

JULY 31, 2017

# KASPER QUARTERLY THRESHOLD ANALYSIS REPORT

FIRST QUARTER 2017

Prepared by  
Dana Quesinberry, JD



## **KASPER Quarterly Threshold Analysis Report, First Quarter 2017**

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 First Quarter 2017 are presented for each dispensed controlled substance class or specific controlled substance.

There are two new features in this report. First, graphs of the dispensing rates for opioids, excluding buprenorphine-naloxone, have been prepared. The exclusion of buprenorphine-naloxone from the all opioids allows review of dispensing of opioids for medical use and buprenorphine-naloxone opioid use disorder treatment use. The second feature is the addition of county-level dispensing rates.

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**<https://www.surveymonkey.com/r/KASPER1stQTR2017ThresholdReportFeedback>**

Prior threshold analysis reports are available on the KASPER website at <http://www.chfs.ky.gov/os/oig/kasptrendreports> and on KIPRC's website at <http://www.mc.uky.edu/kiprc/>.

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 1,057 prescriptions dispensed per 1,000 females and for females 65 years of age and older at 918 prescriptions dispensed per 1,000. Figure 1. The overall dispensing rate for all controlled substances declined for the fifth consecutive quarter. Figure 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 55 to 64 years of age at 103 prescriptions dispensed per 1,000 females. Figure 3. The overall dispensing rate for alprazolam declined for the sixth consecutive quarter. Figure 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 138 prescriptions per 1,000 males. Figure 5. The buprenorphine-naloxone dispensing rate increased for eight consecutive quarters with a 39% 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 258 prescriptions dispensed per 1,000 females and 253 prescriptions per 1,000 males. Figure 7. The dispensing rates for hydrocodone declined for the sixth consecutive quarter. Figure 8.
5. *Methadone Dispensing:* Males had a higher methadone dispensing 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. Methadone dispensing rates declined over the reporting period from 3.42 prescriptions dispensed per 1,000 persons in the first quarter of 2015 to 2.8 per 1,000 in the first quarter of 2017. Figure 10.
6. *All Opioids:* Females ages 17 years and older had higher opioid dispensing rates than males; the highest rates were for females and males aged 55 to 64 years at 524 prescriptions per 1000 and 514 per 1000 for females and males, respectively. Figure 11.
7. *Opioids, excluding Buprenorphine-Naloxone:* By excluding buprenorphine-naloxone dispensing, the opioid dispensing rates are lower, but are similar to all opioid dispensing rates. Females ages 17 years and older had higher dispensing rates than males. The highest rates were for females and males aged 55 to 64 years at 509 prescriptions per 1000 and 494 prescriptions per 1000 for females and males, respectively. Figure 13. Trend comparisons for opioids, excluding buprenorphine-naloxone, are not yet available.

8. *Oxycodone Dispensing:* Females under the age of 55 had higher oxycodone dispensing 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 129 prescriptions dispensed per 1,000 for males and 120 per 1,000 for females. Figure 15. The overall dispensing rate for first quarter 2017 was 57 prescriptions per 1000 persons. Figure 16.
9. *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 205 prescriptions dispensed per 1,000 for males and 87 per 1,000 for females. Figure 17. Dispensing rates for Schedule II stimulants have increased overall over the reporting period from 57 per 1,000 persons in the first quarter of 2015 to 62 per 1,000 in the first quarter of 2017. Figure 18.
10. *County-level Dispensing Rates:* Dispensing rates vary widely by both county and substance.
  - a. Alprazolam dispensing rates are highest in Bell (115 prescriptions per 1000 persons), Powell (99 per 1000), and Magoffin (92 per 1000) Counties. The lowest alprazolam dispensing rates are in Russell (14 per 1000), Kenton (18 per 1000), and Grant (20 per 1000) counties.
  - b. Buprenorphine-naloxone dispensing rates are highest in Owsley (330 per 1000), Magoffin (295 per 1000), and Lee (246 per 1000) Counties. The lowest buprenorphine-naloxone dispensing rates are in Union (2 per 1000), Todd (3 per 1000), and Breckinridge (5 per 1000) Counties.
  - c. Opioid, excluding buprenorphine-naloxone, dispensing rates are highest in Owsley (565 per 1000), Floyd (563 per 1000), and Clay (544 per 1000) Counties. The lowest opioid, excluding buprenorphine-naloxone, dispensing rates are in Russell (90 per 1000), Oldham (131 per 1000), and Boyd (133 per 1000) Counties.
  - d. Hydrocodone dispensing rates are highest Clay (367 per 1000), Floyd (337 per 1000), and Bell (328 per 1000) Counties. The lowest hydrocodone dispensing rates are in Kenton (46 per 1000), Russell (54 per 1000), and Boone (57 per 1000) Counties.
  - e. Oxycodone dispensing rates are highest in Powell (121 per 1000), Clinton (118 per 1000), and Estill (114 per 1000) Counties. The lowest oxycodone dispensing rates are in Russell (13 per 1000), Christian (30 per 1000), and Daviess (30 per 1000) Counties.
  - f. Schedule II Stimulant dispensing rates are highest in Henderson (160 per 1000), Union (136 per 1000), and McCracken (112 per 1000) Counties. The lowest Schedule II Stimulant dispensing rates are in Russell (8 per 1000), Clay (15 per 1000), and Cumberland (16 per 1000) Counties.

Schedule II-V Controlled Substances

Figure 1:

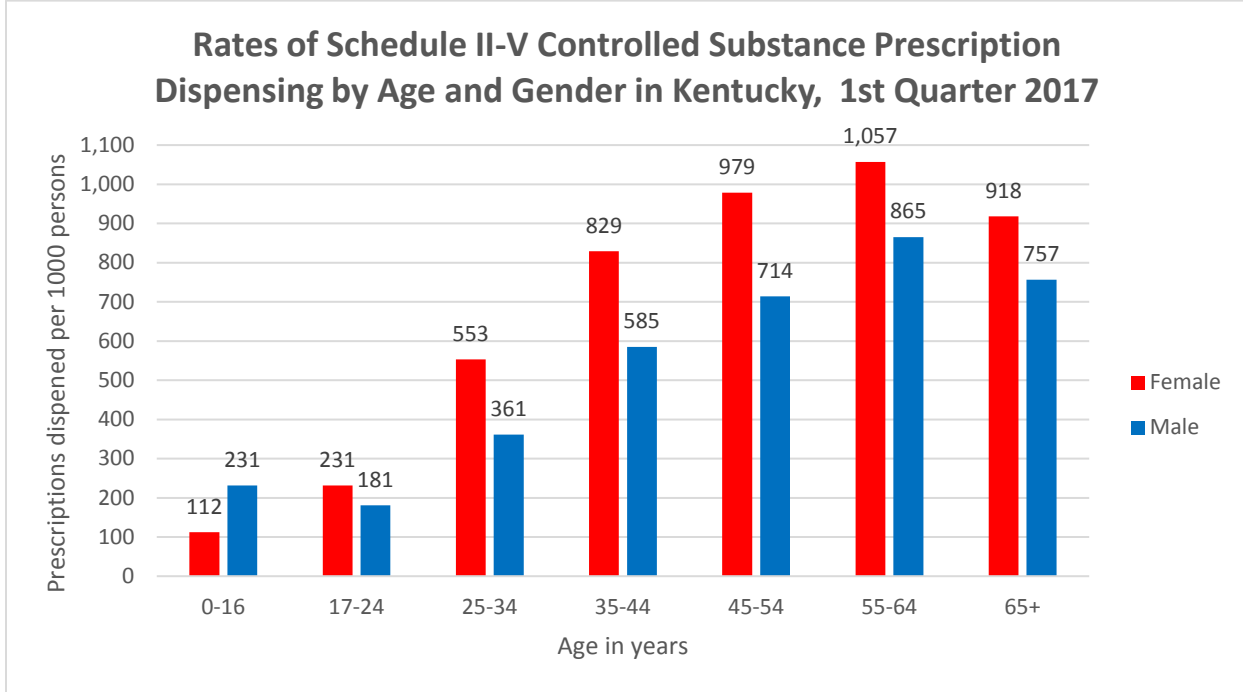
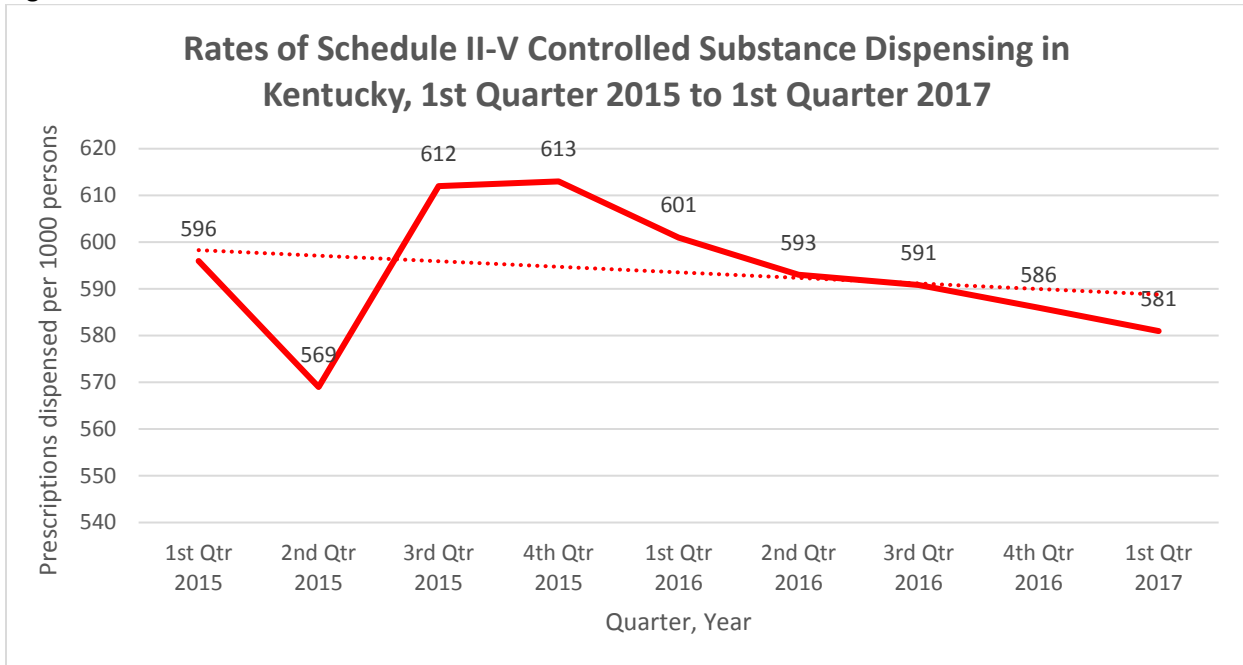


Figure 2:



Produced by the Kentucky Injury Prevention and Research Center, July 2017. Data source: Kentucky All Schedule Prescription Electronic Reporting, Kentucky Office of Inspector General, Cabinet for Health and Family Services.

Alprazolam

Figure 3:

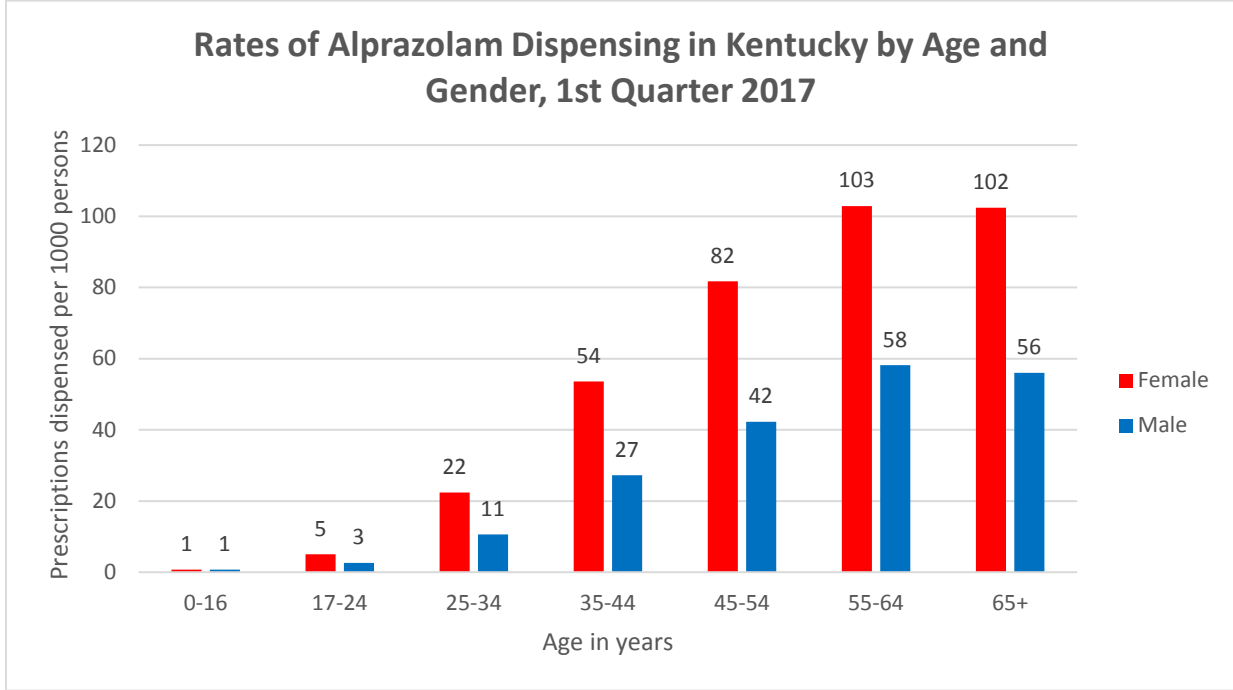
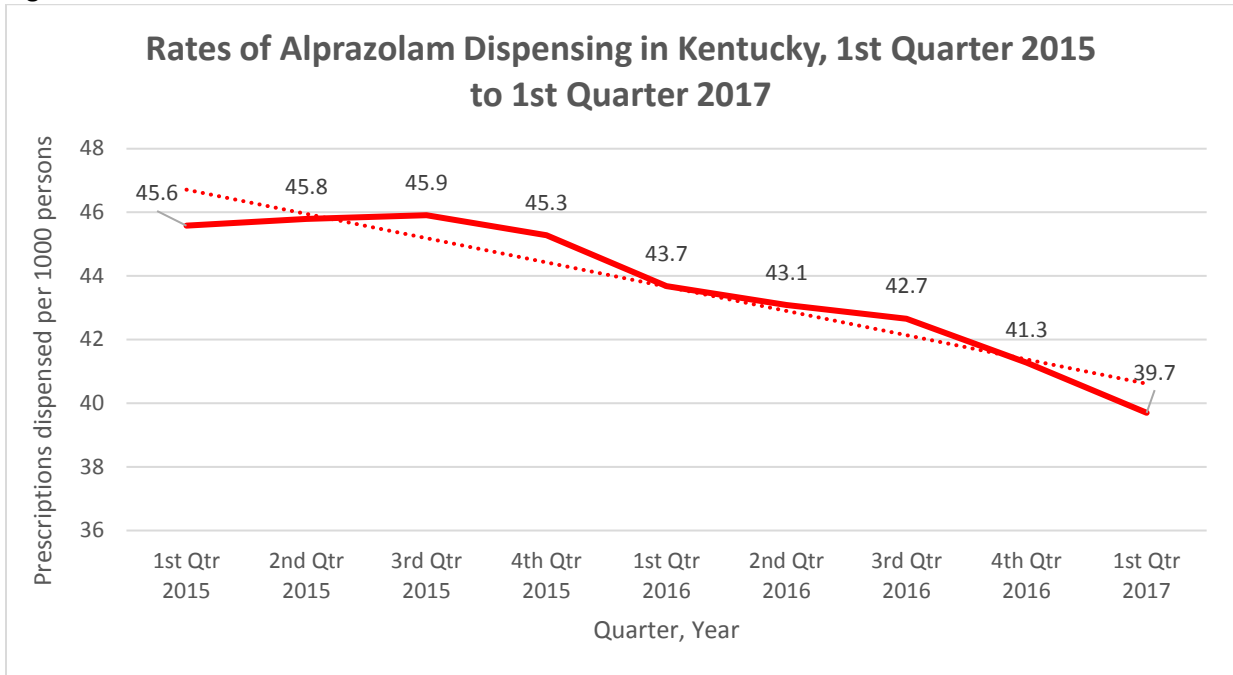


Figure 4:



Produced by the Kentucky Injury Prevention and Research Center, July 2017. Data source: Kentucky All Schedule Prescription Electronic Reporting, Kentucky Office of Inspector General, Cabinet for Health and Family Services.

Buprenorphine-Naloxone

Figure 5:

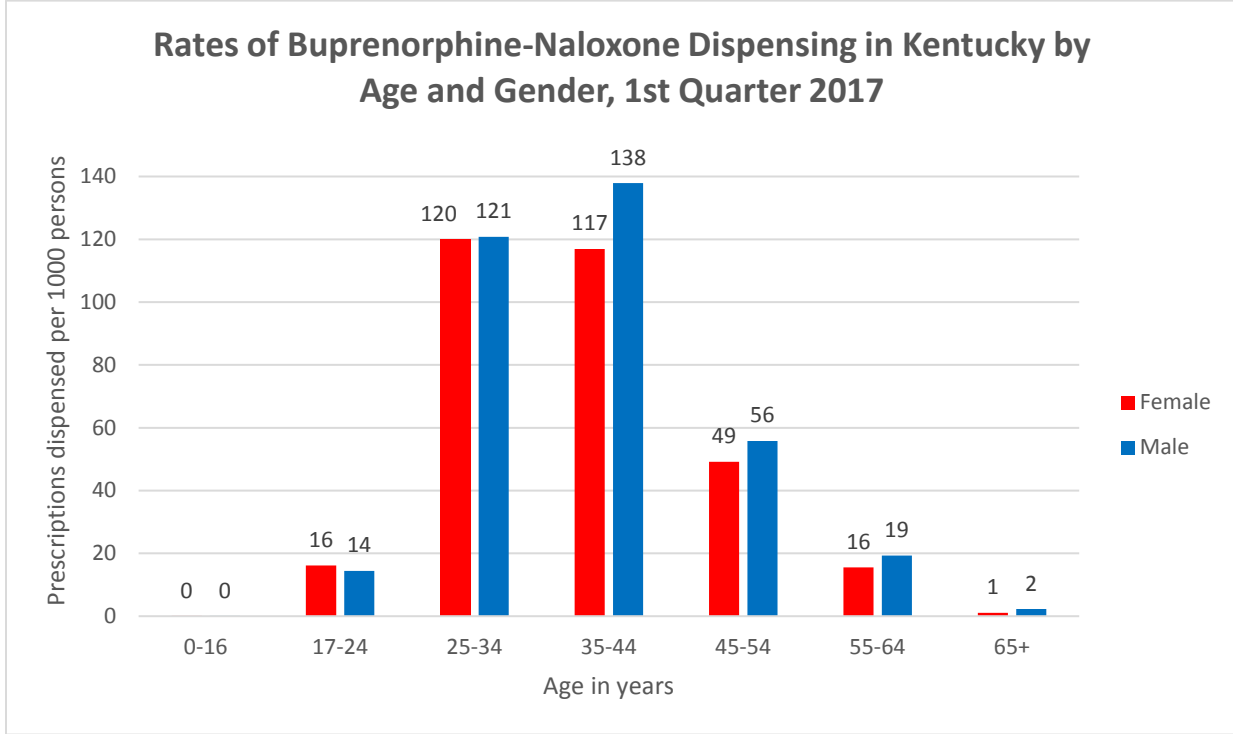
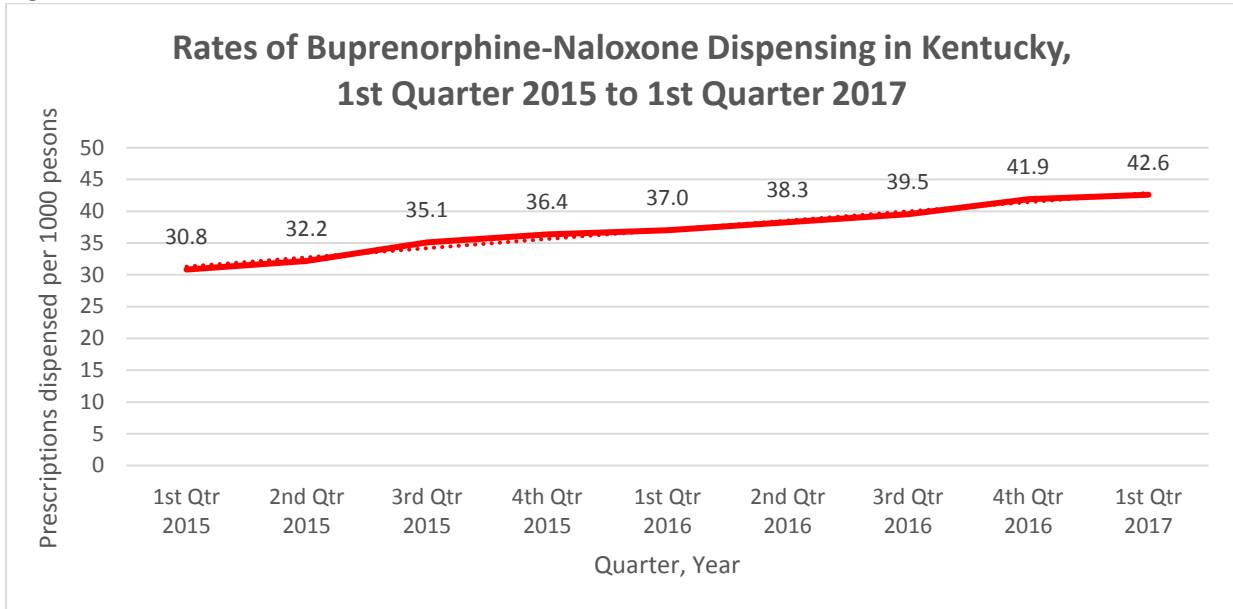


Figure 6:



Produced by the Kentucky Injury Prevention and Research Center, July 2017. Data source: Kentucky All Schedule Prescription Electronic Reporting, Kentucky Office of Inspector General, Cabinet for Health and Family Services.

## Hydrocodone

Figure 7:

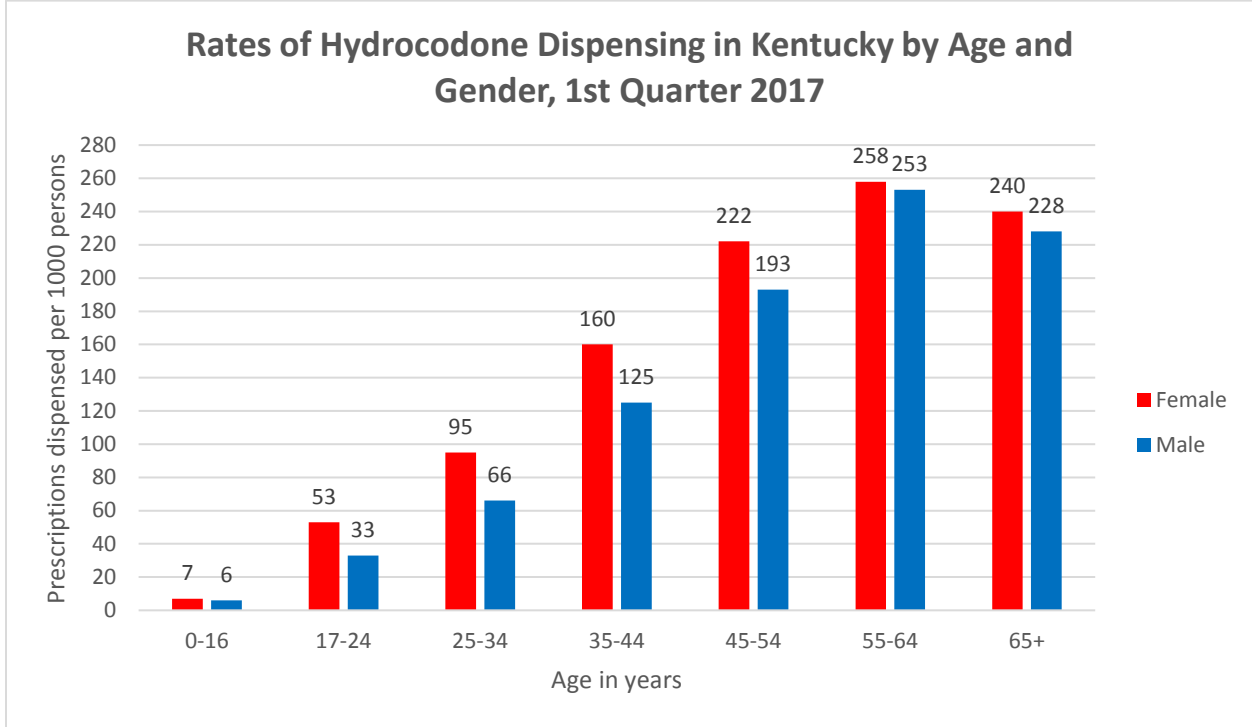
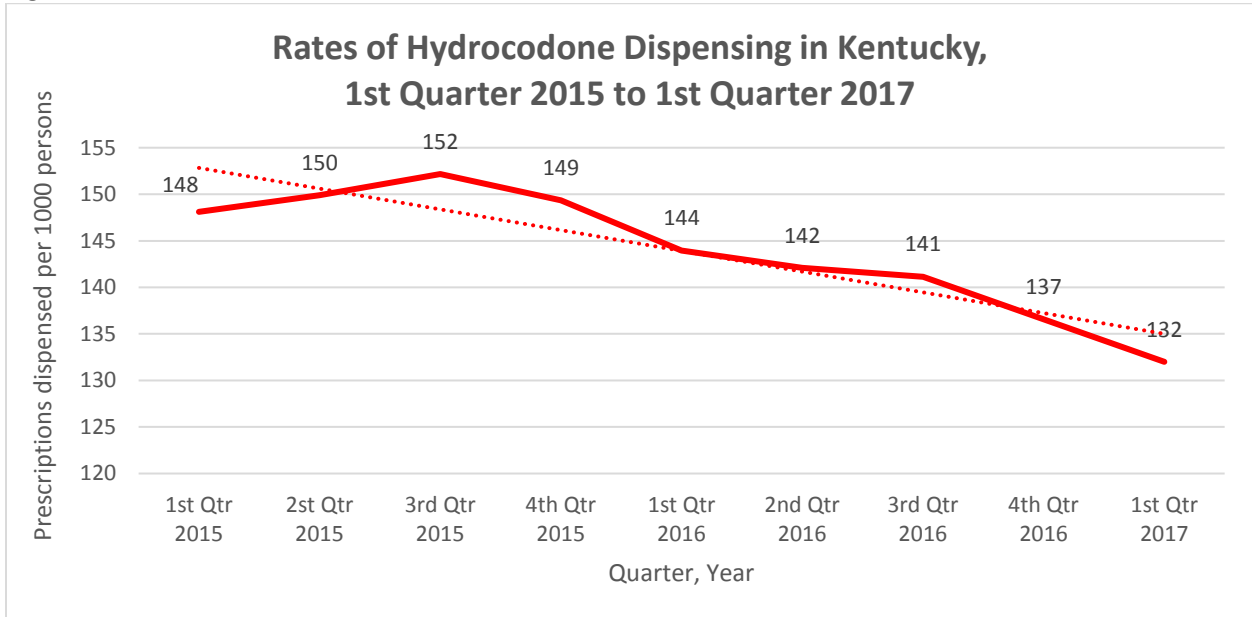


Figure 8:



Produced by the Kentucky Injury Prevention and Research Center, July 2017. Data source: Kentucky All Schedule Prescription Electronic Reporting, Kentucky Office of Inspector General, Cabinet for Health and Family Services.



Methodone

Figure 9:

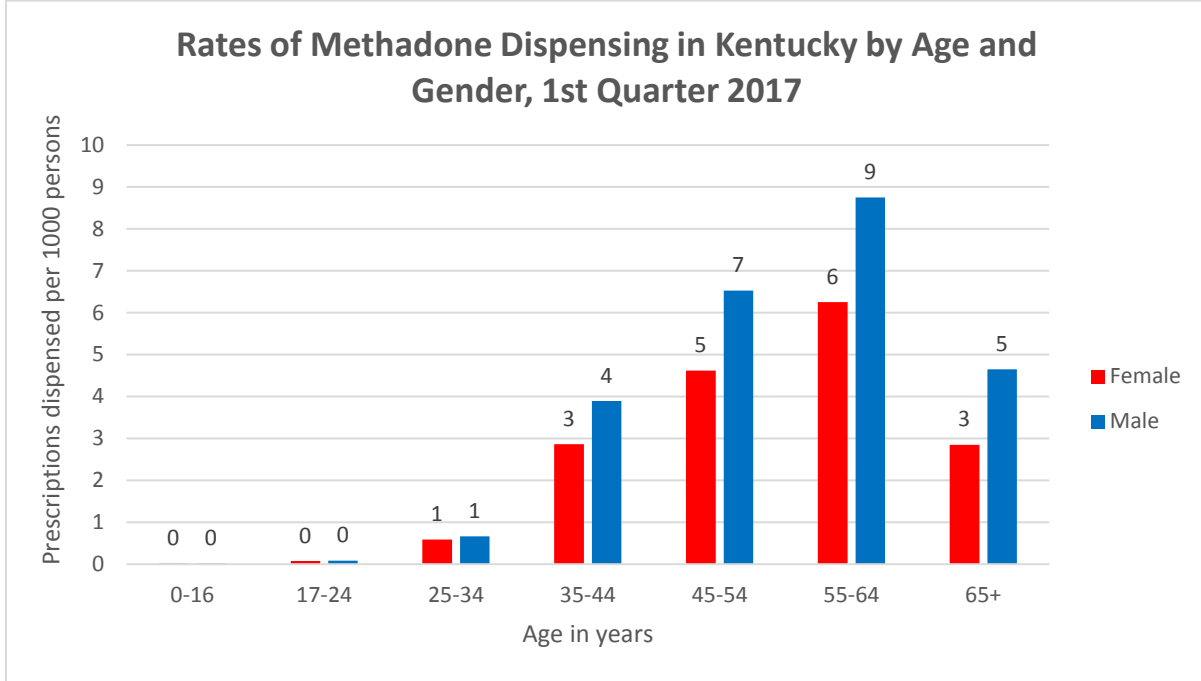
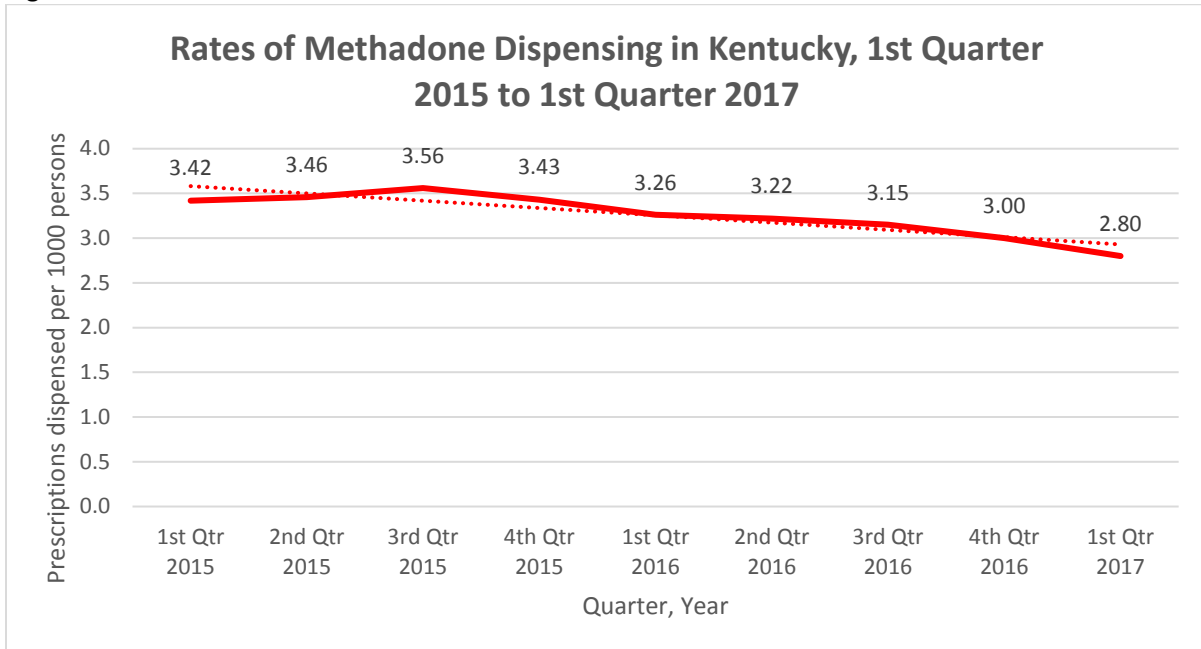


Figure 10:



Produced by the Kentucky Injury Prevention and Research Center, July 2017. Data source: Kentucky All Schedule Prescription Electronic Reporting, Kentucky Office of Inspector General, Cabinet for Health and Family Services.

## Opioids

Figure 11:

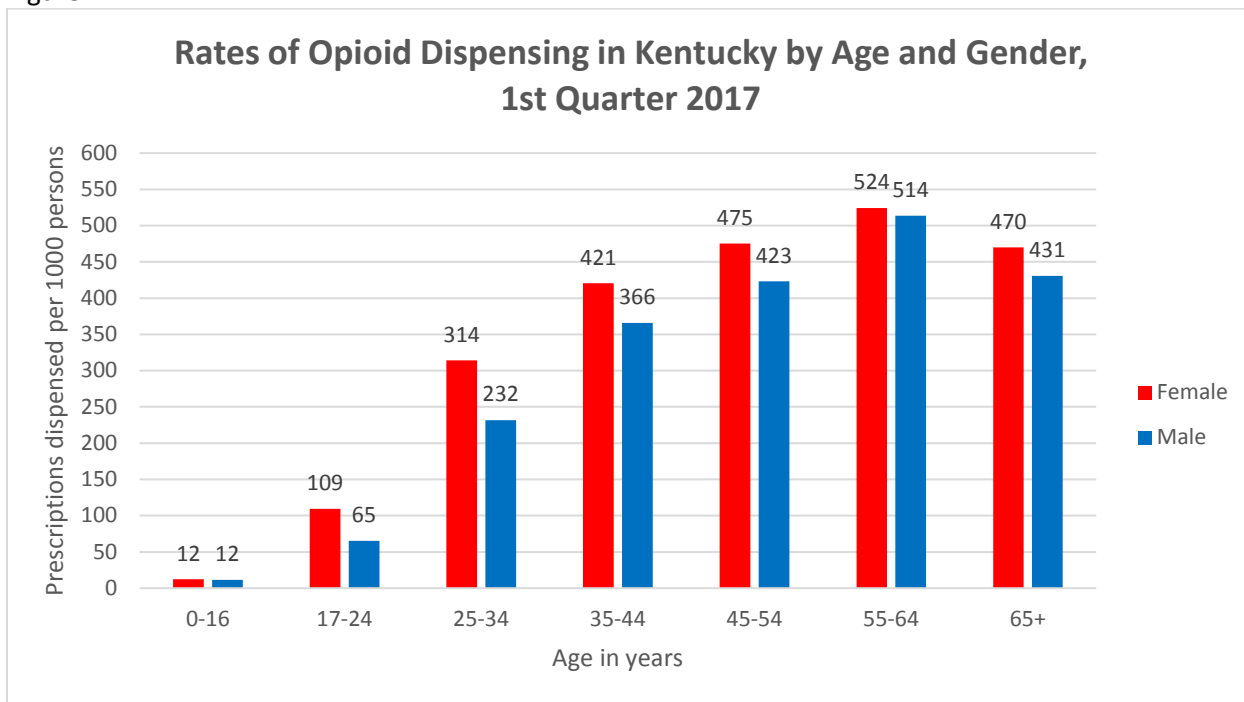
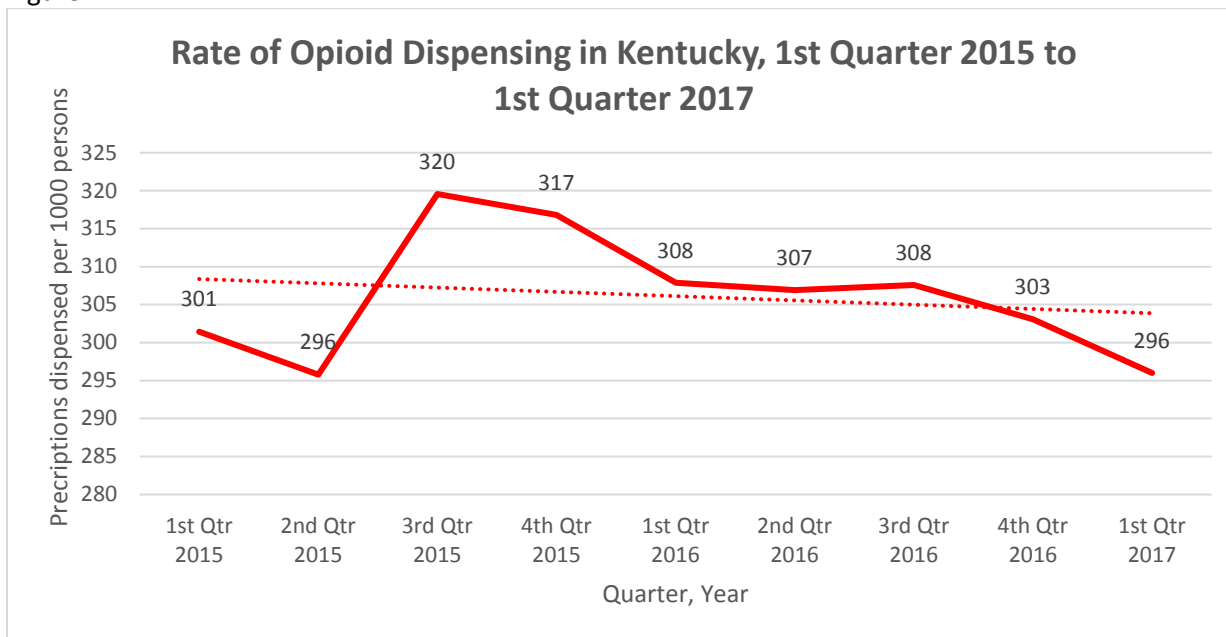


Figure 12:



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Opioids, Excluding Buprenorphine-Naloxone

Figure 13:

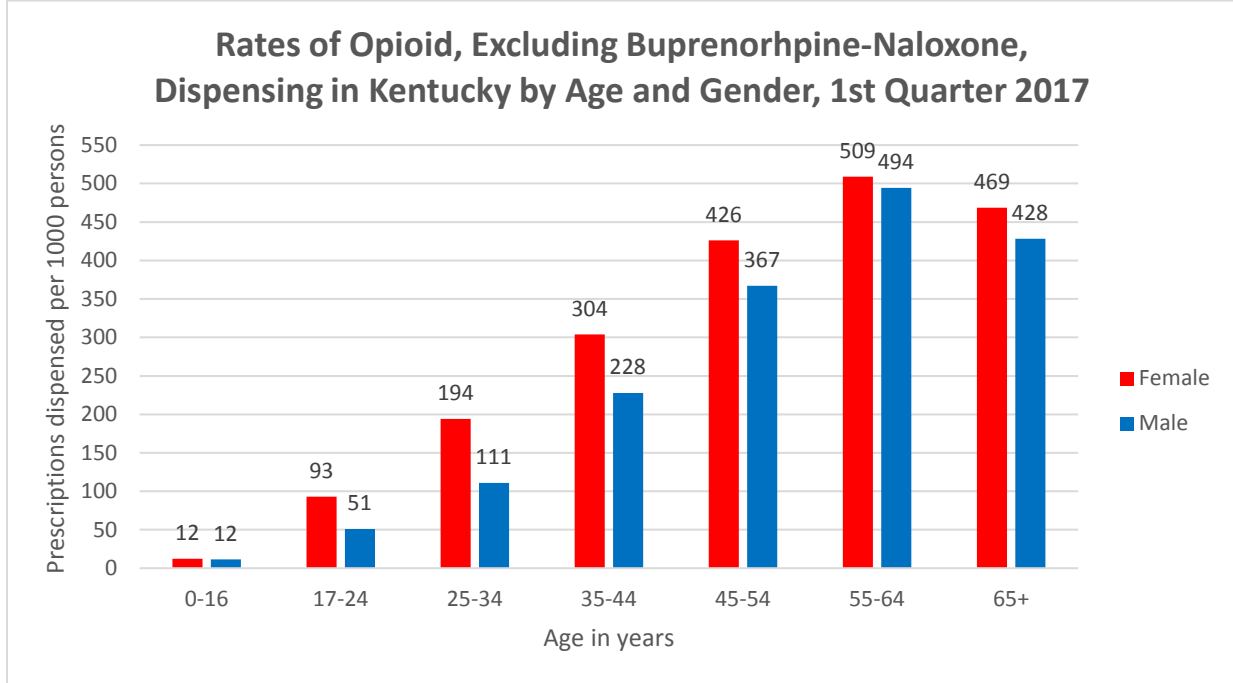


Figure 14:

*This figure is intentionally left out. This is the first time Opioid, excluding Buprenorphine-Naloxone, Dispensing as a separate category in this report. Dispensing rate trend is not available yet.*

Produced by the Kentucky Injury Prevention and Research Center, July 2017. Data source: Kentucky All Schedule Prescription Electronic Reporting, Kentucky Office of Inspector General, Cabinet for Health and Family Services.

Oxycodone

Figure 15:

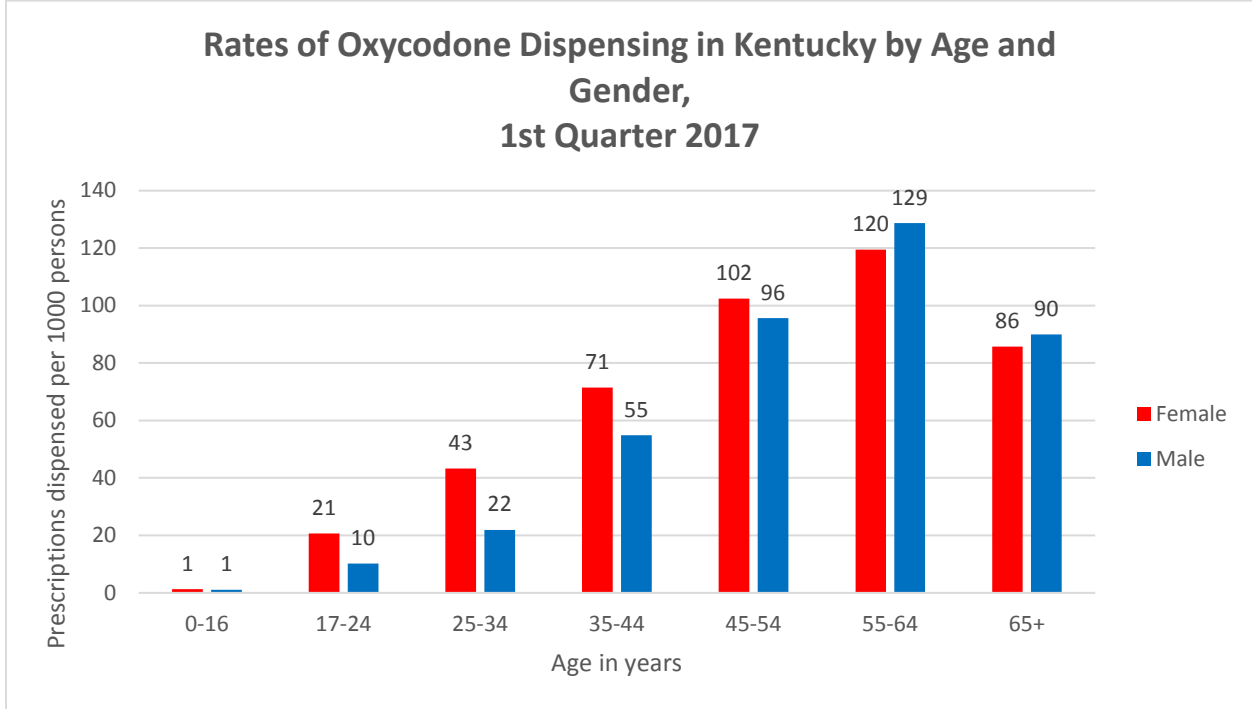
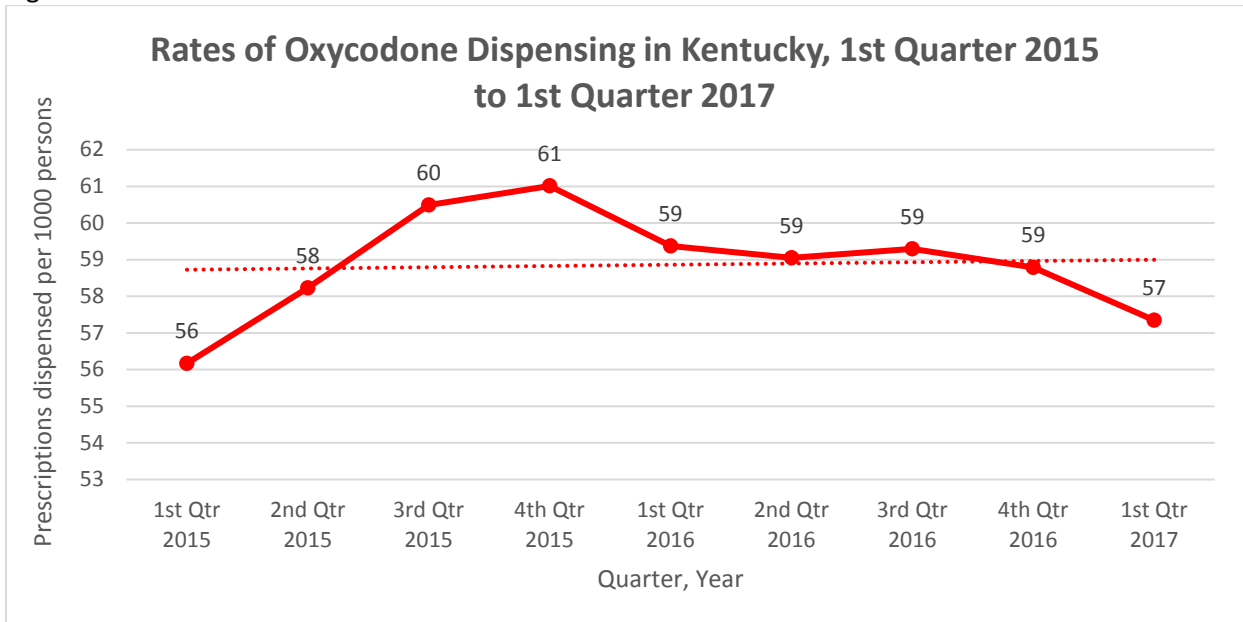


Figure 16:



Produced by the Kentucky Injury Prevention and Research Center, July 2017. Data source: Kentucky All Schedule Prescription Electronic Reporting, Kentucky Office of Inspector General, Cabinet for Health and Family Services.

Schedule II Stimulants

Figure 17:

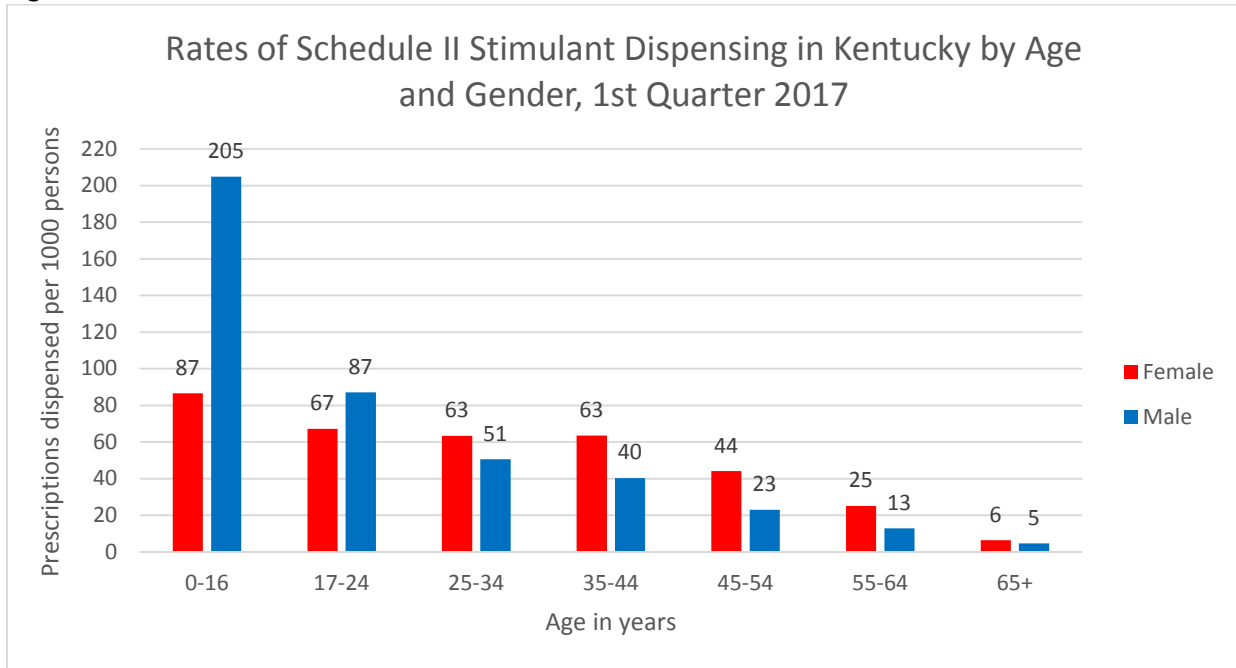
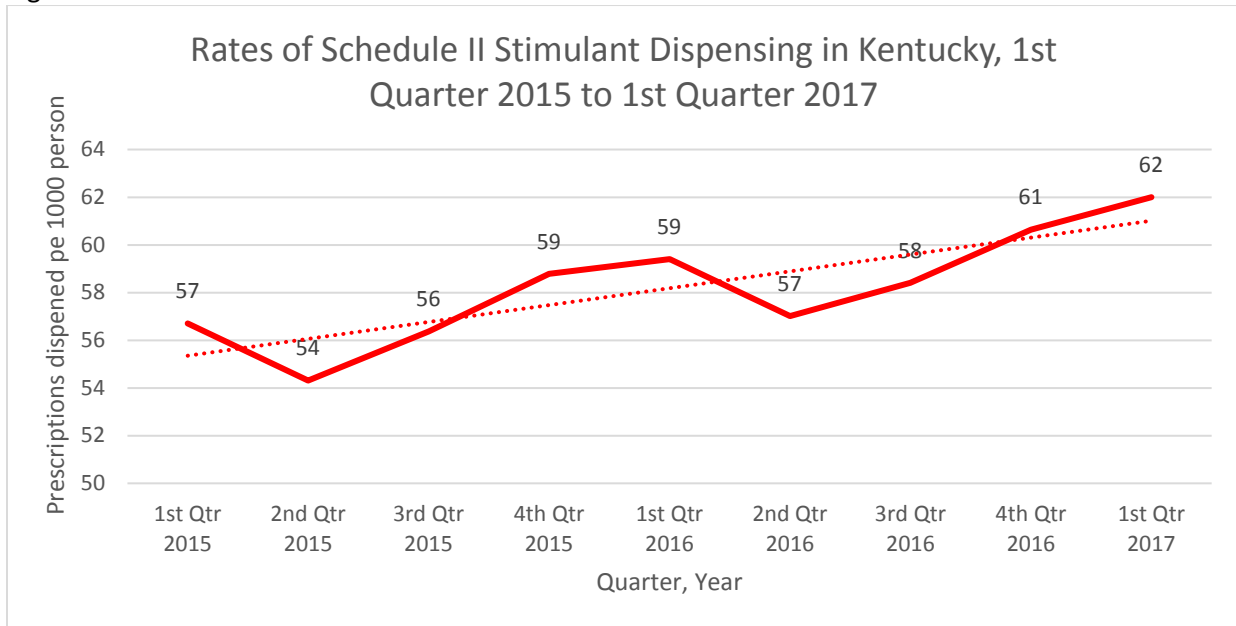


Figure 18:



Produced by the Kentucky Injury Prevention and Research Center, July 2017. Data source: Kentucky All Schedule Prescription Electronic Reporting, Kentucky Office of Inspector General, Cabinet for Health and Family Services.

### County Dispensing Rates

Rates of Dispensing by Drug Class or Type by Kentucky County, 1st Quarter 2017*							
County	Alprazolam	All Opioids	Opioids, Excl. Bup.-Nalox.	Hydro- codone	Oxy- codone	Bup.-Nalox.	Stimulants
Adair	37	342	275	169	34	67	23
Allen	39	282	265	164	47	17	29
Anderson	35	298	243	132	49	55	54
Ballard	41	278	264	160	59	14	62
Barren	32	283	245	152	38	36	39
Bath	40	389	266	112	75	123	38
Bell	115	627	520	328	41	107	21
Boone	21	186	175	57	72	12	76
Bourbon	36	336	234	106	61	102	50
Boyd	23	187	133	57	35	53	44
Boyle	37	273	227	132	41	47	46
Bracken	54	280	257	97	87	23	45
Breathitt	75	674	446	252	79	228	35
Breckinridge	43	226	221	122	41	5	40
Bullitt	34	205	193	105	47	12	55
Butler	26	282	270	167	48	13	38
Caldwell	53	308	281	147	62	27	49
Calloway	56	232	222	122	44	10	60
Campbell	26	200	186	62	79	14	70
Carlisle	54	338	323	184	78	16	72
Carroll	48	358	320	162	86	38	63
Carter	36	310	206	86	51	104	34
Casey	59	312	255	152	34	57	20
Christian	29	169	163	89	30	6	48
Clark	37	329	246	102	79	83	57
Clay	72	694	544	367	78	150	15
Clinton	78	417	388	198	118	29	20
Crittenden	43	374	354	197	85	20	57
Cumberland	72	458	399	249	71	59	16
Daviess	30	149	143	76	30	6	49
Edmonson	29	256	244	136	47	13	34
Elliott	42	249	158	72	41	91	19
Estill	61	593	431	225	114	162	46
Fayette	28	168	142	67	36	26	65
Fleming	53	283	243	110	65	40	36
Floyd	59	736	563	337	95	173	53

County	Alprazolam	All Opioids	Opioids, Excl. Bup.-Nalox.	Hydro-codone	Oxy-codone	Bup.-Nalox.	Stimulants
Fulton	45	326	314	193	58	12	55
Gallatin	21	276	251	89	96	25	54
Garrard	37	281	239	111	63	42	41
Grant	20	260	234	75	104	25	51
Graves	69	312	297	169	63	15	79
Grayson	42	400	386	221	62	14	56
Green	21	273	241	114	38	31	27
Greenup	45	380	295	126	78	86	85
Hancock	34	199	189	97	35	10	49
Hardin	20	226	219	117	47	7	68
Harlan	50	509	408	217	65	101	44
Harrison	40	297	235	108	60	62	41
Hart	23	243	228	122	45	15	40
Henderson	51	333	326	163	80	7	160
Henry	35	289	264	143	57	25	64
Hickman	33	211	202	116	39	9	40
Hopkins	35	334	306	169	64	27	80
Jackson	29	415	317	161	75	98	23
Jefferson	38	210	200	115	43	11	69
Jessamine	28	275	216	96	56	59	73
Johnson	50	602	445	252	77	157	54
Kenton	18	163	151	46	66	12	71
Knott	68	603	444	250	97	159	36
Knox	58	412	353	205	50	59	21
Larue	29	295	285	155	60	10	66
Laurel	42	358	268	148	45	90	31
Lawrence	32	436	295	151	63	141	40
Lee	71	764	518	315	83	246	27
Leslie	41	572	414	250	87	158	22
Letcher	24	547	408	233	70	139	29
Lewis	40	313	251	125	55	62	38
Lincoln	48	343	290	149	64	52	36
Livingston	67	446	429	238	99	17	72
Logan	32	275	261	145	54	13	29
Lyon	71	279	267	147	61	12	50
Madison	23	277	207	97	52	70	48
Magoffin	92	804	510	301	84	295	58
Marion	45	312	274	149	56	38	53

County	Alprazolam	All Opioids	Opioids, Excl. Bup.-Nalox.	Hydro-codone	Oxy-codone	Bup.-Nalox.	Stimulants
Martin	60	557	389	195	52	169	36
Mason	49	188	174	74	51	14	42
McCracken	58	346	320	178	77	27	112
McCreary	37	477	357	172	80	121	18
McLean	50	302	290	173	56	12	61
Meade	21	166	157	87	33	9	38
Menifee	48	431	313	153	76	118	40
Mercer	30	320	262	130	53	58	53
Metcalfe	42	370	328	214	45	42	40
Monroe	46	355	317	191	54	39	24
Montgomery	55	389	272	114	78	117	38
Morgan	59	428	329	160	59	98	28
Muhlenberg	63	397	349	199	81	48	66
Nelson	33	278	260	68	63	18	77
Nicholas	42	402	273	114	73	129	41
Ohio	42	315	297	175	48	18	45
Oldham	27	139	131	70	31	7	83
Owen	24	226	195	81	65	32	29
Owsley	48	895	565	328	82	330	36
Pendleton	22	247	228	72	94	20	52
Perry	81	777	543	282	110	235	63
Pike	31	362	275	168	35	87	23
Powell	99	593	435	211	121	158	48
Pulaski	63	321	253	126	53	68	38
Robertson	53	243	209	98	58	33	59
Rockcastle	33	391	308	165	70	82	26
Rowan	30	277	199	83	46	78	44
Russell	14	117	90	54	13	27	8
Scott	27	271	204	92	54	67	69
Shelby	30	210	198	111	44	12	61
Simpson	33	235	219	121	45	16	28
Spencer	35	240	225	118	53	15	55
Taylor	41	316	277	138	47	39	36
Todd	34	210	207	121	38	3	43
Trigg	41	269	258	135	52	11	48
Trimble	31	250	232	129	49	18	43
Union	43	314	312	171	68	2	136
Warren	21	217	205	114	40	13	54



County	Alprazolam	All Opioids	Opioids, Excl. Bup.-Nalox.	Hydro-codone	Oxy-codone	Bup.-Nalox.	Stimulants
Wayne	51	356	297	167	54	59	23
Webster	46	380	363	188	85	17	96
Whitley	75	636	500	270	96	136	48
Wolfe	70	540	425	241	79	115	39
Woodford	31	224	196	91	45	28	73
*All rates are based on prescriptions dispensed per 1000 persons							