Table 1: Trends in characteristics of prescription opioid-related exposures among older adults, 2015-2021

	2015 (n=7,706) %	2016 (n=8,090) %	2017 (n=7,805) %	2018 (n=7,627) %	2019 (n=7,687) %	2020 (n=7,485) %	2021 (n=7,337) %	Absolute % Change (2015 to 2021)	Relative % Change (2015 to 2021)	P (trend)
Age										
60-69	56.9	56.8	56.9	55.8	53.6	53.0	53.3	-3.6	-6.3	<0.001
70-79	27.0	27.8	28.1	28.8	30.5	31.1	30.7	3.8	14.0	<0.001
≥80	16.1	15.5	15.1	15.4	15.9	15.9	16.0	-0.2	-1.1	0.63
Sex										
Male	37.3	37.4	38.5	38.8	38.1	38.4	38.8	1.5	3.9	0.04
Female	62.7	62.6	61.5	61.3	61.9	61.6	61.2	-1.5	-2.3	0.04
Opioid Used										
Hydrocodone	36.1	35.9	34.2	34.3	32.3	32.1	32.7	-3.4	-9.3	<0.001
Oxycodone	30.5	31.3	30.0	30.7	30.6	31.6	29.6	-0.9	-3.0	0.62
Tramadol	19.8	19.7	20.6	21.1	21.4	19.7	20.6	0.8	3.9	0.20
Morphine	9.7	8.9	10.1	8.3	8.4	8.8	7.6	-2.1	-22.0	<0.001
Methadone	4.3	3.9	4.5	4.0	4.7	4.9	4.7	0.4	9.1	0.01
Hydromorphone	3.2	2.8	2.8	2.5	2.7	2.7	2.4	-0.7	-23.3	0.01
Fentanyl	2.8	2.9	2.9	2.6	2.3	2.4	3.7	1.0	34.9	0.19
Buprenorphine	1.4	1.4	2.1	2.7	3.4	3.7	4.6	3.1	216.0	<0.001
Oxymorphone	0.7	0.8	0.7	0.2	0.1	0.2	0.2	-0.6	-78.1	<0.001
Tapentadol	0.6	0.8	0.7	0.6	0.5	0.5	0.5	-0.1	-10.9	0.03
Reason										
Intentional – Suspected Suicidal	28.5	29.6	31.7	34.7	34.3	31.4	31.5	3.0	10.6	<0.001
Intentional - Misuse	9.4	8.8	8.3	7.6	7.1	7.0	7.2	-2.2	-23.3	0.05
Intentional – "Abuse"	3.1	3.2	3.3	3.5	3.5	4.5	5.0	2.0	63.3	<0.001
Unintentional - Therapeutic Error	42.1	42.2	40.2	39.2	39.6	41.0	40.1	-2.0	-4.8	0.002
Intentional - unknown	3.7	4.4	4.7	4.0	3.8	4.3	3.9	0.2	5.3	0.66
Adverse reaction	6.7	5.8	6.0	5.2	5.7	6.0	5.2	-1.5	-22.1	0.003
Other reason	6.4	6.1	5.8	5.9	6.0	5.9	7.0	0.5	8.3	0.41
Polydrug Use										
Alcohol	4.7	5.3	5.7	5.7	5.6	5.1	5.4	0.7	14.4	0.25
Cannabis	0.2	0.3	0.3	0.5	0.3	0.3	0.6	0.3	154.5	0.001
Cocaine	0.1	0.1	0.2	0.3	0.2	0.4	0.5	0.4	488.9	<0.001
Methamphetamine	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	220.0	0.02
Benzodiazepines	15.7	15.7	15.3	15.0	13.8	12.0	11.7	-4.0	-25.5	<0.001
Heroin	0.1	0.2	0.3	0.4	0.4	0.4	0.4	0.3	208.3	<0.001
Gabapentin	4.6	5.4	6.0	6.6	6.0	6.4	6.6	2.0	43.8	<0.001
Medical Outcome[1]										
None	21.6	21.2	21.9	21.8	21.4	20.6	20.3	-1.2	-5.8	0.08
Mild	34.4	33.8	29.8	29.0	25.4	26.8	25.1	-9.3	-26.9	<0.001
Moderate	33.4	33.5	35.8	35.4	34.5	34.0	35.1	1.7	5.1	0.18
Major	9.3	10.3	11.3	12.8	17.6	17.4	18.0	8.7	93.9	<0.001
Death	1.3	1.2	1.3	1.1	1.2	1.2	1.4	0.1	6.0	0.92

[1] Mild outcomes defined as minimally bothersome; moderate effects were more pronounced or prolonged; and major effects were life-threatening or permanently disabling. Death was listed in cases where the drugs involved were determined to either be responsible for or contributory toward death.

Table 2: Medical outcomes by opioid type and polydrug use (2015-2021)

	None, % (n=7,717)	Mild[1], % (n=10,595)	Moderate[1], % (n=12,530)	Major[1], % (n=4,999)	Death[1], % (n=454)	P
Opioid Used						
Hydrocodone	34.1	34.8	33.0	30.9	38.6	<0.001
Oxycodone	29.2	30.6	32.5	35.5	34.8	<0.001
Tramadol	22.9	22.1	18.2	14.1	13.2	<0.001
Morphine	9.7	7.6	8.8	9.8	11.2	<0.001
Methadone	2.9	3.5	6.5	8.5	4.0	<0.001
Hydromorphone	2.4	2.4	3.0	2.9	2.2	0.05
Fentanyl	1.8	2.3	3.4	6.7	5.5	<0.001
Buprenorphine	1.4	2.8	3.4	2.9	1.5	<0.001
Oxymorphone	0.5	0.4	0.5	0.3	0.2	0.50
Tapentadol	0.8	0.6	0.6	0.6	0.2	0.26
Polydrug Use						
Alcohol	2.8	7.1	9.2	8.1	5.3	<0.001
Cannabis	0.1	0.4	0.6	0.6	0.4	<0.001
Cocaine	0.1	0.2	0.5	0.7	0.4	<0.001
Methamphetamine	0.0	0.1	0.2	0.2	0.4	0.001
Benzodiazepines	8.4	15.7	21.0	25.9	24.0	<0.001
Heroin	0.0	0.2	0.4	1.1	0.4	<0.001
Gabapentin	5.3	5.5	7.0	7.4	6.8	<0.001

[1] Mild outcomes defined as minimally bothersome; moderate effects were more pronounced or prolonged; and major effects were life-threatening or permanently disabling. Death was listed in cases where the drugs involved were determined to either be responsible for or contributory toward death.

Note. Percentages presented are column percentages. Chi-square and Fisher's Exact Test were used to compare the prevalence of medical outcome related to the opioid used (vs. cases not involving use of the specific opioid) and co-use of specific drugs (vs. cases without co-use of that drug).