PDMP TTAC

Prescription Drug Monitoring Program Training and Technical Assistance Center

Technical Assistance Guide No. 01-13

Calculating Daily Morphine Milligram Equivalents

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Introduction

States that receive funding under the Harold Rogers Prescription Drug Monitoring Program are required to report data that measures the results of their work. These performance measures are reported every three months to the Bureau of Justice Assistance (BJA) through BJA's online Performance Measurement Tool (PMT). The measures were designed to document various performance metrics including: number of prescribers/dispensers registered to use the PDMP, number of trainings conducted with various groups, number of solicited and unsolicited reports sent to different authorized users, the number of individuals meeting thresholds associated with potential doctor shopping, and the number of prescriptions they have obtained.

Included in the performance measurements is a calculation of daily morphine milligram equivalents (MMEs) for opioid painkillers for three (3) month and six (6) month reporting periods. BJA has moved to MME reporting to better identify and quantify at-risk individuals.

To assist PDMPs in fulfilling this grant requirement, ensure consistency in the values reported, and provide a better assessment of the drug problem, the PDMP Training and Technical Assistance Center (TTAC) partnered with Len Paulozzi, MD, MPH, from the Centers for Disease Control and Prevention, to develop this technical assistance guide (TAG).

Value of using MMEs

Morphine is widely regarded as the 'gold standard' for the treatment and management of moderate to severe pain and, therefore, is used as the reference point for other opioids. As you know, there has been an increase in the abuse of prescription opioids and in overdose deaths involving these medications. Studies have shown that opioid usage for more than three (3) months can lead to tolerance and dependence resulting in higher dosages being prescribed to the patient. As dosage increases, the likelihood of an adverse reaction increases. Evidence suggests that a patient, receiving more than 100mg MMEs, is nine (9) times more likely to overdose with 12% of those resulting in death. Identifying at-risk patients is a crucial first step towards improving patient safety and increasing

prescriber awareness. The MME measurements will assist states, BJA, and other stakeholders in determining the seriousness of the problem and assist in efforts to address the overdoses and deaths from opioid medications.

The responses to the MME questions should be reported as whole numbers and is the number of individuals receiving more than 100mg MMEs per day; not the number of prescriptions. The MME can be from a single prescription or when there is overlap between prescriptions for the same individual. Make sure that each individual is only counted once for each three month or six month reporting period; some patients may meet the MME threshold more than once during each time period.

NOTE: Opioid dosage thresholds are based on overdose risk when opioids are prescribed for pain and should not guide dosing of Medication Assisted Treatment (MAT) for opioid use disorders.

Technical Assistance Guide (TAG)

The TTAC strongly recommends that PDMP Administrators provide the information, presented in the TAG, to their vendor or IT programmer to enable accurate computing of MMEs for large PDMP data sets.

The TAG includes the following:

- Definitions
- MME Conversion Formula
- Conversion Reference Table.xlsx
- NDC_Opioid_Conversion_code.sas
- NDC_Opioid_Conversion.sas7bdat

Definitions:
The following are terms as used in the BJA reportable performance measurements for MMEs.

a. **Adult** – patients that are 18 years of age or older as of the date the prescription was filled

b. **Youth** – patients that are under 18 years of age as of the date the prescription was filled

c. **Three month reporting period** – the initial reporting period is October 1, 2012 through December 31, 2012 (inclusive) and successive quarterly reporting periods:

   January 1, 2013 through March 31, 2013
   April 1, 2013 through June 30, 2013
   July 1, 2013 through September 30, 2013

d. **Six month reporting period** – the three months or quarterly reporting period as described in c. (above), plus the three months of the quarter immediately preceding the reporting period (i.e., data from the 1st quarter plus data from the 2nd quarter).

e. **Conversion Reference Table-** The CDC developed this table and it contains the MME conversion factor for opioid medications, organized by the National Drug Code (NDC). The table contains all the fields necessary to compute the MMEs. The table may be used by a vendor or the IT staff to build a separate program to convert prescription data to MMEs.

NOTE: *The Conversion Reference Table contains NDCs that are eleven digits; the length of the NDC stored in the PDMP needs to be verified. A leading '0' in the Conversion Reference Table may need to be removed to match properly with a PDMP's NDC file.*

f. **Statistical Analysis System (SAS) programs**, developed by the CDC, is a ready program which can be used by a vendor or IT staff to convert prescription data to MMEs, if it is decided not to build a separate one. The SAS programs combine the MME conversion factors by NDC numbers with the information collected from the PDMP prescription data to automatically calculate the MMEs. The SAS programs may need to be customized to properly work with a PDMP's data fields; it is recommended that the SAS code be modified by an experienced IT programmer.

MME Conversion Formula:

$$\frac{\text{(Drug Strength) * (Drug Quantity) * (MME Conversion Factor)}}{\text{(Days Supply)}}$$

Drug Strength: located in the Conversion Reference Table for each NDC number

Drug Quantity: located in the PDMP prescription record

MME Conversion Factor: located in the Conversion Reference Table for each NDC number

Days Supply: located in the PDMP prescription record

EXCEPTIONS: Fentanyl and Buprenorphine patches are two (2) important exceptions to using the above formula to compute MMEs and are built into the SAS code. The exception only applies to the Fentanyl and Buprenorphine patches; **not** the other dosage forms of either medication.

Typically, patients will be prescribed a Fentanyl or Buprenorphine patch for use every three (3) or seven (7) days, respectively. However, the timeframe for a patch may vary depending upon the doctor's instructions. Therefore, even though the duration of use of each patch may be prescribed for less than the typical number of days, the quantity of medication a patient receives each day remains constant.

EXAMPLE: *10 Fentanyl patches are typically prescribed for thirty (30) days (the Days Supply field in the PDMP data is equal to 30). However, some prescriptions might specify ten (10) patches over twenty (20) days.*

Consequently, a standard has been established to account for possible variances in the length of time a patch is worn. The standard is based on the length of time a patient would normally be using the patch: three (3) days for Fentanyl and seven (7) days for Buprenorphine. In order for the formula to work properly and compute the MME accurately, the Days Supply value should be changed to equal three (3) times the quantity for Fentanyl patches and seven (7) times the quantity

for Buprenorphine patches; regardless of the Days Supply value written on the prescription.

EXAMPLE: *10 Fentanyl patches are prescribed for twenty (20) days. Since a Fentanyl patch is typically used for three (3) days, the 'Days Supply' value should be thirty (30) for computing the MME.*

External Files (click file name to download):

Conversion Reference Table.xlsx

NDC_Opioid_Conversion_code.sas

NDC_Opioid_Conversion.sas7bdat

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