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## Center for Program Integrity

### Methodology

#### Phase 1—Baseline Metrics

This study separately analyzed PDE records for Schedule II drug prescriptions in calendar years 2011, 2012, and 2013. CMS used First Databank to identify Schedule II drug prescriptions. Only PDE records for Schedule II drugs were extracted for this review. The two metrics used as the baseline for comparing the prescribers were:

- Number of Schedule II controlled substance prescriptions.
- Number of 30-day equivalent Schedule II controlled substance prescriptions.

Prescribers who were associated with more than 100 PDE records or more than \$100,000 per year in total Medicare Part D costs for Schedule II controlled substances were included in the initial analysis. Prescribers were removed from the analysis if they were the only prescriber within their specialty identified in their respective States.

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

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.

Outliers were identified within each specialty both nationally and by state. Outliers were calculated using the Tukey Method<sup>1</sup>, a standard technique for identifying extreme outliers. Only prescriber specialties with a PDE record count exceeding a given threshold<sup>2</sup> were included for further review. This threshold was determined after all PDE records were extracted.

Four thresholds were determined for every prescriber using the combinations of the above two metrics:

- PDE record count by specialty nationally
- PDE record count by specialty within each state

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<sup>1</sup> See J. W. Tukey, *Exploratory Data Analysis*. Addison-Wesley, 1977. The Tukey method traditionally sets the threshold at the 75th percentile plus 1.5 or 3 times the interquartile range. The interquartile range is calculated by subtracting the value at the 25th percentile from the value at the 75th percentile.

<sup>2</sup> Threshold defines the extreme outliers.

The formula is:  $Threshold = 75th\ percentile + 3 \times (75th\ percentile - 25th\ percentile)$

- 30-day equivalent by specialty nationally
- 30-day equivalent by specialty within each state

### **Phase 3—Comparison of Findings**

CMS then compared the findings based on calendar year 2012 to the findings based on calendar years 2011 and 2013 and identified the set of prescribers who were determined to be potential outliers for two consecutive years. 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 Schedule II prescribing practices. If you would like to 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](mailto: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).