The Kentucky All Schedule Prescription Electronic Reporting System (KASPER) Quarterly Threshold Analysis Report is produced under a Drug Overdose Prevention for States cooperative agreement between the Kentucky Injury Prevention and Research Center (KIPRC) as the bona fide agent for the Kentucky Department of Public Health and the U.S. Centers for Disease Control and Prevention.
KASPER Quarterly Threshold Analysis Report, Fourth Quarter 2016

The report provides information on rates of controlled substance dispensing (number of prescriptions dispensed per 1,000 Kentucky residents) by age group and gender. The analysis includes dispensing rates of 1) total Schedule II through V controlled substances; 2) alprazolam; 3) buprenorphine/naloxone; 4) hydrocodone; 5) methadone; 6) opioids; 7) oxycodone; and 8) total Schedule II stimulants.

Additionally, trend graphs for the First Quarter 2015 to Fourth Quarter 2016 are presented for each dispensed controlled substance class or specific controlled substance.

Suggested citation:

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Report Summary

1. **All Controlled Substance Dispensing**: Females over the age of 17 were dispensed Schedule II-V Controlled Substance prescriptions at higher rates than males. The highest prescription dispensing rates were for females 55 to 64 years of age at 1,097 prescriptions dispensed per 1,000 females and for females 65 years of age and older at 975 prescriptions dispensed per 1,000. Figures 1 and 2.

2. **Alprazolam Dispensing**: Females over 17 years of age were dispensed alprazolam prescriptions at higher rates than males. Females over 25 years of age were dispensed alprazolam at rates nearly 2 times higher than males over 25 years of age. The highest rate of dispensed alprazolam prescriptions was for females 65 years of age and older at 111 prescriptions dispensed per 1,000 females. Figures 3 and 4.

3. **Buprenorphine-Naloxone Dispensing**: Dispensing rates for buprenorphine-naloxone prescriptions were highest for both males and females 25 to 44 years of age. Males 35 to 44 years of age had the highest dispensing rates of buprenorphine-naloxone prescriptions at 130 prescriptions per 1,000 males. Females 17 to 24 years of age were dispensed buprenorphine-naloxone prescriptions at higher rates than their male counterparts. Figure 5. The highest dispensing rate was for the fourth quarter of 2016 at a rate of 41.9 prescriptions per 1000 persons, a 36% increase over the reporting period. Figure 6.

4. **Hydrocodone Dispensing**: Females of all ages were dispensed hydrocodone at higher rates than males. The highest dispensing rates were for females and males 55 to 64 years of age at 270 prescriptions dispensed per 1,000 females and 263 prescriptions per 1,000 males. Figure 7. The dispensing rates for hydrocodone declined 7.4% over the reporting period. Figure 8.

5. **Methadone Dispensing**: Males had an elevated dispensed methadone prescriptions rate compared to females. The highest dispensing rate was for males 55 to 64 years of age at a rate of 9 prescriptions per 1,000 males. Figure 9. Dispensed methadone prescription rates declined over the reporting period from 3.42 prescriptions dispensed per 1,000 persons in the first quarter of 2015 to 3 per 1,000 in the fourth quarter of 2016. Overall, dispensed methadone prescription rates decreased 12.3%. Figure 10.

6. **Opioids**: Females ages 17 and older had higher dispensed opioid prescription rates than males; the highest rates were for females and males aged 55 to 64 years at 549 prescriptions per 1000 and 532 per 1000 for females and males, respectively. Figures 11 and 12.

7. **Oxycodone Dispensing**: Females under the age of 55 had elevated dispensed oxycodone rates compared to males. After age 55 years, males were dispensed higher rates than females. The highest dispensing rates were for males and females aged 55 to 64 years at 133 prescriptions dispensed per 1,000 for males and 125 per 1,000 for females. Figure 13. The overall dispensing rate was lower in year 2016 than in 2015. Figure 14.
8. **Schedule II Stimulant Dispensing**: Schedule II stimulants include amphetamine (e.g. Adderall) and methylphenidate (e.g. Concerta, Ritalin). The dispensed Schedule II stimulants rates were highest for males and females aged 0 to 16 years at 202 prescriptions dispensed per 1,000 for males and 86 per 1,000 for females. Figure 15. Rates for dispensing of Schedule II stimulants have increased overall over the reporting period from 57 per 1,000 persons in the first quarter of 2015 to 61 per 1,000 in the fourth quarter of 2016. Figure 16.

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Figure 1:

**Rate of Schedule II-V Controlled Substance Prescriptions Dispensed by Age and Gender, 4th Quarter 2016**


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Figure 2:

**Rate of All Controlled Substance Prescriptions Dispensed, 1st Quarter 2015 to 4th Quarter 2016**

Figure 3: Rate of Alprazolam Prescriptions Dispensed by Age and Gender, 4th Quarter 2016


Figure 4: Rate of Alprazolam Prescriptions Dispensed, 1st Quarter 2015 to 4th Quarter 2016

Buprenorphine-Naloxone

Figure 5: Rate of Buprenorphine-Naloxone Prescriptions Dispensed by Age and Gender, 4th Quarter 2016

Rate of Buprenorphine-Naloxone Prescriptions Dispensed, 1st Quarter 2015 to 4th Quarter 2016

Figure 7: Rate of Hydrocodone Prescriptions Dispensed by Age and Gender, 4th Quarter 2016


Figure 8: Rate of Hydrocodone Prescriptions Dispensed, 1st Quarter 2015 to 4th Quarter 2016

Figure 9:

**Rate of Methadone Prescriptions Dispensed by Age and Gender, 4th Quarter 2016**

![Bar chart showing rate of methadone prescriptions dispensed by age and gender for 4th Quarter 2016.]{:style="width:100%;"}


Figure 10:

**Rate of Methadone Prescriptions Dispensed, 1st Quarter 2015 to 4th Quarter 2016**

![Line chart showing rate of methadone prescriptions dispensed from 1st Quarter 2015 to 4th Quarter 2016.]{:style="width:100%;"}

Figure 11:

Rate of Opioid Prescriptions Dispensed by Age and Gender, 4th Quarter 2016


Figure 12:

Rate of Opioid Prescriptions Dispensed, 1st Quarter 2015 to 4th Quarter 2016

**Oxycodone**

Figure 13:

![Rate of Oxycodone Prescriptions Dispensed by Age and Gender, 4th Quarter 2016](image)


Figure 14:

![Rate of Oxycodone Prescriptions Dispensed, 1st Quarter 2015 to 4th Quarter 2016](image)

**Schedule II Stimulants**

Figure 15:

Rate of Schedule II Stimulant Prescriptions Dispensed by Age and Gender, 4th Quarter 2016

Prescriptions dispensed per 1,000 persons

<table>
<thead>
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<th>Age in years</th>
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</tr>
<tr>
<td>65+</td>
<td>7</td>
<td>5</td>
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</table>


Figure 16:

Rate of Schedule II Stimulant Prescriptions Dispensed, 1st Quarter 2015 to 4th Quarter 2016

Prescriptions dispensed per 1,000 persons

<table>
<thead>
<tr>
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