to salicylate or acetaminophen poisoning
        iv. Record not confirmed at the OCME
        v. Death is due to a physical cause such as:
            - Drowning
            - Blunt force trauma
            - Asphyxia
            - Hypothermia/Hyperthermia
6. The final case file should include all cases with an underlying cause of X40-X44, F11-F16, F18-F19 (excluding F codes where the third digit is .2 or .6), R99 and any cases that were found and kept in step 5) above.

b. Hospitalizations with drug-related diagnoses

NAME	SPARCS (Statewide Planning And Research Cooperative System). See data notes below for further information.
AGENCY OWNER	State Department of Health (SDOH) or state licensing authority for healthcare facilities.
ACCESS	From SDOH, through formal arrangement, e.g., IRB, data use agreement.
DRUGS INCLUDED	All ICD-9 codes for any drug-related discharge (includes drug-specific codes).
HOW CONTENT IS PRODUCED	All state-licensed hospital and ambulatory care clinic facilities report patient discharge data to the licensing authority, e.g., SDOH. Each discharge is reported as a unique record; patients can have multiple records, if they have multiple discharges within a given time period. Discharge records include diagnostic codes (ICD-9) for principal, secondary, and injury diagnoses.
DATA REQUEST FOR RXSTAT	RxStat requests all unique discharge records generated by licensed healthcare facilities within the jurisdiction during a period of interest (usually by calendar year), for all drug-related diagnoses, excluding injury diagnoses (E-codes) of suicide, homicide, or undetermined intent. Discharge records are anonymized but assigned unique identifiers for each patient. Variables in the discharge record include: patient unique identifier, gender, race/ethnicity, age at time of admission, and zip code of residence; healthcare facility location; if ICD-9 diagnosis in case selection list, then included in definition for any drug-related diagnosis (for detail, see Case Selection Code section below).
POTENTIAL LAG-TIME	One year, due to reporting lags from facilities (up to three months) and subsequent data-cleaning at SDOH.
DATA NOTES AND CAVEATS	a. In other states, this dataset is known by different names, including State Emergency Department Databases, State Inpatient Databases. b. This dataset excludes federally-managed healthcare facilities operating in the state, e.g., Veterans Administration facilities. c. The Healthcare Cost and Utilization Project (HCUP) provides access to health statistics and information on hospital inpatient and emergency department utilization.

DATA PREPARATION	Use patient zip code of residence to categorize records by neighborhood, borough, state, and other. Define counts of unique patients by first hospitalization in the period of interest. Aggregate frequency and distribution of records, N (%). Calculate age-adjusted rates: (i) intercensal jurisdiction population estimates as denominators for the year of interest, (ii) age-adjust to US standard census 2000 weights.
ANALYSIS PLAN FOR RXSTAT	RxStat indicators: Number of hospitalizations overall and by drug type. Number of patients hospitalized by demographics (gender, race/ethnicity, age, borough of residence/hospital, neighborhood poverty level, UHF42). Diagnoses: • Principal, secondary • Drug psychoses (292.x), dependence (304.x), abuse (305.x) • Poisoning • Co-morbidities based on HCUP diagnostic groupings Procedures. Average length of stay.

Case selection code

Definition: Any drug-related discharge –

if diagnosis in ('292.xx','304.xx','965.xx','967.xx','969.xx','970.xx','305.2x','305.3x','305.4x',
'305.5x','305.6x','305.7x','305.8x','305.9x','357.6','648.3x','655.5x','779.5',
'968.0','968.5','760.72','760.73','760.75','970.81','E850.x','E851','E852.x',
'E853.x','E854.x','E855.1','E855.2','E935.0','E935.1','E935.2','E950.0',
'E950.1','E950.2','E950.3','E950.4','E962.0','E980.0','E980.1','E980.2',
'E980.3','E980.4')
then ICD-9='Any drug-related diagnosis';

Definition: Opioid-related discharge –

if diagnosis in
('304.0x', '305.5x', '304.7x', '965.0x', 'E850.0', 'E850.1', 'E850.2', 'E935.0', 'E935.1', 'E935.2')
then ICD-9='Any opioid related diagnosis';

c. Poison Control Center calls

NAME	Poison Control Center calls.
AGENCY OWNER	Poison Control Center (PCC) for jurisdiction, region, or state.
ACCESS	From PCC, direct system access via electronic portal through formal arrangement, i.e., data use agreement.
DRUGS INCLUDED	All controlled substance-related calls.
HOW CONTENT IS PRODUCED	Calls are received by PCC from a variety of sources, most frequently from clinicians in health care facilities. Information is logged and completed in a centralized call database by PCC staff in near real-time, per shift, as the reason for the call is handled.
DATA REQUEST FOR RXSTAT	RxStat has direct, real-time system access via electronic portal to all variables in the PCC database, including categories detailing patient information, substance in question, treatment information, outcome information, and caller information.
POTENTIAL LAG-TIME	Real-time, within 24 hours of PCC receipt of the call.
DATA NOTES AND CAVEATS	a. Due to low counts for other controlled substance-related calls in NYC, only opioid analgesic-related calls are presented for inclusion in RxStat. b. Patient zip code of residence is provided in only 15% of NYC call records; analysis is not possible for geographic distribution of patients' residence.
DATA PREPARATION	Patient information includes: call intake date, sex, age, zip code. Substance in question includes: substance category, substance description, caller verbatim, exposure type, exposure site (ingestion, other route, unknown route), acute or chronic. Treatment information includes: management, disposition (if treated in health care facility), initial health care facility, final health care facility. Outcome information includes: medical outcome, estimated effects duration. Caller information includes: caller relationship, caller county, caller state, caller zip code.
ANALYSIS PLAN FOR RXSTAT	RxStat indicators: Volume (N) of opioid analgesic-related calls received per calendar quarter, in comparison with volume (N) received in previous year same calendar quarter.

d. Emergency department admissions for suspected overdose events

NAME	Emergency Department (ED) syndromic data.
AGENCY OWNER	Hospital emergency departments (ED), who may upload to local health departments in larger cities for analysis purposes (see data notes below).
ACCESS	Internal database at city health department, direct system access via electronic portal through formal arrangement, such as a data use agreement.
DRUGS INCLUDED	All ED admissions noting overdose-related chief complaints or diagnoses.
HOW CONTENT IS PRODUCED	ED admissions are recorded by ED staff in real-time at the point of service in the ED electronic health record. Each record includes text describing the patient's chief complaint, sometimes supplemented or substituted with an ICD-9 diagnosis code. (In NYC, ED admission records are uploaded to the city health department via electronic portal every 12 hours.)
DATA REQUEST FOR RXSTAT	RxStat has direct, real-time system access via electronic portal to all variables in the ED syndromic database, including date of visit, time of visit, chief complaint, hospital, patient sex, patient zip code of residence, patient age, mode of arrival, and disposition. See Case Selection Code section below for coding instructions to identify all chief complaints defined as "overdose."
POTENTIAL LAG-TIME	Real-time, within 24 hours of ED visit.
DATA NOTES AND CAVEATS	a. Real-time uploads from EDs to local health departments are usually arranged to conduct public health surveillance of communicable disease outbreaks and suspected bioterrorism events. Tracking suspected drug overdose events represents a novel use of syndromic data. b. If the jurisdiction is small or the local health department does not receive hospital ED uploads, alternately, RxStat analysts could arrange daily reviews of local ED data with ED or hospital leadership.
DATA PREPARATION	Data are analyzed by date, ED, patient zip code of residence, neighborhood of residence, and neighborhood of hospital. Statistical tests are performed to identify any increase above what would be expected (level of significance, 5%). These analyses are used for internal purposes only.
ANALYSIS PLAN FOR RXSTAT	RxStat indicators: Volume of "overdose" cases per calendar quarter, in comparison with previous year same calendar quarter.

Case selection code

Definition: Overdose –

```
OD=Prxmatch("/ OD|OD | O\.D\.|O\.D\. | O[[:punct:]]D|^OD|OVERDO|OVER DOSE|OVER D|
DRUG O.|O. DOSE|EXTRA DOSE|OPVER DOSE|OVER.DO.E|TOO MUCH DRUG|TOO MANY DRUG
|OUDOSE|D.O.D /", CC) >0;

      **OD Exclude;
      If OD GE 1 Then
      Exclude1=Prxmatch("/PERIOD|LOOD|BODY|CODE|ODONTAL|GOD|EPISOD|NODULE|
TODAY|MODERATE|PRODUCTIVE|DISLODGED|ODOR|C[[:punct:]]O D|HEMODIALYSIS|PROD|
NODES|SODIUM|O D/", CC) >0;
      Else Exclude1=.;

      If OD GE 1 AND Exclude1=0 Then
      Exclude2=Prxmatch("/ODOUR|POD|EXTRNOD|BOOD|DISCHARGE|OPPOSITIONAL|NOD
|ROD|BLLOD|BLOD|PARANIOD|TOD|ODD BEHAVIOR|PROSTATE|THYRIOD|SUGAR|BOD
|STERIOD|TA[LG][LG]IA|ALGIA|.OOD|HEM[MO]|FIBRIOD|ODON/", CC) >0;
      Else Exclude2=.;

      If Exclude1 > 0 Then Exclude=1;
      Else if Exclude2 >0 Then Exclude=1;
      Else Exclude=.;

      If OD > 0 And Exclude NE 1 Then Overdose=1;
      Else Overdose=0;

      Drop OD Exclude Exclude1 Exclude2;
```

e. Ambulance calls for suspected overdose events

NAME	Emergency Medical Services (EMS) ambulance calls.
AGENCY OWNER	Fire department or first responder agency responsible for oversight of all EMS services in the jurisdiction.
ACCESS	Data prepared for RxStat by first responder agency owner.
DRUGS INCLUDED	All ambulance calls responding to suspected drug overdose incidents.
HOW CONTENT IS PRODUCED	Information on EMS calls is recorded electronically for all agency-managed EMS calls. Each call includes zip code of dispatch and clinical indicators such as vital signs and prior medical history.
DATA REQUEST FOR RXSTAT	All calls where naloxone was administered.
POTENTIAL LAG-TIME	EMS data is collected in real-time. For the purposes of RxStat, it is prepared and provided by the agency owner on a monthly basis.
DATA NOTES AND CAVEATS	Some cases are not overdoses; naloxone was administered as a precautionary measure, but it was subsequently determined the case was not an overdose.
DATA PREPARATION	Clinical data from the call is examined to remove calls that meet exclusion criteria (in development).
ANALYSIS PLAN FOR RXSTAT	Spatial distribution of probable non-fatal overdoses in comparison with the spatial distribution of fatal overdoses.

f. Substance use disorder treatment admissions

NAME	Substance use disorder treatment admissions dataset. See data notes and caveats for detail.
AGENCY OWNER	Single state agency (SSA) reporting to federal Substance Abuse and Mental Health Services Administration (SAMHSA).
ACCESS	From SSA, as data tables prepared by SSA for RxStat.
DRUGS INCLUDED	All substances, reported by drug class or specific drug type (where prevalence of specific drug use is dominant).
HOW CONTENT IS PRODUCED	All licensed programs report patient-level treatment admissions data to the SSA via electronic reporting system.
DATA REQUEST FOR RXSTAT	RxStat receives data tables of aggregated data, including: participant demographics and socio-economic status; self-reported drug use (type, frequency, route of administration); referral source and detail.
POTENTIAL LAG-TIME	Estimated lag time of 6 months after the treatment event. Annual reports are available from SAMHSA TEDS with a lag-time of one calendar year.
DATA NOTES AND CAVEATS	a. SSA are required to report all treatment admissions data to SAMHSA on a routine basis. SAMHSA compiles these data as the Treatment Episode Data Set (TEDS) and presents information by state, reporting aggregate characteristics of treatment admissions per calendar year. For details, see website: http://wwwdasis.samhsa.gov/webt/information.htm
DATA PREPARATION	Sort records to identify those for the jurisdiction of residence for the time period of interest. (In NYC, the jurisdiction level used for sorting and preparing this dataset is the county, or borough.)
ANALYSIS PLAN FOR RXSTAT	RxStat indicators: Opioid and opioid-type misuse admissions, overall (N,%), by borough, by age, by route of administration, by referral source. Other drug class and type misuse admissions occurring with considerable frequency (N, %), by borough, by age, by route of administration, by referral source.

g. Jail health services intakes

NAME	Jail health services intake dataset.
AGENCY OWNER	Local health department or provider contracted to deliver healthcare services.
ACCESS	From provider, direct system access via electronic portal to electronic health record, arranged by data use agreement.
DRUGS INCLUDED	All drug use self-reported by prisoners at intake, and identified in prisoner urine drug screening at intake.
HOW CONTENT IS PRODUCED	Within 24 hours of admission to the jail, new prisoners undergo a full physical and mental health examination. The jail healthcare provider uses an electronic health record to manage patient information.
DATA REQUEST FOR RXSTAT	Via electronic portal, RxStat has access to specific patient-level variables in the electronic health record, including: gender, race, ethnicity, zip code of residence, age on intake, education level; self-reported drug use (type, frequency, quantity); self-reported mental health history; urine drug screen results, all drugs identified.
POTENTIAL LAG-TIME	Lag-time is dependent on whether there is an electronic health record system in place. With an electronic health record system, data is available in real-time via the electronic portal.
DATA NOTES AND CAVEATS	a. All jurisdictions are required to provide adequate medical care to prisoners. b. In larger jurisdictions, the local health department may deliver or oversee healthcare services in the jail, but in most jurisdictions, care is delivered via agreement with a local healthcare provider.
DATA PREPARATION	Count of new admissions during a time period of interest with reported or identified drug use, by drug type and demographics. Assign zip code of residence to neighborhood and borough.
ANALYSIS PLAN FOR RXSTAT	RxStat indicators: Opioid misuse among new admissions, overall (N, %), by neighborhood and borough, by age. Other drug misuse among new admissions (N, %), by drug type.

h. Dispensed prescriptions for controlled substances

NAME	Prescription Monitoring Program (PMP) or Prescription Drug Monitoring Program (PDMP).
AGENCY OWNER	State agency authorized by law to manage the program.
ACCESS	Direct electronic access, negotiated through formal arrangement with state agency, such as data use agreement.
DRUGS INCLUDED	All controlled substances prescribed for medical use in that state.
HOW CONTENT IS PRODUCED	Standards and methods vary somewhat from state to state, and are established in legislation. In all states with PMP, pharmacists filling a controlled substance prescription are required to submit related patient and drug information to the PMP. In addition, in some of these states, physicians prescribing a controlled substance must also submit related patient and drug information to the PMP office. The PMP office maintains these data as case records of each prescription event. A new record is produced for each prescription; patients can have multiple records.
DATA REQUEST FOR RXSTAT	From the PMP office, direct system access is provided for patients, providers, and pharmacies with a NYC zip code. The dataset includes four levels of data: prescription, patient, prescriber, and pharmacy.
POTENTIAL LAG-TIME	Lag-time is dependent on the PMP reporting system in place in the state. Some PMP offices maintain an on-line, real-time, state-wide electronic reporting system for providers, which should ensure complete data within one week (maximum) of the prescription event, if RxStat negotiates an agreement for direct access to the system. Many PMP offices maintain an internal tracking system, receiving, cleaning, and entering data from providers on a monthly basis, with an allowable lag-time of up to two weeks following the close of the reporting month. For datasets from these states, lag-time for RxStat analysis could extend up to three months, given time for data cleaning and report preparation within the PMP office.
DATA NOTES AND CAVEATS	Some states have not implemented a PMP. For a recent list and map of the status of states' PMP programs, please see: http://www.namsdl.org/library/1E4808C8-1372-636C-DD0293F829471A7E

DATA PREPARATION	1. Methods for data cleaning: i) Location (residence, prescriber location, pharmacy location) • Use 3 digit zip code to create borough, state, and other. • Report borough level information. • For patient and prescriber calculate the most frequent location for the person in the period of interest. ii) Patient age • Age is at prescription refill. • Calculate the average age in the period of interest to obtain patient age in the period of interest. iii) Reassign "oxymorphone" per detail provided in Case Selection Code section below. iv) Apply short-acting and long-acting classifications provided in Case Selection Code section below. v) Apply "Schedule II" definition, provided in Case Selection Code section below. vi) Apply exclusions, provided in Case Selection Code section below. 2. Calculate age-adjusted rates • Use population estimates as denominators for the year of interest. • Age-adjust to US Standard Census 2000 weights
ANALYSIS PLAN FOR RXSTAT	Drug types include: Codeine, Fentanyl, Hydrocodone, Hydromorphone, Meperidine, Methadone, Oxycodone, Oxymorphone, and Pentazocine. RxStat indicators: • Number of prescriptions filled overall and by type • Number of patients filling prescriptions by demographics (age, gender, residence) • Number of prescribers • Number of pharmacies • Median day supply of prescriptions • Morphine equivalent dose (MED) of prescriptions • Number and rate of high dose (morphine equivalent dose ≥ 100) prescriptions filled

Case selection code

Definition: Oxymorphone –

if ndc number in ('16590060930','16590060960','16590060990','16590074730',
16590074756','16590074760','16590074790','16590076730','16590076756',
16590076760','16590076790','21695094860','21695094960','60760061760',
63481052270','63481052275','63481055370','63481055375','63481057170',
63481057175','63481061270','63481061370','63481061770','63481061775',
63481062410','63481067470','63481067475','63481069370','63481069375',
63481090770','63481090775','63629417301','63629417302','63629417303',
63629417304','63629417401','63629417402','63629417403','63629417701',
63629417702','63629417703') then ndc_acronym='OXYM';

Definition: Short-acting and Long-acting drug classifications –

- Merging by NDC number, the NDC file available from CDC Injury Center (see XXX)
- For any prescription with missing short acting or long acting classification, assign according to drug type for drugs that are only short acting in form or long acting in form.
- Apply MED calculations
- Cannot calculate MED with prescriptions missing information on strength, quantity dispensed, day supply, or Morphine Milligram Equivalent conversion factor.
- Check data for any missing information and apply formula to those without missing information.
- Exclude missing day supply, day supply = 999.
- Formula: dailydose = (strength*quantity_dispensed)/days_supply;
- MED = dailydose*MME_CONVERSION_FACTOR

Definition: Schedule II controlled substances –

('FENT', 'HYDM', 'MEPE', 'METD', 'MORP','OXYC','HYDC', 'OXYM')

Exclusions –

- Exclude institutions: dea_busncode ne 'B'
- Exclude veterinarians: dea_profcode not in ('74', '75') and lic_specode not='500'
- Exclude missing patient number as these patients cannot be uniquely identified
- Exclude missing prescriber number as these providers cannot be uniquely identified

II. PUBLIC SAFETY ADMINISTRATIVE DATASETS

a. Pharmacy orders for prescription opioid medication stock

NAME	Automation of Reports and Consolidated Orders Systems (ARCOS).
AGENCY OWNER	Drug Enforcement Administration (DEA).
ACCESS	A law enforcement agency must make the request to the DEA for ARCOS data. In NYC, NY/NJ HIDTA obtained approval from DEA headquarters via a request for a data report submitted by the local DEA office (which participates in RxStat).
DRUGS INCLUDED	All Schedules I and II materials and Schedule III narcotic and gamma-hydroxybutyric acid (GHB) materials.
HOW CONTENT IS PRODUCED	Reports are filed to DEA at three levels: (1) by manufacturers at the point of a logged order, (2) by a regional distributor to report what is in inventory and what is being ordered, and (3) by a local pharmacy to report what is in inventory and what is being ordered. Report to ARCOS is generated at the point of transaction, and reflects orders placed and inventory in stock for each drug (by NDC# and dosage units).
DATA REQUEST FOR RXSTAT	RxStat receives data from DEA on a calendar quarterly basis. Data reports orders only from pharmacies in the jurisdiction. RxStat does not receive data from DEA on what stock is in inventory at local pharmacies. Data is provided on all Schedule II and III controlled substances ordered by pharmacies at the zip code level. The variables included are: NDC number, NDC trade name, drug type, package size, total dosage units, and grams of controlled substance.
POTENTIAL LAG-TIME	Minimum one calendar quarter lag, up to two calendar quarters lag.
DATA NOTES AND CAVEATS	a. Law enforcement may be able to obtain access to examine specific pharmacies with consistent high-volume orders for unexplained suspicious activity. b. RxStat could also request inventory reports alongside order reports, to develop a fuller picture for local availability of controlled substances in pharmacies.

DATA PREPARATION	All data is anonymized, stripped of identifying name or location characteristics other than zip code. Data is prepared as follows: Merge ARCOS file with the NDC product codes, NDC package codes, and CDC MME conversion worksheet. Identify any NDC codes not in the files above and manually add in the missing data. Create a master strength field for analysis. Create a pill variable to exclude all liquids, powders, suppositories, patches, sprays, solutions, etc. Using the NDC codes and CDC files, categorize all opioid analgesics into specific drug types (morphine, hydrocodone, oxycodone, etc.). Calculate the morphine milligram equivalent for each type of opioid analgesic. Create a borough variable from pharmacy zip code.
ANALYSIS PLAN FOR RXSTAT	Drug types include: All Schedule II and III substances, including: Codeine, Fentanyl, Hydrocodone, Hydromorphone, Meperidine, Methadone, Oxycodone, Oxymorphone, and Pentazocine. RxStat indicators: # pills per drug type by borough of pharmacy, per quarter.

b. Drug-related prosecutions

NAME	Drug-related prosecutions.
AGENCY OWNER	District Attorney's (DA) Office.
ACCESS	Gained through DA participation.
DRUGS INCLUDED	All prosecutions for narcotic drugs and controlled substances are included. The data captured is based upon prosecution charge, not arrest charge. Of note, in New York State, marijuana-related arrests are classified under a different statute than controlled substances and narcotic drugs. This marijuana statue is not selected during data compilation, but marijuana is included in the data capture if it is present in a case alongside a controlled substance or narcotic drug.
HOW CONTENT IS PRODUCED	Information on a DA Office's system serves as the dataset for analysis, and includes both information the DA Office receives from the Police Department and information the DA Office produces. The "complaint language" is written by an Assistant District Attorney assigned to the case in the intake bureau, and is included in a legal document where the ADA sets forth the grounds for the criminal charges. This "complaint language" is used to capture and identify drug type(s) involved in a specific prosecution.
DATA REQUEST FOR RXSTAT	RxStat receives data from the DA Offices as it is produced and prepared for monthly working group meetings. Data is organized per prosecutions by the DA Office for narcotic drugs and controlled substances (not including marijuana unless it is present in a prosecution involving narcotic drugs and/ or controlled substances). Data elements per prosecution include: (1) demographics - defendant's age, gender, race, zip code of residence, residence precinct; (2) location - arresting precinct, address of arrest; (3) charges – top screening drug charge, top screening sale charge, top screening possession charge; (4) drugs involved.
POTENTIAL LAG-TIME	Up to one month.

DATA NOTES AND CAVEATS	a. Reflects the practice and approach of prosecutors' offices in New York City, which may differ considerably from other jurisdictions. b. Includes only cases arraigned on narcotic drugs and controlled substances charges; does not include arrests where these charges were subsequently dropped. c. The data includes number of prosecutions, and number of instances of a drug. Oftentimes cases involve more than one drug, as such the "instances" total for a given time period will far outnumber the "prosecutions".
DATA PREPARATION	SQL code is used to draw information from the DA Office's system. The main functions of the code are to isolate the drug related prosecutions out of total prosecutions (and within a certain time frame), pull relevant information about the case (ie, about the defendant, charges, and location of arrest), and indicate which drug(s) were involved. Drug related prosecutions are isolated by using the specific penal charges for narcotic drugs and controlled substances. To identify which drugs are involved, the complaint language is searched for key drug terms, including common misspellings of these terms. Records (prosecutions) are then labeled as including or absent the identified drug type(s). Code output is transferred to a relational table (e.g., Excel). Records which have not been classified with a drug type through this process are manually coded by individually looking up the case on the DA Office's system and attempting to ascertain the drugs involved. If new misspellings for a particular narcotic drug or controlled substance are thereby discovered these are recorded and utilized in future searches to reduce the need for hand recoding. The cases are only hand recoded if no drug is classified, so there is a margin of error as in a case where there are controlled substances or narcotic drugs that are misspelled but not with a known misspelling and other controlled substances or narcotic drugs are also present and spelled correctly. In such cases, the DA Office will not know to hand recode those cases and instances of drugs will be missed. For sending the data out of the DA's office, records are anonymized and de-identified, by removing docket information, screening date and outcome, bureau of case, case status, sentence type, individual identifiers of defendant(e.g., name, arrest ID, date of birth, defendant address), and the text of the complaint language.

ANALYSIS PLAN FOR RXSTAT	RxStat indicators: Narcotic drug and controlled substance prosecutions by drug type, as a proportion of all narcotic drug and controlled substance prosecutions, during the period of interest by borough. If the prosecutions data is displayed visually, one must take caution to specify if the data displayed is by prosecution or by instance. This is due to the fact that many cases involve more than one drug type hence the instances will outnumber the number of prosecutions. Most commonly, RxStat utilizes the graphs or charts that reflect the number of instances of each drug type out of total number of incidences of all drugs. Additionally, (where relevant) prosecutions by age, neighborhood, felonies versus misdemeanors, location of residence as compared to location of arrest, etc. can be analyzed.

Case selection code varies by prosecutor's office.

c. Pharmacy/clinic/doctor's office burglaries and robberies

NAME	Burglaries and robberies at pharmacies and clinics/doctor's offices where the intent is to obtain controlled prescription drugs.
AGENCY OWNER	Police department (PD).
ACCESS	Provided through PD participation in RxStat.
DRUGS INCLUDED	Any controlled substance reported as stolen or missing as a result of the robbery or burglary. See Data notes below.
HOW CONTENT IS PRODUCED	Any reported burglary or robbery of a pharmacy or clinic or doctor's office location (as recorded by PD).
DATA REQUEST FOR RXSTAT	RxStat receives data from PD as it is produced and prepared for monthly work group meetings. Data is organized per event. Data elements per event include: (1) date; (2) type of location – pharmacy or clinic/doctor's office; (3) geographic location; (4) mode of entry; (5) drugs – substances taken (types, strength); # pills taken (if available); (6) arrest made.
POTENTIAL LAG-TIME	Up to one month.
DATA NOTES AND CAVEATS	a. Definitions – "burglary" represents entry to premises when no one is there, and "robbery" represents on-premises demand for medication from an employee. b. Definitions (New York City) – "attempted burglary" represents an attempt to enter premises without success. If a perpetrator successfully enters the premises, even if not successful in obtaining controlled prescription drugs, the event is not indicated as attempted. c. In the events where nothing was stolen, it is presumed that the intent was to access controlled substance medications (and thus included in the counts), unless the intent was clearly to obtain other items such as cash or cigarettes.
DATA PREPARATION	Data are quantified and detailed by PD.
ANALYSIS PLAN FOR RXSTAT	RxStat indicators: Number of burglaries and robberies of pharmacies and clinics/ doctor's offices in each county during the period of interest. Number of pills taken from burglaries and robberies during specific time period and location, reported by drug type (if available).

d. Loss or theft of controlled substance medications

NAME	DEA-106 loss/theft report.
AGENCY OWNER	Drug Enforcement Administration (DEA).
ACCESS	A law enforcement agency must make the request to the DEA for DEA-106 data. In NYC, NY/NJ HIDTA requested the data report from the local DEA office (which participates in RxStat).
DRUGS INCLUDED	Any prescribed medication defined as a controlled substance.
HOW CONTENT IS PRODUCED	Report is filed to DEA by any entity with a DEA #, including pharmacy, distributor, and manufacturer, within 24 hours of the time of an event involving the loss or theft of controlled prescription medication.
DATA REQUEST FOR RXSTAT	RxStat receives data from DEA on a calendar quarterly basis for losses reported by pharmacies, manufacturers, or distributors. Data reports on location of pharmacy, manufacturer, or distributor, drug type, medication dosage, and quantity missing.
POTENTIAL LAG-TIME	Up to one month.
DATA NOTES AND CAVEATS	a. Reports on losses incurred which are categorized as: armed robbery, customer theft, employee pilferage, lost in transit, night break-in, or other.
DATA PREPARATION	N/A
ANALYSIS PLAN FOR RXSTAT	Drug types are any controlled substance, and include: Codeine, Fentanyl, Hydrocodone, Hydromorphone, Meperidine, Methadone, Oxycodone, Oxymorphone, and Pentazocine. RxStat indicators: Number of incidents by incident type, by county. Number of pills by drug type or incident type, by county.

e. Medicaid coverage of local residents for prescribed controlled substance medications

NAME	Medicaid-covered prescriptions to residents for controlled substance medications.
AGENCY OWNER	Local department of social services (DSS) or human services.
ACCESS	Provided by local DSS office participating in RxStat.
DRUGS INCLUDED	Any prescribed medication defined as a controlled substance.
HOW CONTENT IS PRODUCED	Report is produced by DSS, based on prescriptions covered by Medicaid to local residents for controlled substance medications.
DATA REQUEST FOR RXSTAT	RxStat receives data produced and prepared by DSS on a quarterly basis. Data is presented at three levels: 1. Recipients – per zip code, NDC # and name, average days duration prescription, average recipient age, county, # transactions, # unique recipients, total dosage units per NDC #, average number of refills. 2. Pharmacy providers – per zip code, NDC # and name, total dosage units, average days supply, average # refills, average recipient age, county, # transactions, # unique pharmacies. 3. Clinician prescribers – per zip code, NDC # and name, total dosage units, average days supply, average # refills, average recipient age, county, # transactions, # unique prescribers.
POTENTIAL LAG-TIME	Up to one calendar quarter, based on Medicaid billing cycles and subsequent data cleaning needs.
DATA NOTES AND CAVEATS	1. Captures information on prescriptions filled only. 2. Captures information on prescriptions to Medicaid beneficiaries and which were covered by Medicaid, requiring rate calculations that present this information as a proportion of the total number of Medicaid beneficiaries in that area (eg, per zip code).
DATA PREPARATION	Information is initially prepared by DSS in tables for each level of data, as described above. Group NDC # by drug type (eg, oxycodone) and calculate total dosage units, average number of refills, average duration of prescription – per zip code.
ANALYSIS PLAN FOR RXSTAT	RxStat indicators: Rate of drug type total dosage units per zip code Average # of refills, average duration of prescription, per zip code

III. SURVEY DATA

a. Youth drug use behaviors

NAME	Youth Risk Behavior Surveillance System (YRBSS).
AGENCY OWNER	Centers for Disease Control (CDC) via state health department.
ACCESS	Through CDC online query system, or through specific reports produced by state health department. Information is available at: http://www.cdc.gov/HealthyYouth/yrbs/index.htm?s_cid=tw_cdc16
DRUGS INCLUDED	Marijuana, cocaine, inhalants, heroin, methamphetamine, ecstasy, prescription pain medications (opioids), other prescription drugs (including benzodiazepines).
HOW CONTENT IS PRODUCED	Survey is administered to a representative sample of anonymous public high school students in the state, in the classroom, on a biannual basis. Data is compiled and cleaned by state health department, and submitted to the CDC for analysis and reporting.
DATA REQUEST FOR RXSTAT	Reports on drug type distribution by demographics and geography (where feasible).
POTENTIAL LAG-TIME	Survey is administered biannually; data is available for analysis and reporting 6 months after the calendar year reporting.
DATA NOTES AND CAVEATS	a. YRBS is a state-wide survey. As a result, data is not representative for regions of the state, only for the state as a whole. b. NYC is the only local jurisdiction administering its own YRBS; data is available by borough.
DATA PREPARATION	N/A
ANALYSIS PLAN FOR RXSTAT	For examples see: http://www.cdc.gov/HealthyYouth/yrbs/index.htm?s_cid=tw_cdc16

b. Adult drug use behaviors

NAME	National Survey on Drug Use and Health (NSDUH).
AGENCY OWNER	Substance Abuse and Mental Health Services Administration (SAMHSA).
ACCESS	Through SAMHSA reports produced for state-level data, or individual queries for analyses of large municipalities. For further information see: http://www.samhsa.gov/data/NSDUH.aspx
DRUGS INCLUDED	Marijuana, cocaine, heroin, hallucinogens, inhalants, psychotherapeutics (including sub-categories for pain relievers, tranquilizers, stimulants, sedatives).
HOW CONTENT IS PRODUCED	Survey is administered to a representative sample of adults (age 12 years and older) in the state, in person and anonymously, using computer-assisted survey software to preserve the confidentiality of responses.
DATA REQUEST FOR RXSTAT	Reports on drug type distribution by demographics.
POTENTIAL LAG-TIME	Survey is administered annually; data reports are available up to one year after the calendar year reporting.
DATA NOTES AND CAVEATS	a. Annual NSDUH data is geographically representative at the state level only. b. For large municipalities, it may be possible to achieve sufficient power in the data at the local level by combining multiple years of data.
DATA PREPARATION	N/A
ANALYSIS PLAN FOR RXSTAT	For examples see: http://www.samhsa.gov/data/NSDUH.aspx

c. Arrestee drug use detection

NAME	Arrestee Drug Abuse Monitoring (ADAM) program.
AGENCY OWNER	National Institute of Justice (NIJ).
ACCESS	Through specific information query to NIJ or from report produced; see: http://www.whitehouse.gov/sites/default/files/ondcp/policy-and-research/adam_ii_2012_annual_rpt_final_final.pdf.
DRUGS INCLUDED	Marijuana, cocaine, heroin and other opiates, methamphetamine, other drugs.
HOW CONTENT IS PRODUCED	Survey is administered at selected courts in selected large cities during selected years, to all arrestees who are admitted to that court. Participation is voluntary and involves self-reported drug use data and urinalysis monitoring.
DATA REQUEST FOR RXSTAT	Reports on drug type distribution by demographics.
POTENTIAL LAG-TIME	Survey is administered annually; data is available for analysis and reporting 6 months after the calendar year reporting.
DATA NOTES AND CAVEATS	a. This dataset is not used in RxStat b. In 2012, survey was administered in Atlanta, Chicago, Denver, New York, Sacramento, Washington D.C.
DATA PREPARATION	N/A
ANALYSIS PLAN FOR RXSTAT	N/A

d. Emergency room admissions with drug mentions

NAME	Drug Abuse Warning Network (DAWN)*
AGENCY OWNER	Substance Abuse and Mental Health Services Administration (SAMHSA).
ACCESS	Through information queries to SAMHSA, and from reports produced by the program, see: http://www.samhsa.gov/data/DAWN.aspx
DRUGS INCLUDED	Illicit drugs and prescription drugs.
HOW CONTENT IS PRODUCED	General, non-federal, short-stay hospitals in 12 metropolitan areas were invited to participate. For those hospitals responding to the invitation, a trained reporter was stationed at the institution to conduct retrospective data collection of all emergency department (ED) medical records and note "drug mentions" related to drug abuse or misuse, via a standard abstraction protocol.
DATA REQUEST FOR RXSTAT	Reports on drug type distribution by demographics.
POTENTIAL LAG-TIME	Data abstraction and analysis is conducted annually; data is available for analysis and reporting one year after the calendar year reporting.
DATA NOTES AND CAVEATS	a. This dataset is not used in RxStat b. *Last year of reporting was 2011. Program has since been discontinued
DATA PREPARATION	N/A
ANALYSIS PLAN FOR RXSTAT	N/A

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FAX (804) 371-8595

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Roanoke, Virginia 24019
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COMMONWEALTH of VIRGINIA

Department of Health

Office of the Chief Medical Examiner
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April 29, 2014

MEMORANDUM

TO: David Trump, MD, MPH, Acting Deputy Commissioner, Public Health and Preparedness

FROM: William T. Gormley, MD, Chief Medical Examiner William T Gormley

SUBJECT: Accidental Poisoning Deaths in Virginia

Recently, I convened a meeting to begin a strategic planning process for the Office of the Chief Medical Examiner (OCME). At the meeting, representatives from law enforcement, Commonwealth's Attorneys, and the Board of Pharmacy mentioned a problematic gap in the data being gathered and distributed by this Office. In particular, they discussed how important accurate and timely information about poisoning deaths are to responding to the growing drug overdose problem in the state, noting that our annual reports of these data trends were published "too late" to assist in responding in a timely way to the problem.

We have discussed this problem among OCME staff, and fully recognize the importance of responding to this problem. The CDC recently identified overdose poisoning deaths as among the top five public health threats in the United States. "Drug overdose rates in the United States have more than tripled since 1990 and have never been higher. In 2008, more than 36,000 people died from drug overdoses, and most of these deaths were caused by prescription drugs."[1] In Virginia, we know that these deaths have also been increasing and represent a significant change in our caseloads. See Tables 1 and 2 below, and note in particular the steady increase in accidental drug overdoses. These poisoning deaths include use of prescription drugs by those to whom it was prescribed and those who have no prescription; use of prescription drugs such as fenantyl and oxycodone that are bought and sold illegally on a black market; use of illegal substances such as cocaine and heroin; and deaths from carbon monoxide poisonings from fires. With regard to manner of death, these involve accidental deaths, as well as suicides, homicides, and undetermined deaths.

[1]See overview of problem at: http://www.cdc.gov/homeandrecreationalsafety/rxbrief/ and at http://www.cdc.gov/media/dpk/2013/dpk-2013-review.html#Ia.

Current Capacities

The OCME's information system, the Virginia Medical Examiner Data System (V-MEDS), was designed to capture the flow of the OCME business and the elements of our statutory responsibility. As a result, V-MEDS screens and data elements collect the following information:

- Cause and manner of death
- Death investigation information in narrative form
- Toxicological findings submitted by the Department of Forensic Sciences
- Payment for transport of dead bodies
- Payment for investigations by medical examiners
- Logs of records requested and released
- Logs monitoring the intake and release of dead bodies and other evidence into the OCME facilities
- Basic health and medical information on cases reported to the OCME but determined not to be an OCME case

What V-MEDS does not capture are the nuances of a death scene investigation in quantitative form that would permit the wedding of circumstance information with cause and manner of death and toxicological findings. This would include measures such as the following:

- Precise drugs and drug related evidence found at scene
- Toxicological findings of the decedent, including all tested substances and results
- Information about whether the drug was obtained through prescription or illegally
- Information about whether the drug was prescribed to decedent as documented in the Prescription Monitoring Program or in a medical record

In essence, because the OCME has the capacity to grow and develop its current operations to accommodate this surveillance need in Virginia, OCME staff has identified a short and a long term solution to this gap. This memorandum outlines both of these strategies, as well as the costs associated with each.

A Short Term Fix

Virginia is one of 18 states participating in the National Violent Death Reporting System (NVDRS), which is funded, owned, and operated by the Centers for Disease Control and Prevention. In Virginia, that system is called the Virginia Violent Death Reporting System (VVDRS). VVDRS is abstracting its 12th year of death data. Currently, the VVDRS captures information on all of the following deaths occurring within Virginia's border: suicides, homicides, unintentional firearm deaths, legal interventions, terrorist deaths, and undetermined deaths with a clear cause of death and/or suspicion of a violent death. In addition, the VVDRS draws data from the medical examiner/coroner reports, law enforcement records, the death certificate, and reports from crime labs such as toxicological findings. The CDC provides a comprehensive coding manual to assure consistent coding of data across states, and requires a quality assurance process within states to assure inter-coder reliability.

With regard to poisoning deaths, the VVDRS captures the following information:

- Each drug or compound identified through toxicological studies, provided as part of a class of drugs and by drug name

- Whether or not the drug contributed to death
- Whether the drug was prescribed to the decedent or someone else
- Circumstances or risk factors surrounding the death, including problems attributed to mental health treatment, physical health, criminal or civil legal issues, and intimate partner relationships.
- Demographic characteristics of decedents, include city/county of residence, veteran status, and occupation

Notably, the VVDRS does not currently capture poisoning deaths attributed to unintentional or accidental manners and circumstances. But it could. The NVDRS web-based application allows states to abstract any death case into the system, requiring only that the state endorse it as "Not an NVDRS Case." All of the relevant NVDRS variables and software capabilities are then made available to the state for use.

This would be my recommendation for a short term fix: launch an VVDRS add-on surveillance system immediately to respond to the need for quality public health data for key stakeholders, notably law enforcement and pharmacists, about fatal poisoning deaths. By adding accidental poisoning deaths to the cases already captured in the VVDRS system, information about all poisoning deaths would be available through the VVDRS application. Because the OCME's 2012 report has already been completed, I propose that we would begin case entry where date of death was January 1, 2014 or later.

This short term solution would cost $181,929 for a 24 month project. See the proposed budget for this effort in Appendix A. We are asking for two years of funding under the short term solution, which will provide information about poisoning/drug overdose deaths while helping us to accomplish the long term solution, which is described below.

The Long Term Fix

In the long term, the OCME wants to integrate comprehensive surveillance of poisoning deaths into the current V-MEDs system. This would involve the following:

- Convening a work group to determine the data collection, functionality, and specifications of the enhanced V-MEDS toxicology system
- Upgrading V-MEDS to the 2012 VertiQ Software and then making changes to that system using input from the work group
- Preparing a coding manual to assure consistency in data entry across the four OCME District Offices.
- Establishing a data quality assurance process between and among OCME district offices

In conversations with Mr. Batten, Information Technology Manager for the OCME, a two year time frame for accomplishing this work, with a new V-MEDS capability fully functional, is feasible by June 30, 2016.

Table 1: Accidental Poisoning Deaths in Virginia by Year and OCME District, 2011-2013

OCME District Office	2011	2012	2013	Three year average
Central	152	151	195	166
Northern	138	136	157	144
Tidewater	117	105	179	134
Western	239	225	213	226
Total	**646**	**617**	**744**	**669**

Source: Virginia Medical Examiner Data System, Office of the Chief Medical Examiner, Virginia Department of Health

Table 2: Non-Accidental Poisoning Deaths in Virginia by Year and OCME District, 2011-2013

OCME District Office	2011	2012	2013	Three year average
Central	35	35	40	37
Northern	65	72	62	66
Tidewater	38	34	33	35
Western	35	41	33	36
Total	**173**	**182**	**168**	**174**
For all three years combined, 83.7% of non-accidental poisons are suicides, 15.9% are undetermined, and 0.4% are homicides.				

Source: Virginia Violent Death Reporting System, Office of the Chief Medical Examiner, Virginia Department of Health

Analysis of Emergency Department Drug Overdose Visits
Virginia, 2012-2014

Virginia Department of Health (VDH) conducts enhanced disease surveillance using patient visit data gathered from emergency departments and urgent care centers in near-real time for the detection of events of public health importance. There has been recent interest at both the national and state levels in describing the morbidity and mortality related to unintentional drug overdoses with the goal of developing and implementing appropriate prevention strategies. The Centers for Disease Control and Prevention noted that "deaths from drug overdose have been rising steadily over the past two decades and have become the leading cause of injury death in the United States."[1]

VDH analyzed chief complaints of emergency department (ED) visits to characterize the burden of unintentional drug overdoses across Virginia from 2012 to 2014*. Visits for unintentional drug overdoses were identified based on the following chief complaint terms:

Inclusion terms: overdose, OD, O/D, intoxication, substance abuse
Exclusions terms: suicide, suicidal, intentional, alcohol

Locality-specific rates of unintentional drug overdose visits were calculated per 100,000 population in order to describe geographic distribution of the issue across the Commonwealth. Locality was based on zip code of patient residence. In cases where a zip code spans across multiple localities, the patient visit was assigned to the locality where the majority of the population resides.

Data categories, shown in the map legend, were generated using approximate natural breaks for each year's county rates. The natural breaks were modified to span the three year average state rate of 90 visits per 100,000 population for 2012 to 2014 and applied to each map. The choice was made to use six categories in order to display regions without data resulting from lack of participating ED and regions of high outliers.

* Annual rates were calculated utilizing that year's population estimate, available through the U.S. Census https://www.census.gov/popest. The 2014 locality rates were calculated based on 2013 U.S. Census population estimates.

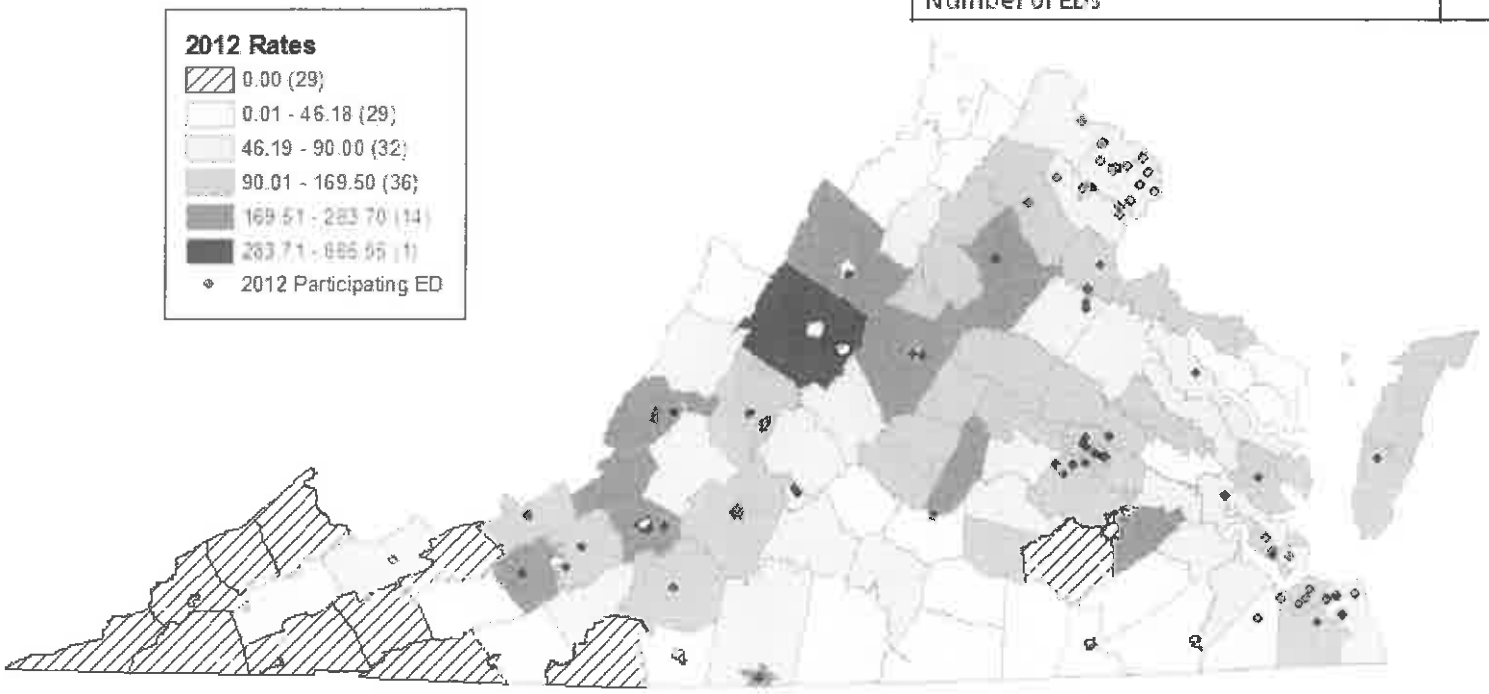
For any questions regarding the data or methodology, please contact the Amanda Wahnich, Enhanced Surveillance Analyst with the Office of Epidemiology, at amanda.wahnich@vdh.virginia.gov or (804) 864-7760.

[1]Centers for Disease Control and Prevention. Wide-ranging OnLine Data for Epidemiologic Research (WONDER) [online]. (2014) Available from URL: http://wonder.cdc.gov/mortsql.html.

VDH VIRGINIA DEPARTMENT OF HEALTH

Emergency Department (ED) Visits with Chief Complaint Indicating Unintentional Drug Overdose, Rate per 100,000 Population, Virginia, 2012

	2012
Number of unintentional overdose visits	7,305
Total ED visits	2,407,608
Virginia Population Census 2012 Estimate	8,186,628
Statewide unintentional overdose visit rate per 100,000 population	89
Number of EDs	71



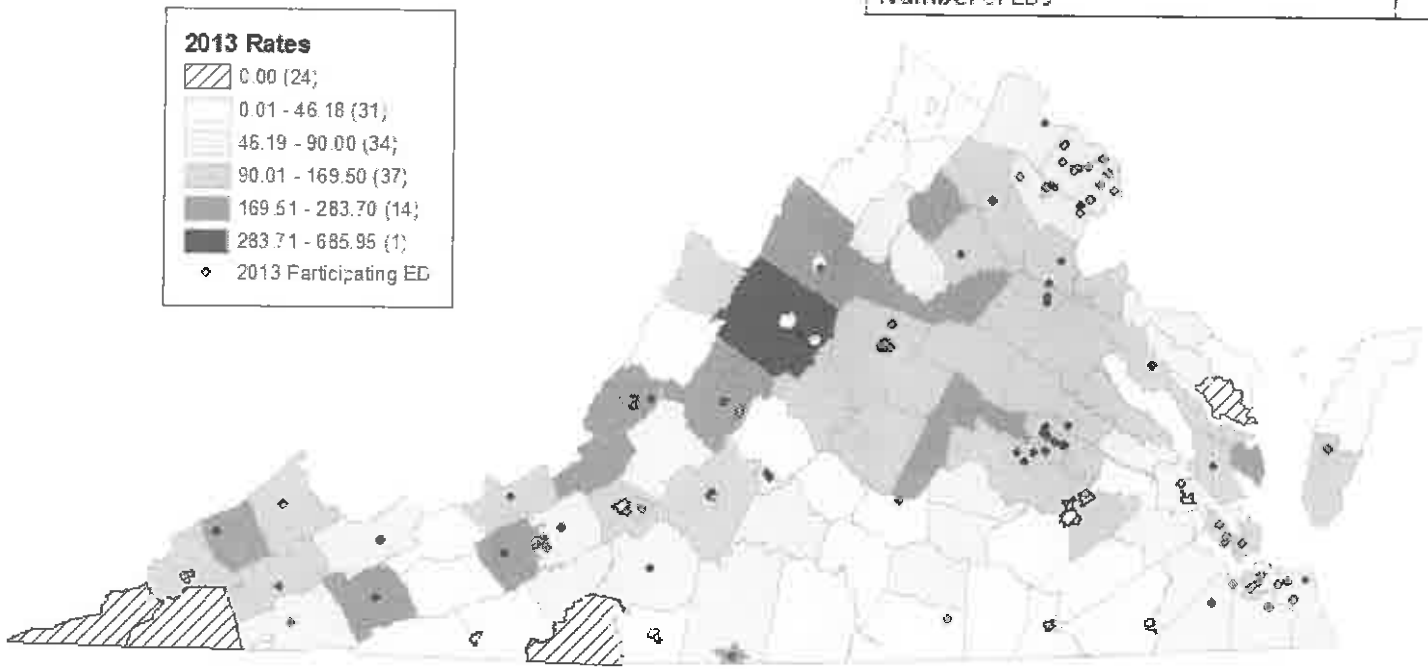
Data represents ED visits from 2012 calendar year based on zip code of patient residence. Annualized rates calculated using 2012 U.S. Census

Source: VDH Enhanced Surveillance Data
Report Generated: February 11, 2015

VDH VIRGINIA DEPARTMENT OF HEALTH

Emergency Department (ED) Visits with Chief Complaint Indicating Unintentional Drug Overdose, Rate per 100,000 Population, Virginia, 2013

2013	
Number of unintentional overdose visits	7,154
Total ED visits	2,422,911
Virginia Population Census 2013 Estimate	8,260,405
Statewide unintentional overdose visit rate per 100,000 population	87
Number of EDs	80



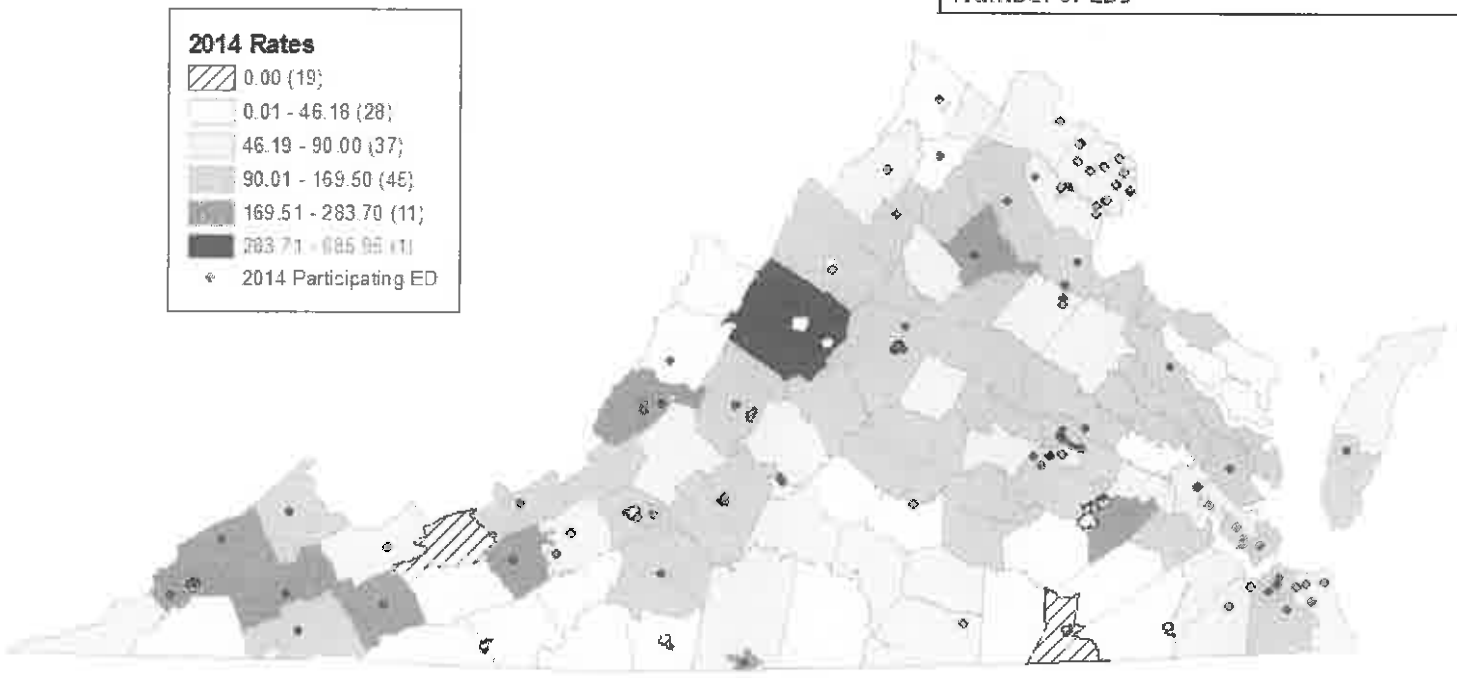
Data represents ED visits from 2013 calendar year based on zip code of patient residence. Annualized rates calculated using 2013 U.S. Census

Source: VDH Enhanced Surveillance Data
Report Generated: February 11, 2015

VDH VIRGINIA DEPARTMENT OF HEALTH

Emergency Department (ED) Visits with Chief Complaint Indicating Unintentional Drug Overdose, Rate per 100,000 Population, Virginia, 2014

2014	
Number of unintentional overdose visits	7,754
Total ED visits	2,588,148
Virginia Population Census 2013 Estimate	3,260,405
Statewide unintentional overdose visit rate per 100,000 population	94
Number of EDs	39



Data represents ED visits from 2014 calendar year based on zip code of patient residence. Annualized rates calculated using 2013 U.S. Census

Source: VDH Enhanced Surveillance Data
Report Generated: February 11, 2015

VDH VIRGINIA DEPARTMENT OF HEALTH

Rates of Unintentional Drug Overdose Visits to Emergency Departments by Locality, Rate per 100,000 Population, 2012-2014

County	FIPS	2013 Population	2012 Rates	2013 Rates	2014 Rates
Accomack County, Virginia	51001	33,148	102	45	72
Albemarle County, Virginia	51003	103,000	183	127	91
Alexandria City, Virginia	51510	148,892	63	54	86
Alleghany County, Virginia	51005	16,161	210	272	198
Amelia County, Virginia	51007	12,745	71	86	118
Amherst County, Virginia	51009	32,178	89	44	50
Appomattox County, Virginia	51011	15,255	13	39	39
Arlington County, Virginia	51013	224,906	69	63	53
Augusta County, Virginia	51015	73,912	436	513	686
Bath County, Virginia	51017	4,616	64	22	43
Bedford City, Virginia	51515	5,948	0	0	0
Bedford County, Virginia	51019	69,825	147	169	132
Bland County, Virginia	51021	6,735	0	15	0
Botetourt County, Virginia	51023	33,002	57	67	48
Bristol City, Virginia	51520	17,341	0	17	40
Brunswick County, Virginia	51025	16,973	6	6	41
Buchanan County, Virginia	51027	23,597	0	136	136
Buckingham County, Virginia	51029	17,136	129	99	117
Buena Vista City, Virginia	51530	6,680	0	0	0
Campbell County, Virginia	51031	55,235	58	51	81
Caroline County, Virginia	51033	29,298	86	99	79
Carroll County, Virginia	51035	29,883	7	3	3
Charles City County, Virginia	51036	7,130	84	14	56
Charlotte County, Virginia	51037	12,305	56	24	49
Charlottesville City, Virginia	51540	44,349	7	0	0
Chesapeake City, Virginia	51550	230,571	115	88	98
Chesterfield County, Virginia	51041	327,745	104	95	104
Clarke County, Virginia	51043	14,348	14	42	63
Colonial Heights City, Virginia	51570	17,634	0	0	0
Covington City, Virginia	51580	5,818	0	0	0
Craig County, Virginia	51045	5,210	191	192	115
Culpeper County, Virginia	51047	48,506	190	144	210
Cumberland County, Virginia	51049	9,841	183	234	163
Danville City, Virginia	51590	42,907	228	233	186

*Data represents ED visits from January 1, 2012 through December 31, 2014 by zip code of patient residence. A 2014 annualized rate was calculated using 2013 U.S. Census population estimates.

Source: VDH Enhanced Surveillance Data
Reported Generated: February 11, 2015

VDH VIRGINIA DEPARTMENT OF HEALTH

Rates of Unintentional Drug Overdose Visits to Emergency Departments by Locality, Rate per 100,000 Population, 2012-2014, cont.

County	FIPS	2013 Population	2012 Rates	2013 Rates	2014 Rates
Dickenson County, Virginia	51051	15,486	0	181	220
Dinwiddie County, Virginia	51053	27,904	0	25	22
Emporia City, Virginia	51595	5,588	0	0	0
Essex County, Virginia	51057	11,229	71	107	116
Fairfax City, Virginia	51600	23,973	0	0	4
Fairfax County, Virginia	51059	1,130,924	85	76	83
Falls Church City, Virginia	51610	13,508	129	118	96
Fauquier County, Virginia	51061	67,207	126	152	138
Floyd County, Virginia	51063	15,528	84	77	45
Fluvanna County, Virginia	51065	25,977	127	127	46
Franklin City, Virginia	51620	8,638	0	0	0
Franklin County, Virginia	51067	56,335	121	89	101
Frederick County, Virginia	51069	81,319	2	2	43
Fredericksburg City, Virginia	51630	28,132	175	167	185
Galax City, Virginia	51640	7,035	0	0	0
Giles County, Virginia	51071	16,925	147	112	106
Gloucester County, Virginia	51073	36,834	141	141	149
Goochland County, Virginia	51075	21,626	150	250	157
Grayson County, Virginia	51077	15,161	0	13	26
Greene County, Virginia	51079	18,804	128	197	96
Greensville County, Virginia	51081	11,886	8	25	0
Halifax County, Virginia	51083	35,401	8	14	14
Hampton City, Virginia	51650	136,699	61	91	93
Hanover County, Virginia	51085	101,330	123	108	120
Harrisonburg City, Virginia	51660	51,395	8	18	6
Henrico County, Virginia	51087	318,611	114	123	125
Henry County, Virginia	51089	52,617	21	13	8
Highland County, Virginia	51091	2,215	45	135	45
Hopewell City, Virginia	51670	22,163	0	0	0
Isle of Wight County, Virginia	51093	35,656	82	73	70
James City County, Virginia	51095	70,516	65	50	78
King and Queen County, Virginia	51097	7,130	85	28	112
King George County, Virginia	51099	24,926	122	120	168
King William County, Virginia	51101	16,097	132	99	93
Lancaster County, Virginia	51103	11,148	18	0	27
Lee County, Virginia	51105	25,185	0	0	71
Lexington City, Virginia	51678	7,170	0	0	0

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Report Generated: February 11, 2015

VDH VIRGINIA DEPARTMENT OF HEALTH

Rates of Unintentional Drug Overdose Visits to Emergency Departments by Locality, Rate per 100,000 Population, 2012-2014, cont.

County	FIPS	2013 Population	2012 Rates	2013 Rates	2014 Rates
Loudoun County, Virginia	51107	349,679	85	88	85
Louisa County, Virginia	51109	33,945	149	130	138
Lunenburg County, Virginia	51111	12,527	32	88	88
Lynchburg City, Virginia	51680	78,014	69	74	85
Madison County, Virginia	51113	13,200	114	61	76
Manassas City, Virginia	51683	41,705	118	72	94
Manassas Park City, Virginia	51685	16,149	0	0	0
Martinsville City, Virginia	51690	13,755	0	0	0
Mathews County, Virginia	51115	8,897	112	180	146
Mecklenburg County, Virginia	51117	31,426	6	32	73
Middlesex County, Virginia	51119	10,762	46	102	112
Montgomery County, Virginia	51121	96,207	90	77	71
Nelson County, Virginia	51125	14,789	81	108	95
New Kent County, Virginia	51127	19,507	26	67	46
Newport News City, Virginia	51700	182,020	117	112	135
Norfolk City, Virginia	51710	246,139	119	85	91
Northampton County, Virginia	51131	12,125	106	115	132
Northumberland County, Virginia	51133	12,200	41	8	33
Norton City, Virginia	51720	4,017	0	0	0
Nottoway County, Virginia	51135	15,773	94	82	146
Orange County, Virginia	51137	34,689	170	199	153
Page County, Virginia	51139	23,821	63	71	101
Patrick County, Virginia	51141	18,368	0	0	16
Petersburg City, Virginia	51730	32,538	0	0	0
Pittsylvania County, Virginia	51143	62,426	72	53	61
Poquoson City, Virginia	51735	12,104	132	99	132
Portsmouth City, Virginia	51740	96,205	146	93	96
Powhatan County, Virginia	51145	28,259	89	92	74
Prince Edward County, Virginia	51147	22,802	22	31	26
Prince George County, Virginia	51149	37,253	176	145	201
Prince William County, Virginia	51153	438,580	59	48	63
Pulaski County, Virginia	51155	34,507	245	232	217
Radford City, Virginia	51750	17,184	12	0	17
Rappahannock County, Virginia	51157	7,478	134	201	107
Richmond City, Virginia	51760	214,114	104	93	88
Richmond County, Virginia	51159	8,953	44	67	22
Roanoke City, Virginia	51770	98,465	177	166	143

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VDH VIRGINIA DEPARTMENT OF HEALTH

Rates of Unintentional Drug Overdose Visits to Emergency Departments by Locality, Rate per 100,000 Population, 2012-2014, cont.

County	FIPS	2013 Population	2012 Rates	2013 Rates	2014 Rates
Roanoke County, Virginia	51161	93,524	175	148	155
Rockbridge County, Virginia	51163	22,307	165	179	139
Rockingham County, Virginia	51165	77,741	234	201	165
Russell County, Virginia	51167	28,264	7	142	219
Salem City, Virginia	51775	25,299	0	0	0
Scott County, Virginia	51169	22,640	0	0	13
Shenandoah County, Virginia	51171	42,684	21	30	75
Smyth County, Virginia	51173	31,652	0	202	240
Southampton County, Virginia	51175	18,128	27	33	33
Spotsylvania County, Virginia	51177	127,348	89	109	84
Stafford County, Virginia	51179	136,788	112	94	129
Staunton City, Virginia	51790	24,350	17	8	16
Suffolk City, Virginia	51800	85,728	45	54	50
Surry County, Virginia	51181	6,765	88	59	133
Sussex County, Virginia	51183	11,810	25	8	25
Tazewell County, Virginia	51185	44,103	52	50	57
Virginia Beach City, Virginia	51810	448,479	67	62	62
Warren County, Virginia	51187	38,699	16	8	41
Washington County, Virginia	51191	54,907	0	78	122
Waynesboro City, Virginia	51820	21,263	0	0	0
Westmoreland County, Virginia	51193	17,612	91	85	114
Williamsburg City, Virginia	51830	15,206	13	0	7
Winchester City, Virginia	51840	27,216	7	7	85
Wise County, Virginia	51195	40,589	0	123	266
Wythe County, Virginia	51197	29,344	7	14	37
York County, Virginia	51199	66,269	56	56	66
STATE		8,260,405	89	87	93

*Data represents ED visits from January 1, 2012 through December 31, 2014 by zip code of patient residence. A 2014 annualized rate was calculated using 2013 U.S. Census population estimates.

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