PBSS Prescription Behavior
Surveillance System
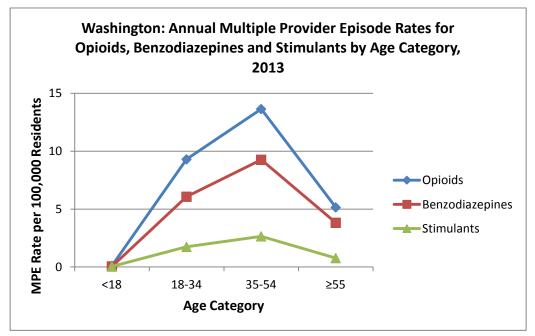Brandeis University, Waltham, MA
May 2015

Washington State Department of
Health

PBSS Data Brief

Patient Risk Measures for Controlled Substance Prescriptions in Washington, 2013

Summary: In 2013, the drug overdose death rate in Washington was 13.4 deaths per 100,000 residents and prescription opioid pain relievers accounted for at least 437 (45%) of the 969 drug overdose deaths.[1] Washington Prescription Monitoring Program data from 2013 were used to examine several patient risk indicators of potential prescription drug misuse, abuse or overdose. First, in 2013, the annual rate of multiple provider episodes (a measure of patients visiting multiple providers above a threshold)[2] for Schedule II – IV controlled substances was 7.3 per 100,000 residents. The rate varied by age group and major class of prescription controlled substances (Figure 1). Second, 2013 annual percentages of days with overlapping prescriptions were highest for opioid – opioid combinations and lowest, but still sizeable, for benzodiazepine – benzodiazepine combinations (Figure 2). Third, annual mean daily dosages of opioids greater than 100 morphine milligram equivalents (MMEs or morphine equivalent dose, MED), a dosage level that can put patients at significant risk of overdose, was observed for 9.4% of prescriptions and for eight opioids. Prescriptions for five opioids had a mean daily dosage greater than 120 MMEs (MEDs), the "yellow flag" consultation threshold in Washington.[3] These findings may provide practitioners with additional patient risk indicators to consider when reviewing Prescription Monitoring Program records, namely, use of multiple providers, overlapping prescriptions and mean daily dosages over 100 MMEs.

Figure 1. In 2013, annual multiple provider episode (MPE) rates[2] were highest for the 35 to 54 age group for opioids, benzodiazepines and stimulants. In addition, MPE rates were highest for opioids and lowest for stimulants across all age groups 18 years old and older. The overall annual MPE rate in 2013 for all controlled substances in Schedules II – IV was 7.3 per 100,000 residents (data not shown).
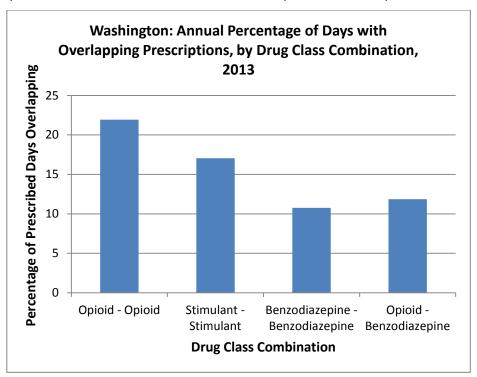

Washington's PMP

Washington's Prescription Monitoring Program, housed in the State Department of Health, is one of 11 PDMPs currently participating in PBSS. For further information, please visit http://www.doh.wa.gov/pmp
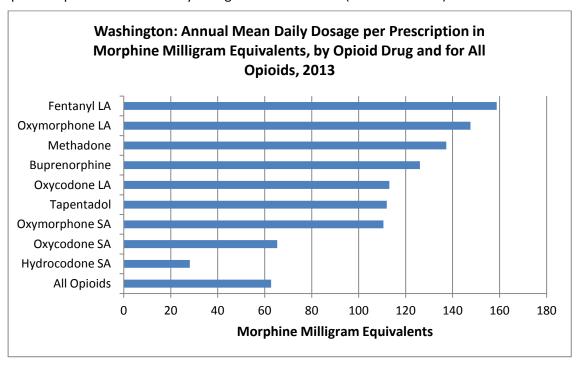
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Figure 2. The annual percentage of days with overlapping prescriptions[4] in a drug class in 2013 was highest for opioid–opioid combinations and lowest for benzodiazepine–benzodiazepine combinations.

Washington: Annual Percentage of Days with Overlapping Prescriptions, by Drug Class Combination, 2013

About PBSS

The Prescription Behavior Surveillance System (PBSS) provides epidemiological analyses of de-identified data from state prescription drug monitoring programs to help target and evaluate interventions aimed at reducing prescription drug abuse and diversion. For further information, see the PBSS webpage at http://www.pdmpexcellence.org.

Figure 3. In 2013, annual mean daily dosage per prescription for eight (seven of which are shown)[5] of the 17 most prescribed opioids exceeded 100 morphine milligram equivalents (MMEs, or morphine equivalent doses, MEDs)[6] and those for five opioids (four of which are shown)[5] exceeded 120 MMEs (or MEDs). Data for nine opioids are shown, including for comparison hydrocodone SA and oxycodone SA, the most prescribed opioids in Washington. Annual mean daily dosage per prescription for all opioids was 62.8 MMEs (or MEDs) and 9.4% of prescriptions represented mean daily dosages over 100 MMEs (data not shown).

Washington: Annual Mean Daily Dosage per Prescription in Morphine Milligram Equivalents, by Opioid Drug and for All Opioids, 2013

PBSS Data Brief: Patient Risk Measures for Controlled Substance Prescriptions in Washington, 2013

This Data Brief is a joint publication of PBSS, Brandeis University and the Washington PMP, Washington State Department of Health. It can be accessed online at www.pdmpexcellence.org.

Endnotes

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[1] Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2013 on CDC WONDER Online Database, released 2015. Accessed at http://wonder.cdc.gov/mcdicd10.html on Apr 6, 2015.

[2] A multiple provider episode is defined for this report as use of 5 or more prescribers and 5 or more pharmacies within 3 months. Rates are calculated by drug class for those receiving a prescription in the drug class and are averaged over 4 quarters to obtain an annual rate. Note that the threshold used here was assigned by PBSS for the purpose of obtaining population estimates only and any one individual engaged in multiple provider episodes is not necessarily engaged in doctor/pharmacy shopping.

[3] See the Washington State Department of Health website for adopted rules: www.doh.wa.gov/ForPublicHealthandHealthcareProviders/HealthcareProfessionsandFacilities/PainManagement

[4] Percentage of overlapping prescriptions is calculated as the number of days with more than one prescription in the same drug class (or opioid and benzodiazepine classes) divided by the total number of prescription days for that drug class (or opioid class for opioid – benzodiazepine combinations). Please see PBSS website for additional methodological details.

[5] LA = long-acting ; SA = short-acting. While mean daily dosages for fentanyl SA were greater than 120 MMEs, data are not shown due to the complexities of calculating MMEs for this class of opioids as well as their limited indications for use only in the management of breakthrough pain in cancer patients.

[6] Daily morphine milligram equivalents (MMEs), or morphine equivalent dose (MED) given in milligrams per day, is the daily dosage of morphine that would provide an equal amount of analgesia as the daily dosage of the opioid. The conversion factors used for MMEs here may differ somewhat from those used by Washington prescribers for calculating morphine equivalent dose (MED). Some patient populations (e.g., those prescribed fentanyl) may consist primarily of opioid-tolerant cancer patients in which cases mean daily dosages over 100 MME for the population do not necessarily indicate higher risk prescribing. Please see PBSS website for additional methodological details.