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KASPER QUARTERLY THRESHOLD ANALYSIS REPORT

THIRD QUARTER 2017

Prepared by
Dana Quesinberry, JD



KASPER Quarterly Threshold Analysis Report, Third Quarter 2017

The Kentucky Injury Prevention and Research Center, as bona fide agent for the Kentucky Department for Public Health, prepares this report to provide 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 Third Quarter 2017 are presented for each dispensed controlled substance class or specific controlled substance.

There is a substantial increase in the number of controlled substances prescriptions dispensed that was captured by KASPER. This increase is due, in part, to the scheduling of gabapentin in Kentucky as a Schedule V controlled substance.

Your feedback is important to us. After you review the report, please click on this link to complete the evaluation survey:

<https://www.surveymonkey.com/r/KASPER3rdQTR2017ThresholdReportFeedback>

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

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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 controlled substance prescription dispensing rates were for females 55 to 64 years of age at 1,258 prescriptions dispensed per 1,000 females and for females 45 to 54 years of age at 1,149 prescriptions dispensed per 1,000. The overall dispensing rate for all controlled substances sharply increased from the first quarter of 2017 due, in part, to the scheduling and reporting of gabapentin dispensing in Kentucky as a Schedule V Controlled Substance in July 2017.
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 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 100 prescriptions dispensed per 1,000 females. The overall dispensing rate for alprazolam declined for the eighth consecutive quarter.
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 147 prescriptions per 1,000 males. The buprenorphine-naloxone dispensing rate increased for the tenth consecutive quarter.
4. *Hydrocodone Dispensing:* Females 17 years of age and older were dispensed hydrocodone at higher rates than males. The highest hydrocodone dispensing rates were for females and males 55 to 64 years of age at 249 prescriptions dispensed per 1,000 females and 240 prescriptions per 1,000 males. The dispensing rates for hydrocodone declined for the eighth consecutive quarter.
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 8 prescriptions per 1,000 males. Methadone dispensing rates declined for the seventh consecutive quarter.
6. *All Opioids:* Females of all ages had higher opioid dispensing rates than males; the highest rates were for females and males aged 55 to 64 years at 515 prescriptions per 1,000 and 496 per 1,000 for females and males, respectively. Opioid prescription dispensing rates declined for the fourth consecutive quarter.
7. *Opioids, excluding Buprenorphine-Naloxone:* By excluding buprenorphine-naloxone dispensing, the opioid dispensing rates may better represent opioid use for pain control. Females of all ages had higher dispensing rates than males. The highest rates were for females and males aged 55 to 64 years at 496 non-buprenorphine-naloxone prescriptions per 1,000 and 473 prescriptions per 1,000 for females and males, respectively. Trend comparisons for opioids, excluding buprenorphine-naloxone, are preliminary. Dispensing

rates for opioids, excluding buprenorphine-naloxone, decreased from 253 prescriptions per 1,000 persons to 240 per 1000 persons.

8. *Oxycodone Dispensing:* Females under the age of 55 years had higher oxycodone dispensing rates compared to males. After 55 years of age, males were dispensed higher rates than females. The highest dispensing rates were for males and females aged 55 to 64 years at 125 prescriptions dispensed per 1,000 for males and 119 per 1,000 for females. The overall dispensing rate declined for the second consecutive quarter.
9. *Schedule II Stimulant Dispensing:* Schedule II stimulants include amphetamine (e.g. Adderall) and methylphenidate (e.g. Concerta, Ritalin). The Schedule II stimulant dispensing rates were highest for males and females aged 0 to 16 years at 165 prescriptions dispensed per 1,000 for males and 71 per 1,000 for females. Dispensing rates for Schedule II stimulants increased in 3rd Quarter 2017 from 2nd Quarter 2017 slightly.
10. *County Resident Dispensing Rates:* Dispensing rates vary widely by both county and substance.
 - a. Alprazolam dispensing rates were highest in Bell (103 prescriptions per 1,000 persons), Powell (84 per 1,000), and Clinton (78 per 1,000) counties. The lowest alprazolam dispensing rates were in Russell (14 per 1,000), Kenton (18 per 1,000), and Grant (19 per 1,000) counties.
 - b. Buprenorphine-naloxone dispensing rates were highest in Owsley (333 per 1,000), Magoffin (272 per 1,000), and Lee (262 per 1,000) counties. The lowest buprenorphine-naloxone dispensing rates were in Union (2 per 1,000), Todd (5 per 1000), and Oldham and Daviess (6 per 1,000) counties.
 - c. Opioid, excluding buprenorphine-naloxone, dispensing rates were highest in Owsley (580 per 1,000), Floyd (526 per 1,000), and Clay (516 per 1,000) counties. The lowest opioid, excluding buprenorphine-naloxone, dispensing rates were in Russell (84 per 1,000), Boyd (124 per 1,000), and Oldham (126 per 1,000) counties.
 - d. Hydrocodone dispensing rates were highest in Owsley (348 per 1,000), Clay (341 per 1,000), and Bell (317 per 1,000) counties. The lowest hydrocodone dispensing rates were in Kenton (44 per 1,000), Russell (48 per 1,000), and Boone and Boyd (53 per 1,000) counties.
 - e. Oxycodone dispensing rates were highest in Powell and Clinton (116 per 1,000), Perry (106 per 1,000), and Estill (104 per 1,000) counties. The lowest oxycodone dispensing rates were in Russell (15 per 1,000), Davies and Oldham (29 per 1,000), and Boyd (31 per 1,000) counties.
 - f. Schedule II Stimulant dispensing rates were highest in Henderson (140 per 1,000), Union (111 per 1,000), and McCracken (106 per 1,000) counties. The lowest Schedule II Stimulant dispensing rates were in Russell (6 per 1,000), Cumberland and Clay (14 per 1,000), and Elliott (15 per 1,000) counties.

Schedule II-V Controlled Substances

Figure 1:

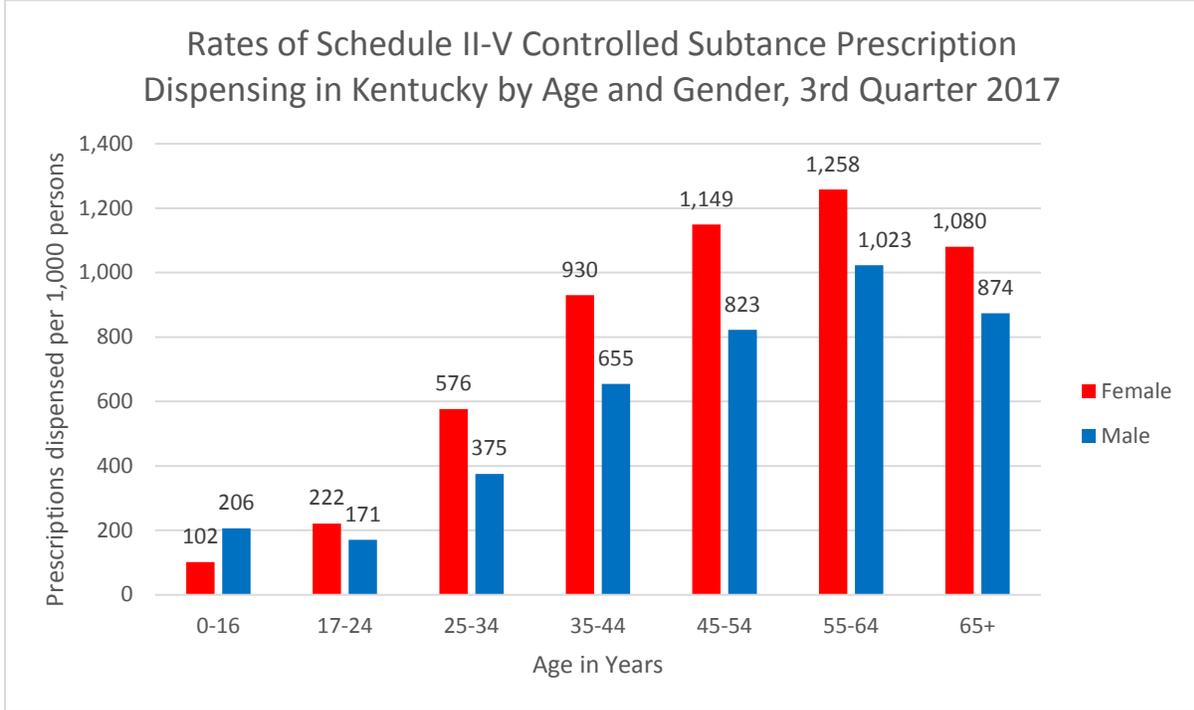
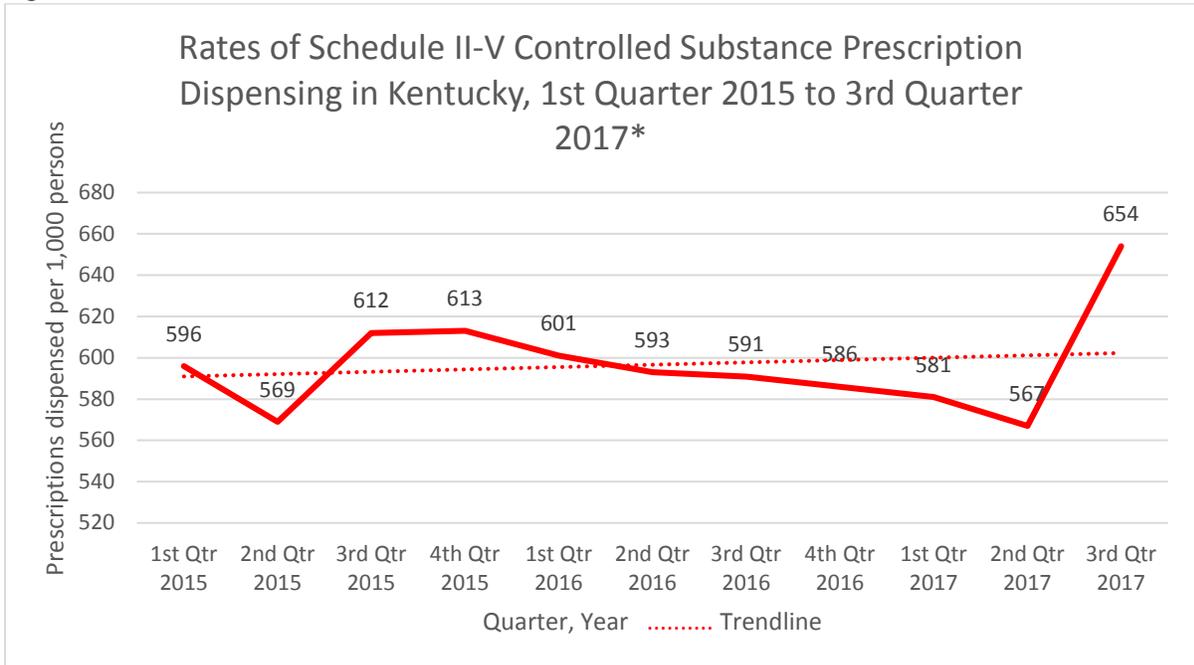


Figure 2:



* Note: The increase in the rate is due, in part, to the scheduling of gabapentin in Kentucky.

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

Alprazolam

Figure 3:

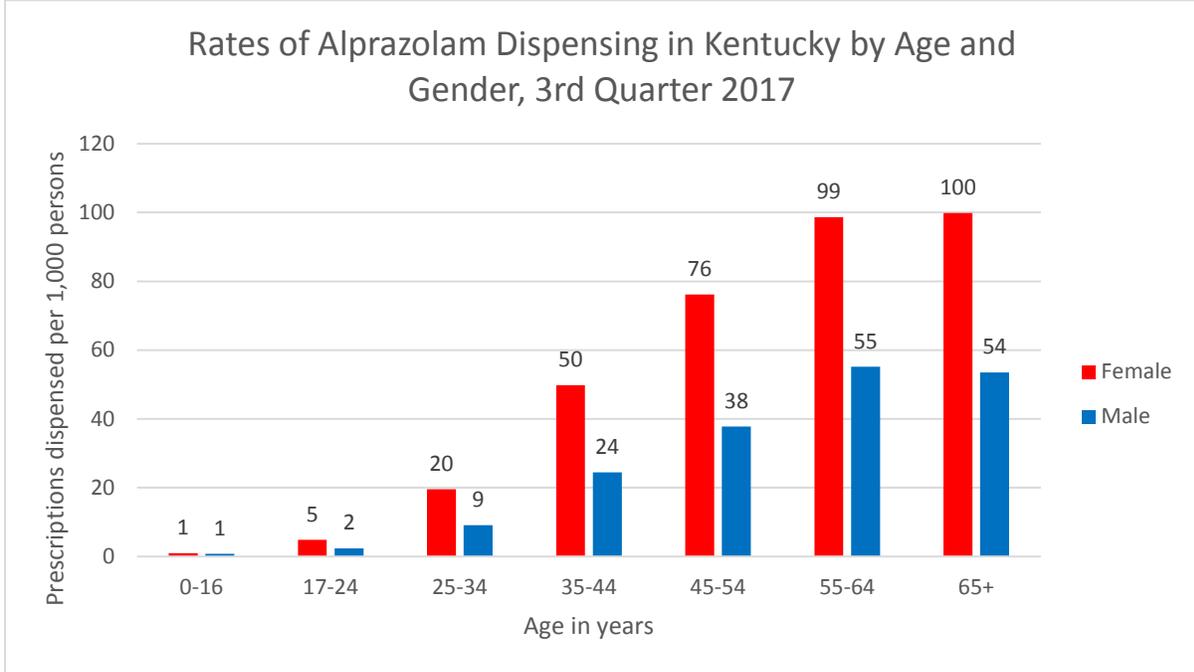
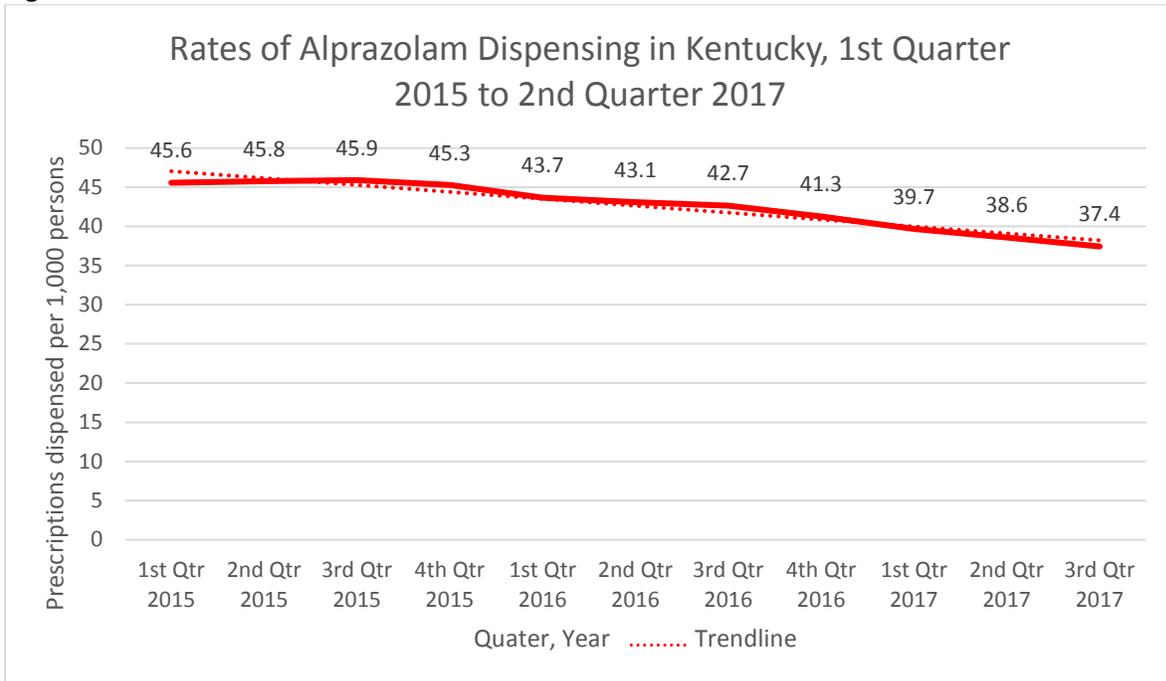


Figure 4:



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

Buprenorphine-Naloxone

Figure 5:

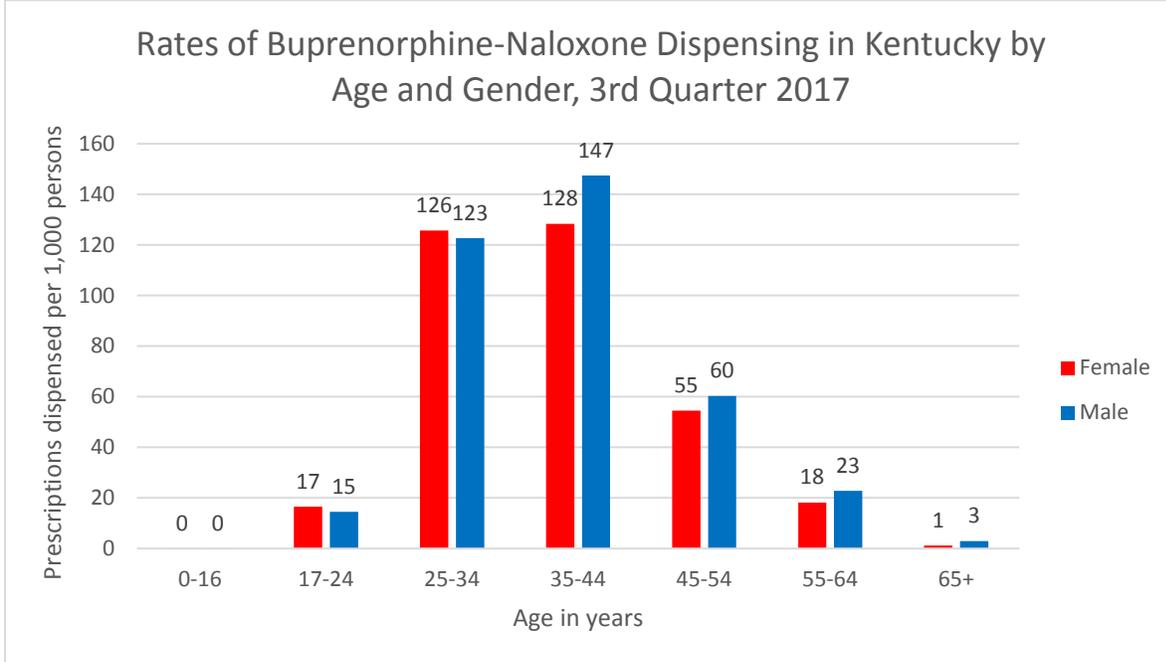
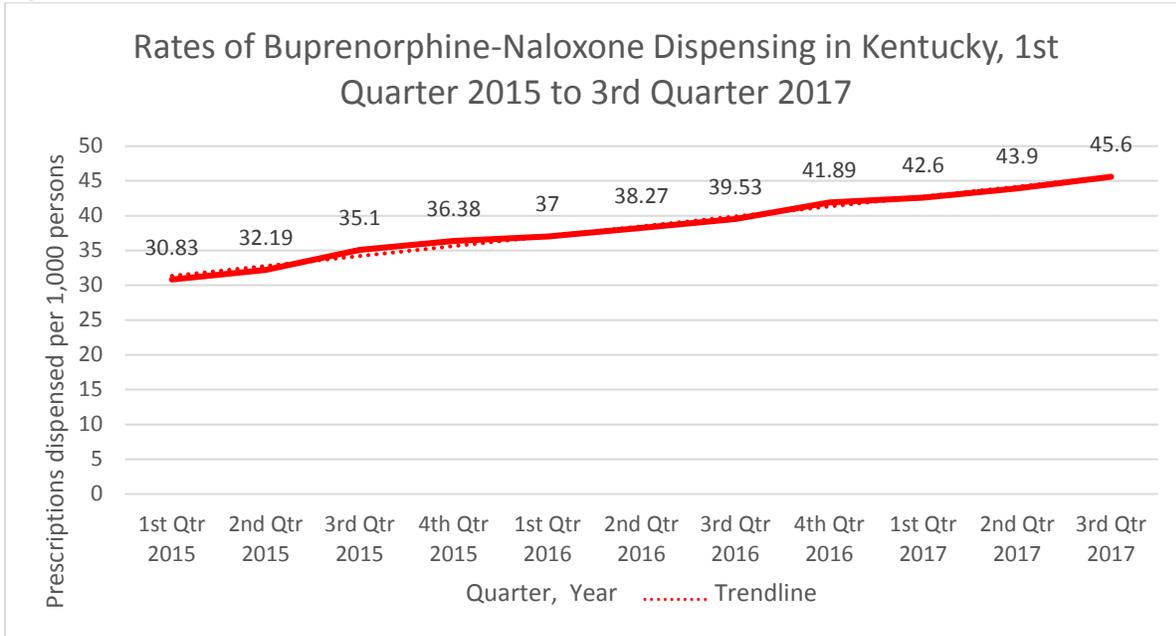


Figure 6:



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

Hydrocodone

Figure 7:

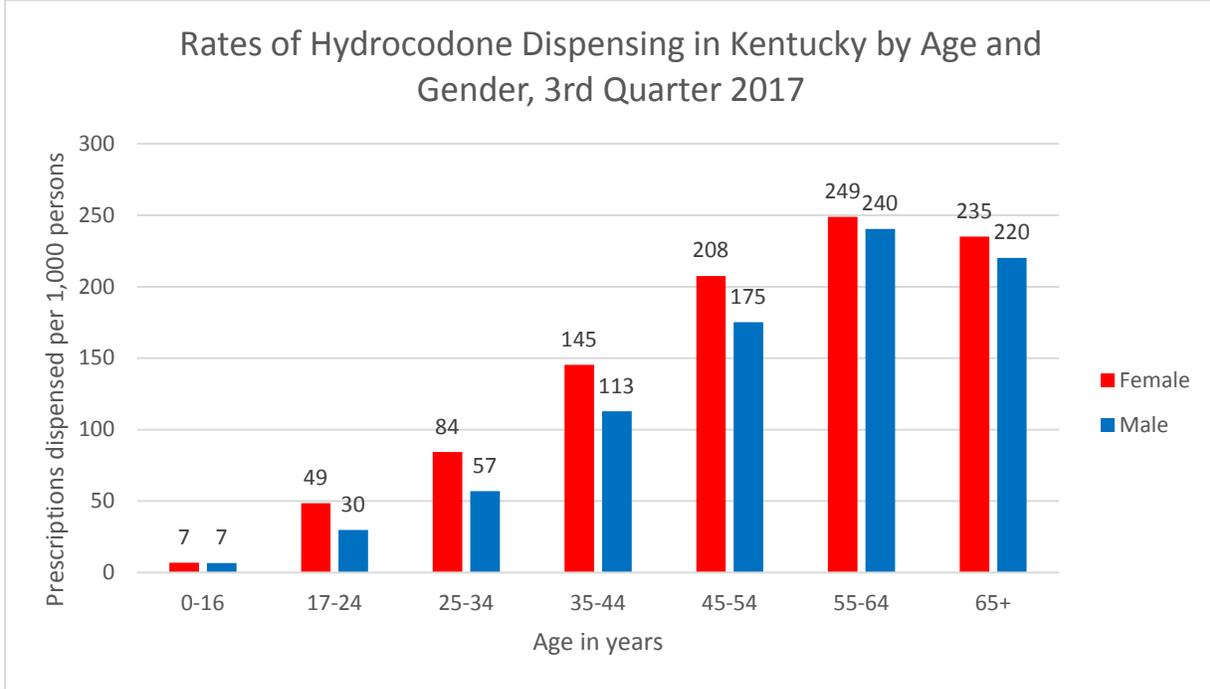
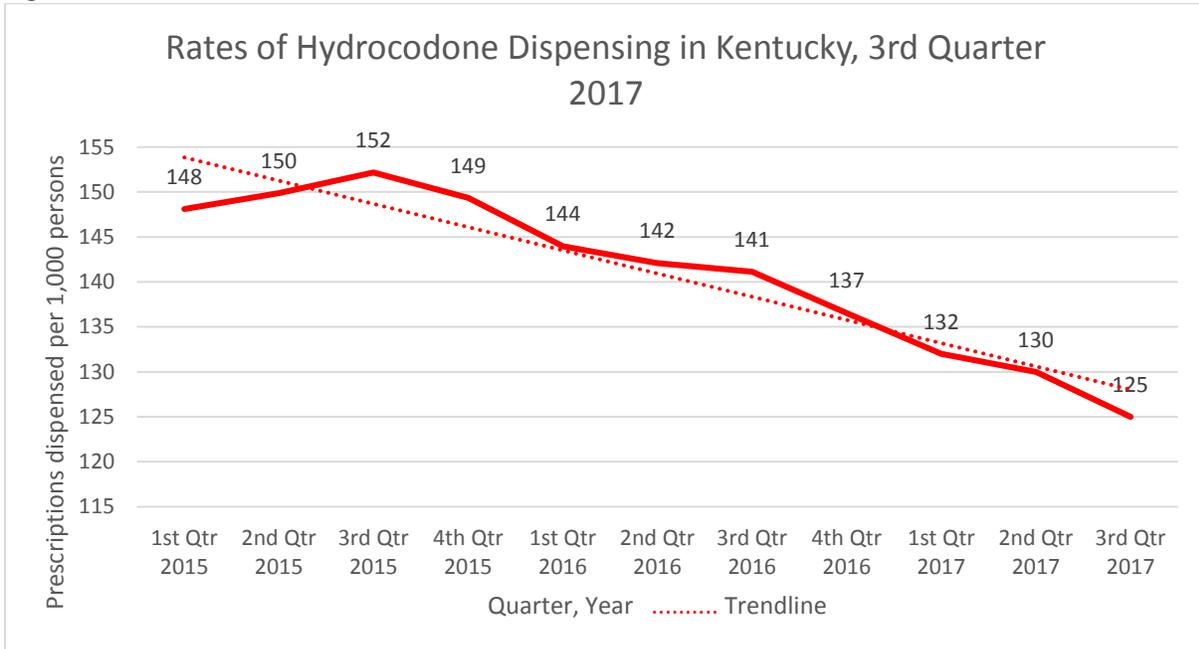


Figure 8:



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

Methodone

Figure 9:

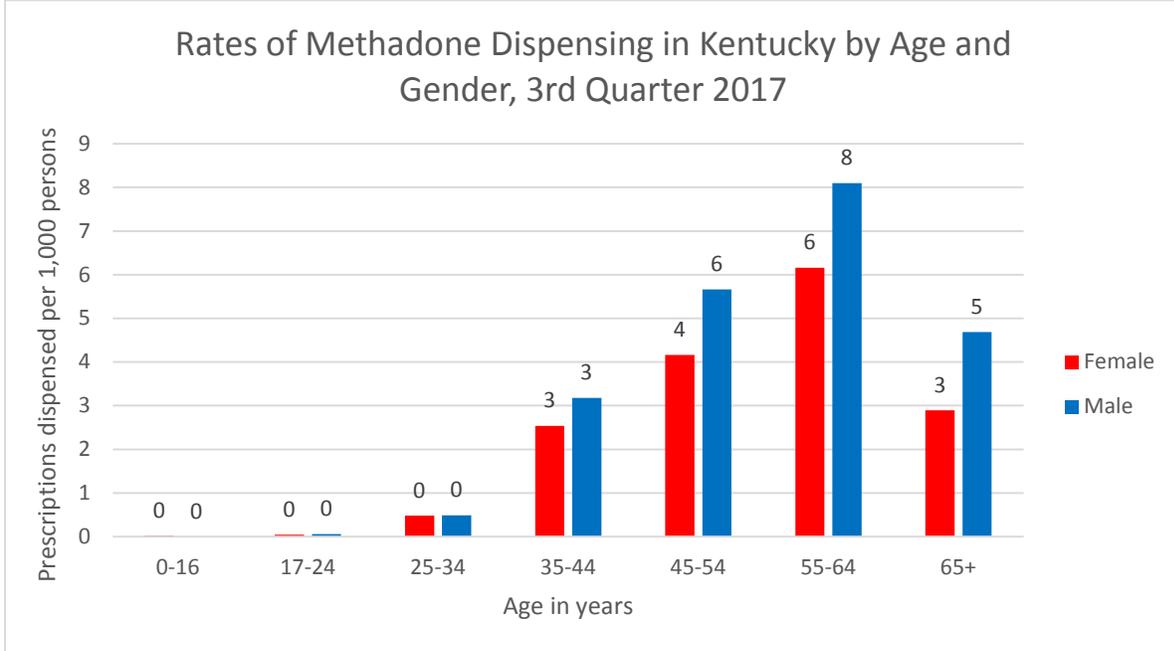
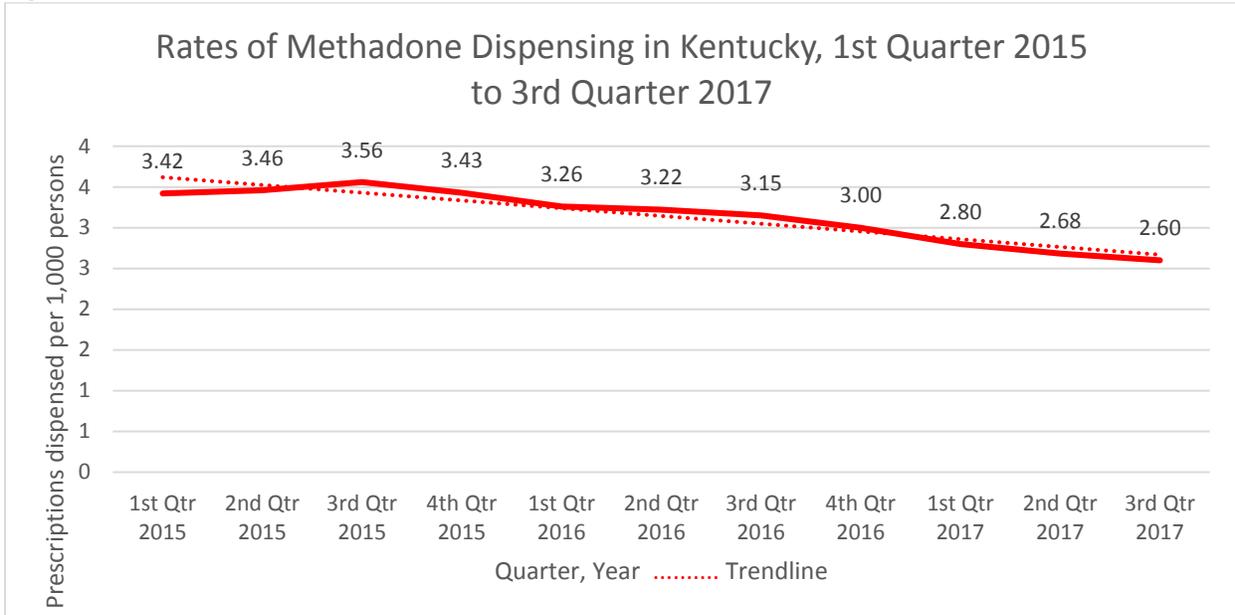


Figure 10:



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

Opioids

Figure 11:

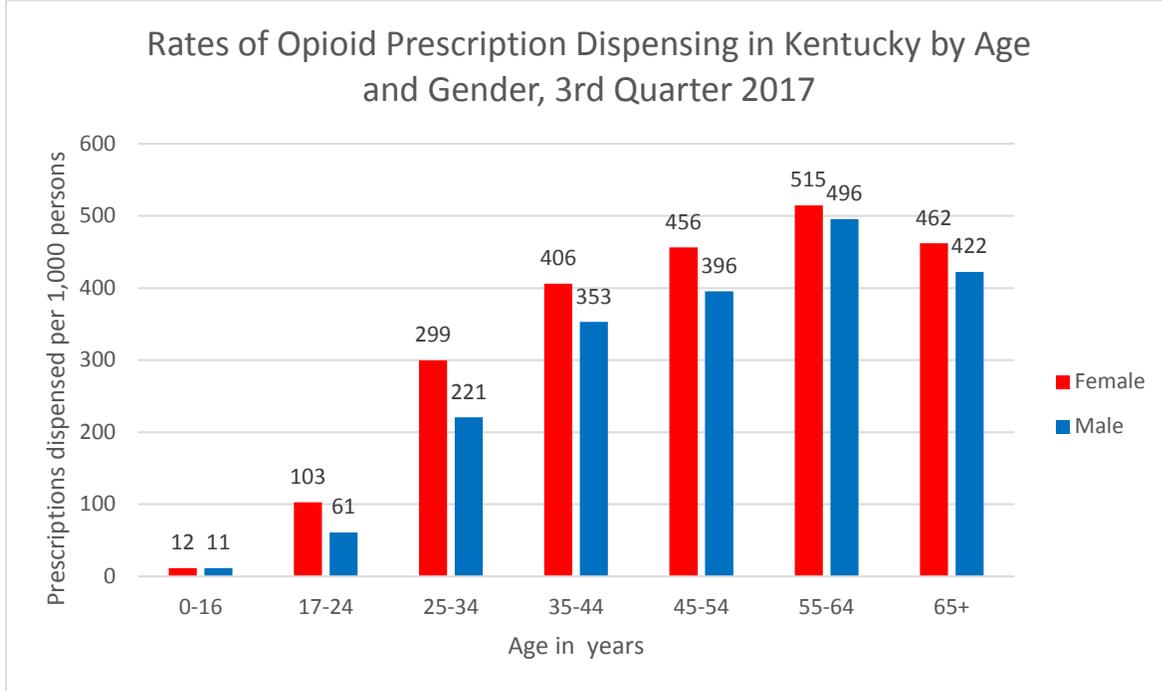
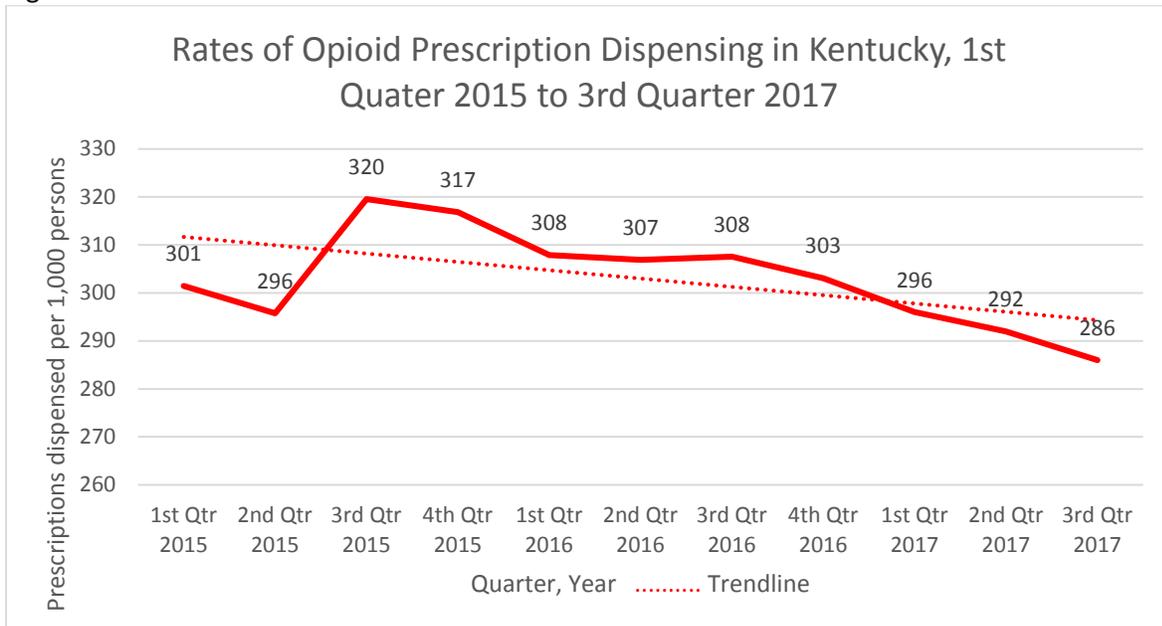


Figure 12:



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

Opioids, Excluding Buprenorphine-Naloxone

Figure 13:

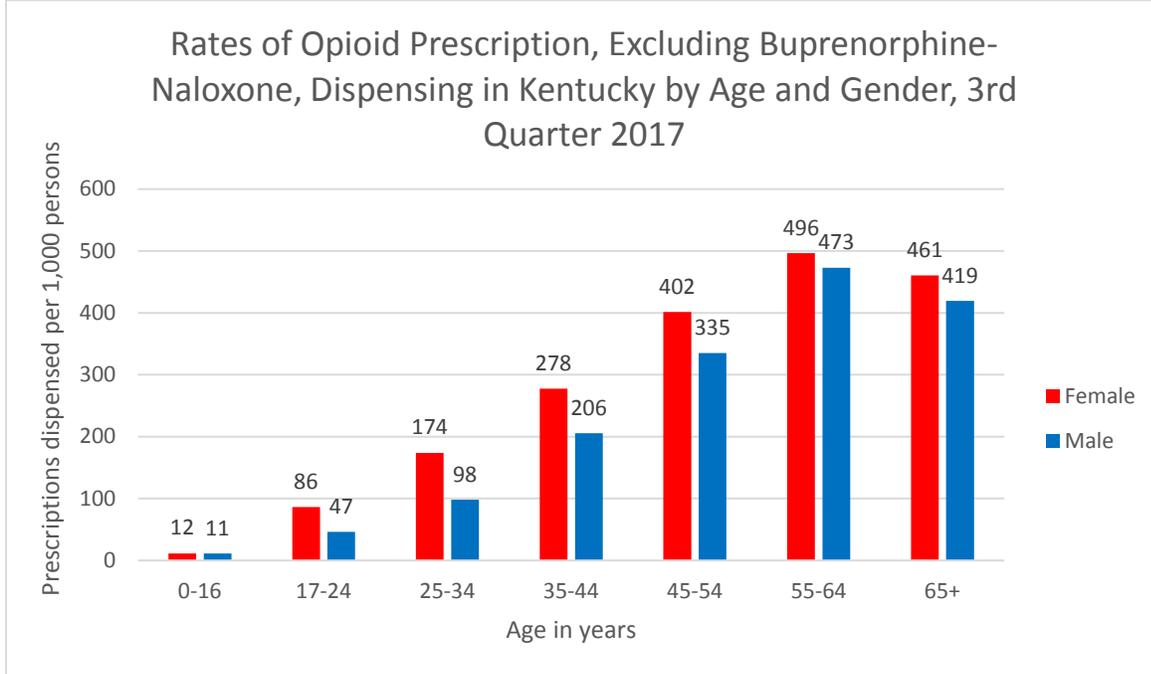
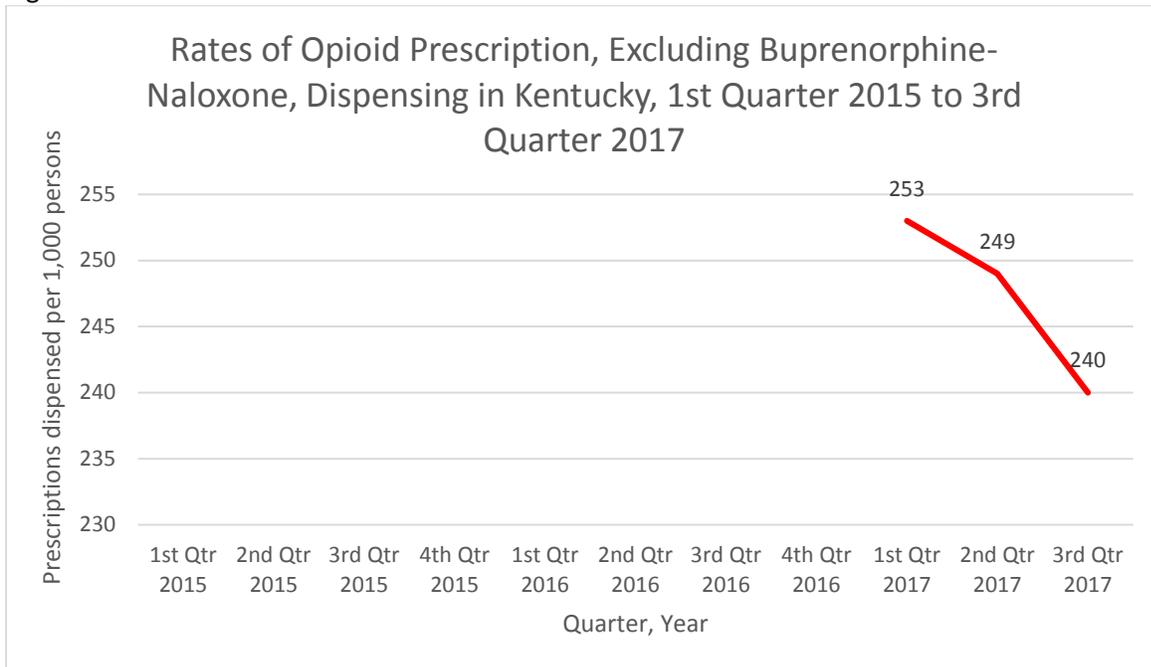


Figure 14:



Produced by the Kentucky Injury Prevention and Research Center, Nov 2017. Data source: Kentucky All Schedule Prescription Electronic Reporting, Kentucky Office of Inspector General, Cabinet for Health and Family Services. Surveillance of Opioid Prescription, excluding Buprenorphine-Naloxone began 1st Quarter 2017.

Oxycodone

Figure 15:

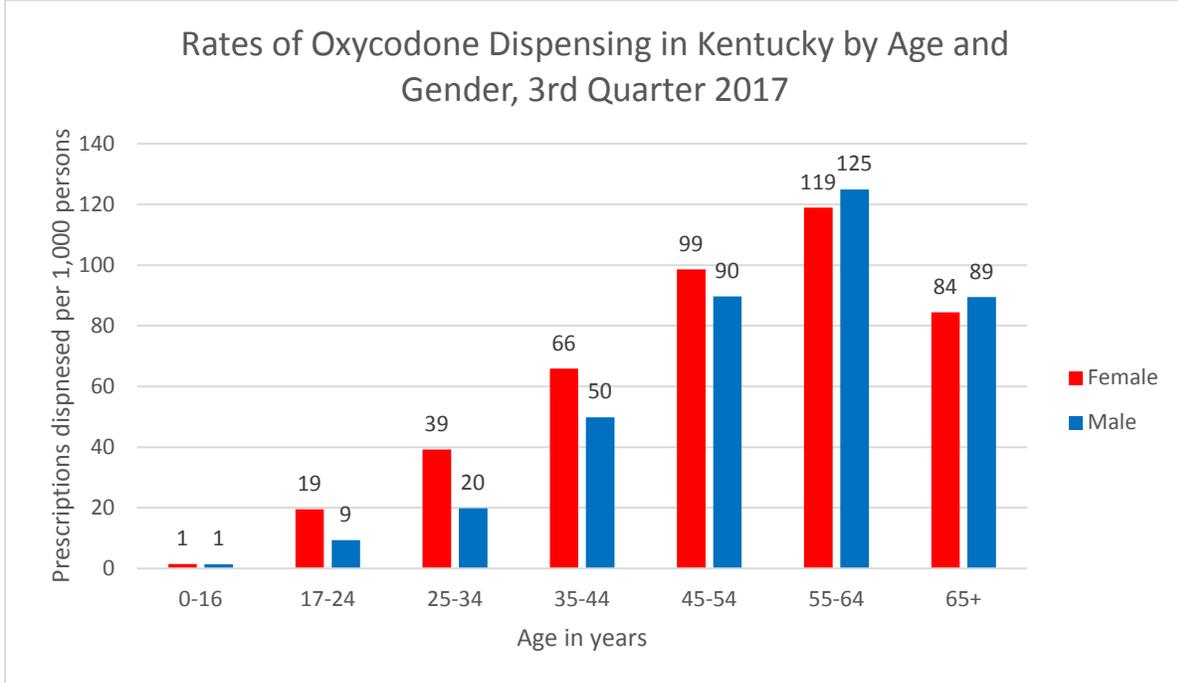
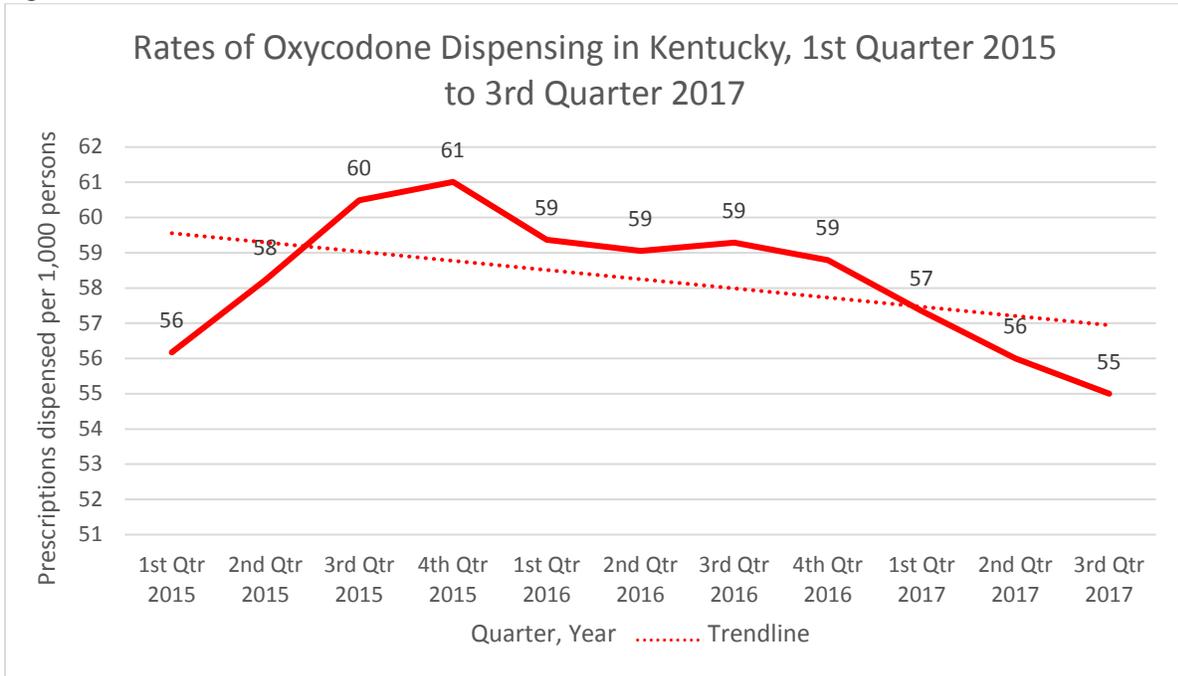


Figure 16:



Produced by the Kentucky Injury Prevention and Research Center, Nov 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:

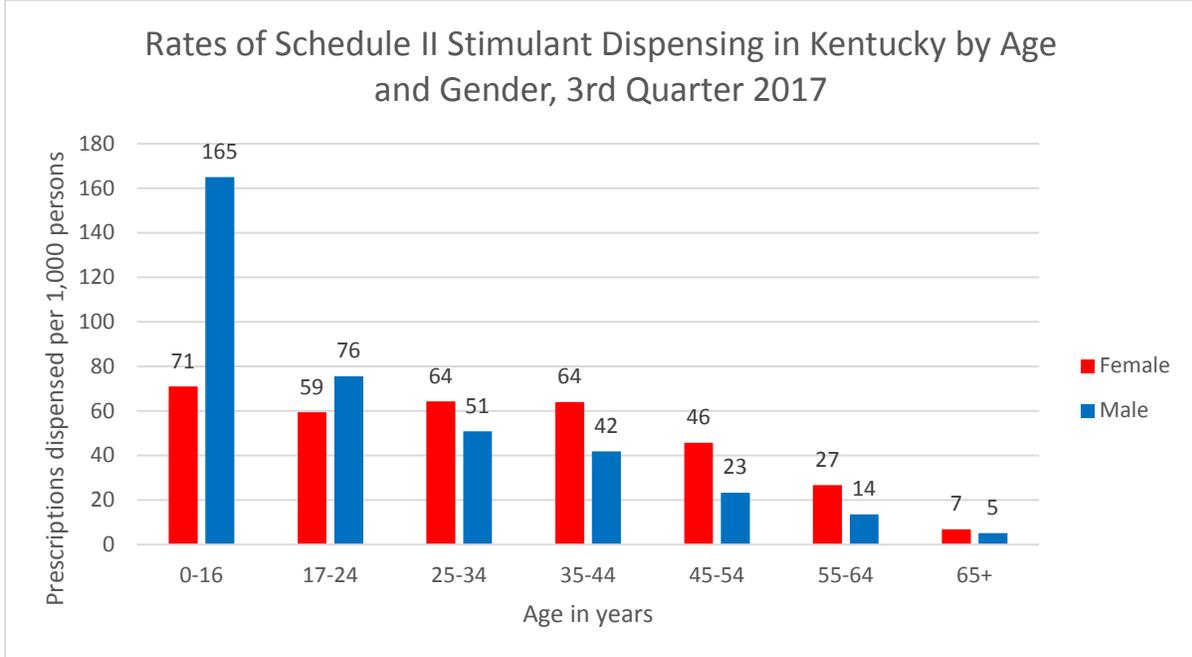
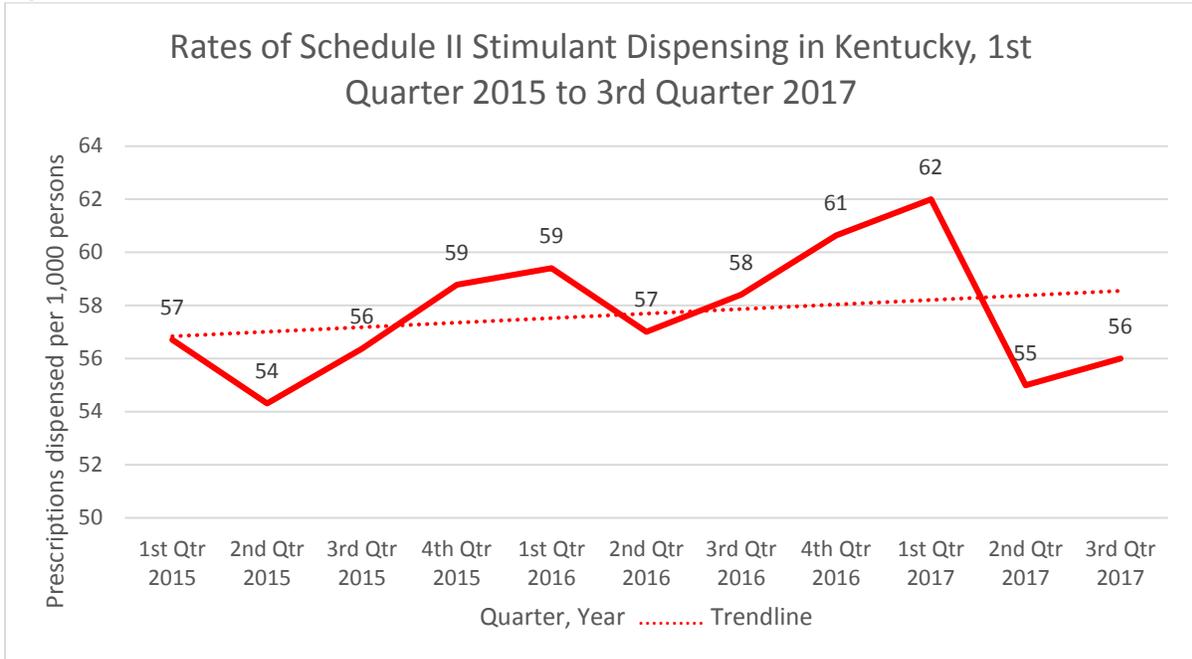


Figure 18:



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

County Resident Rates

Table 1:

Rates of Dispensing by Drug Class or Type by Kentucky County, 3rd Quarter 2017*							
County	Alprazolam	Buprenorphine/ Naloxone	All Opioids	Opioids- BN	Hydro- codone	Oxy- codone	Stimulants
Adair	36	70	328	258	162	32	23
Allen	36	19	272	253	151	48	26
Anderson	34	54	282	228	124	46	49
Ballard	43	14	280	266	156	60	57
Barren	29	38	272	234	141	43	35
Bath	38	129	383	254	109	69	33
Bell	103	138	637	499	317	39	22
Boone	21	12	176	164	53	67	69
Bourbon	33	98	324	227	101	57	49
Boyd	22	55	179	124	53	31	38
Boyle	34	46	260	214	120	39	43
Bracken	57	17	268	251	89	86	41
Breathitt	68	238	646	408	234	73	31
Breckinridge	39	7	213	206	112	40	35
Bullitt	32	14	202	188	101	46	48
Butler	25	14	272	258	158	49	34
Caldwell	51	23	291	269	135	66	45
Calloway	55	10	224	214	119	42	53
Campbell	25	14	188	174	57	76	63
Carlisle	59	14	321	307	173	77	70
Carroll	46	37	349	312	158	86	54
Carter	32	104	285	181	76	45	27
Casey	52	59	302	243	138	34	19
Christian	29	7	166	159	86	32	41
Clark	34	86	320	234	97	75	51
Clay	67	150	666	516	341	78	14
Clinton	78	43	435	392	210	116	21
Crittenden	42	20	360	340	189	80	51
Cumberland	57	80	451	371	223	69	14
Daviess	27	6	143	137	74	29	42
Edmonson	27	12	245	233	127	50	32
Elliott	41	99	247	148	66	39	15
Estill	58	180	589	409	216	104	37
Fayette	26	29	162	133	61	33	61
Fleming	52	41	262	221	100	58	35

County	Alprazolam	Buprenorphine/ Naloxone	All Opioids	Opioids- BN	Hydro- codone	Oxy- codone	Stimulants
Floyd	52	178	704	526	314	90	48
Franklin	33	58	253	196	105	40	56
Fulton	46	20	329	309	184	63	52
Gallatin	24	26	266	240	85	99	48
Garrard	36	50	280	230	109	59	41
Grant	19	21	245	224	69	100	45
Graves	66	22	305	283	160	62	72
Grayson	40	15	374	360	206	58	45
Green	21	32	267	235	112	35	25
Greenup	43	84	355	271	115	69	71
Hancock	30	8	192	184	98	34	45
Hardin	20	8	214	206	109	45	59
Harlan	47	115	505	390	204	66	38
Harrison	36	62	281	218	96	55	21
Hart	23	16	236	221	118	45	34
Henderson	47	8	308	301	150	77	140
Henry	32	28	286	259	138	55	61
Hickman	30	9	209	200	114	40	36
Hopkins	31	29	319	290	159	62	70
Jackson	27	111	416	305	154	70	24
Jefferson	36	12	198	187	107	41	61
Jessamine	27	70	270	199	88	49	66
Johnson	48	137	564	427	243	71	45
Kenton	18	13	162	149	44	67	65
Knott	60	152	567	415	238	92	31
Knox	55	67	410	343	198	50	19
Larue	27	13	277	264	145	57	59
Laurel	40	95	348	253	137	43	27
Lawrence	29	180	452	273	139	57	36
Lee	64	262	734	472	279	74	27
Leslie	38	179	580	401	236	87	20
Letcher	24	164	553	390	216	68	26
Lewis	36	63	285	222	104	49	34
Lincoln	45	65	329	264	139	57	29
Livingston	66	21	433	413	228	98	64
Logan	29	12	267	255	140	53	25
Lyon	72	19	284	264	140	64	47

County	Alprazolam	Buprenorphine/ Naloxone	All Opioids	Opioids- BN	Hydro- codone	Oxy- codone	Stimulants
Madison	23	79	280	200	95	50	45
Magoffin	73	272	722	450	260	71	50
Marshall	45	39	299	260	145	54	45
Marion	56	24	330	306	161	83	71
Martin	57	185	561	376	197	51	32
Mason	48	18	185	167	68	47	41
McCracken	56	23	329	305	167	78	106
McCreary	35	114	452	338	151	95	18
McLean	44	20	306	286	167	59	47
Meade	19	8	159	151	82	32	32
Menifee	43	116	415	299	157	69	31
Mercer	28	58	310	252	125	49	49
Metcalfe	40	44	370	326	201	49	34
Monroe	38	60	368	308	180	56	22
Montgomery	52	125	386	261	108	75	35
Morgan	59	110	415	305	151	55	26
Muhlenberg	55	50	382	332	190	75	59
Nelson	30	20	265	244	127	58	63
Nicholas	41	142	405	263	109	68	39
Ohio	39	21	310	289	167	49	38
Oldham	24	6	132	126	68	29	74
Owen	24	31	211	180	72	56	29
Owsley	41	333	913	580	348	89	38
Pendleton	23	19	231	212	71	88	52
Perry	78	246	742	497	265	106	49
Pike	28	95	361	266	160	33	23
Powell	84	174	585	411	203	116	46
Pulaski	58	72	318	247	119	56	34
Robertson	46	40	233	194	86	51	58
Rockcastle	29	85	383	298	152	71	22
Rowan	31	81	259	178	77	41	39
Russell	14	27	111	84	48	15	6
Scott	27	68	254	186	84	49	61
Shelby	27	15	200	185	99	42	52
Simpson	28	11	207	196	107	43	25
Spencer	29	19	227	208	112	46	51
Taylor	38	35	300	265	133	45	32

County	Alprazolam	Buprenorphine/ Naloxone	All Opioids	Opioids- BN	Hydro- codone	Oxy- codone	Stimulants
Todd	35	5	218	213	124	39	39
Trigg	43	11	261	250	127	55	44
Trimble	28	18	233	216	123	44	37
Union	42	2	303	301	161	68	111
Warren	20	15	207	192	105	40	48
Washington	26	27	222	194	99	42	41
Wayne	50	55	335	281	158	51	22
Webster	44	15	362	347	176	84	86
Whitley	71	167	640	473	251	96	43
Wolfe	65	113	523	410	231	80	32
Woodford	29	38	218	180	85	40	66

*All rates are based on prescriptions dispensed per 1000 persons