

Center for Program Integrity

Methodology

Phase 1—Baseline Metrics

This study separately analyzed PDE¹ records for Seroquel drug prescriptions in calendar years 2013 through 2014. CMS used First Databank and Medi-Span to identify quetiapine (generic), Seroquel, and Seroquel XR (hereafter referred to as Seroquel) drug prescriptions. Only PDE records for Seroquel were extracted for this review. The two metrics used as the baseline for comparing the prescribers were:

1. Number of Seroquel Prescription Drug Treatment (PDT)² counts per prescriber
2. Number of 30-day equivalent Seroquel PDT counts per prescriber

This analysis focused only on the General Care Practitioners. Family Medicine and Internal Medicine practitioners were grouped together with the General Care Practitioners (hereafter referred to as General Care Practitioners). In addition, General Care Practitioners with no specialization who had a secondary or tertiary taxonomy specialty of Psychiatry were removed from the analysis.

Beneficiaries who resided in long-term care (LTC) facilities were removed from the analysis due to the unique issues surrounding antipsychotic use in these facilities. Additionally, low volume prescribers who were associated with less than or equal to 10 Seroquel PDE records in either year of the analysis were excluded in order to focus on high risk prescribers.

Phase 2---Comparison of Prescriber (within Specialty) by State

CMS used the National Plan and Provider Enumeration System (NPPES) and the National Provider Identifier (NPI) to identify the prescribers and determine their primary taxonomy code.

Prescribers who were associated with group practices or other medical facilities that have multiple prescribers were excluded from this analysis, because the PDE record could not be attributed to an individual prescriber. This analysis was limited to physicians due to the lack of detailed taxonomy for mid-level prescribers, such as physician assistants and advanced nurse practitioners, which does not allow for their grouping by peer prescribing or elimination based on area of specialization, such as Psychiatry.

Outliers were identified by state and calculated using the Tukey Method³, a standard technique for identifying extreme outliers. Only prescribers with a PDE record count exceeding a given

¹ Prescription Drug Event

² Prescription Drug Treatment (PDT) is one or more PDE records that are concurrently being received by a beneficiary for the same medication. For example, Seroquel 200 mg and Seroquel 25 mg to achieve a total dose of 225 mg.

threshold⁴ were included for further review. This threshold was determined after all PDE records were extracted.

Two thresholds were determined for every prescriber using the combination of the following two metrics:

- Number of Seroquel Prescription Drug Treatment (PDT) counts per prescriber within their state
- 30-day equivalent Seroquel PDT count per prescriber within their state

Phase 3—Comparison of Findings

CMS then compared the findings based on calendar year 2013 to the findings based on calendar year 2014 and identified the set of prescribers who were determined to be potential outliers for two consecutive years. There were approximately 5,056 prescribers in this group. The findings presented in this letter reflect the data from the most recent year included in our study.

CMS recognizes there may be extenuating circumstances including your patient health status or the special nature of your practice that cause these numbers to be high and recommends that you use the information to review Seroquel prescribing practices. If you would like to discuss this project or your data or provide feedback on this analysis, please contact the NBI MEDIC at 1-877-7SafeRx (1-877-772-3379) or CMS at CPIMedicarePartD_Data@cms.hhs.gov. If you believe your prescriptions are being forged, please contact the NBI MEDIC at 1-877-7SafeRx (1-877-772-3379).

³ See J. W. Tukey, *Exploratory Data Analysis*. Addison-Wesley, 1977. The Tukey method traditionally sets the threshold at the 75th percentile plus 1.5 times the interquartile range. The interquartile range is calculated by subtracting the value at the 25th percentile from the value at the 75th percentile.

⁴ Threshold defines the extreme outliers.

The formula is: $Threshold = 75th\ percentile + 0.25 \times (75th\ percentile - 25th\ percentile)$