

Long-term trajectories of prescription opioid use in NSW, Australia

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The Difference is Research

Background

- Opioid use is widespread in Australia and internationally.
- There are particular concerns about the long-term use of opioids, especially for chronic non-cancer pain where the benefits of use may not outweigh the potential harms.
- Definitions of long-term opioid use are highly variable, with most previous studies using follow-up periods up to one year.^{1,2}
- Less is known about the long-term trajectories of use following opioid initiation.

Aim

- To examine 5-year trajectories of opioid use from the time of opioid initiation and the individual characteristics associated with different trajectories of use.

Methods

- Data from POPPY II Cohort: a population-based cohort study of people initiating prescription opioids (2003–2018) in New South Wales (NSW), Australia, linked to a range of healthcare datasets.²
- New opioid users were defined using a 12-month look-back period: 3,474,490 individuals were followed for five-years.
- Group-based trajectory modelling was used to determine trajectories of monthly opioid use over five-years from the date of first opioid initiation.³
- Individual characteristics at baseline were examined for each trajectory including: sociodemographic characteristics, comorbidities, prior hospitalisations, prior use of psychotropic and analgesic medicines, and type of initial opioid use.

Conclusions

- Most individuals had relatively low use of opioids over a five-year period.
- Individuals with sustained or increasing use were older with more co-morbidities and other medicine use, likely reflecting a higher prevalence of pain and treatment needs in these individuals.

Impact

- Understanding the individual characteristics of people with different trajectories of opioid use may be a potential mechanism of preventing future harms from long-term opioid use.

Results

Figure 1. 5-year trajectories of prescription opioid use

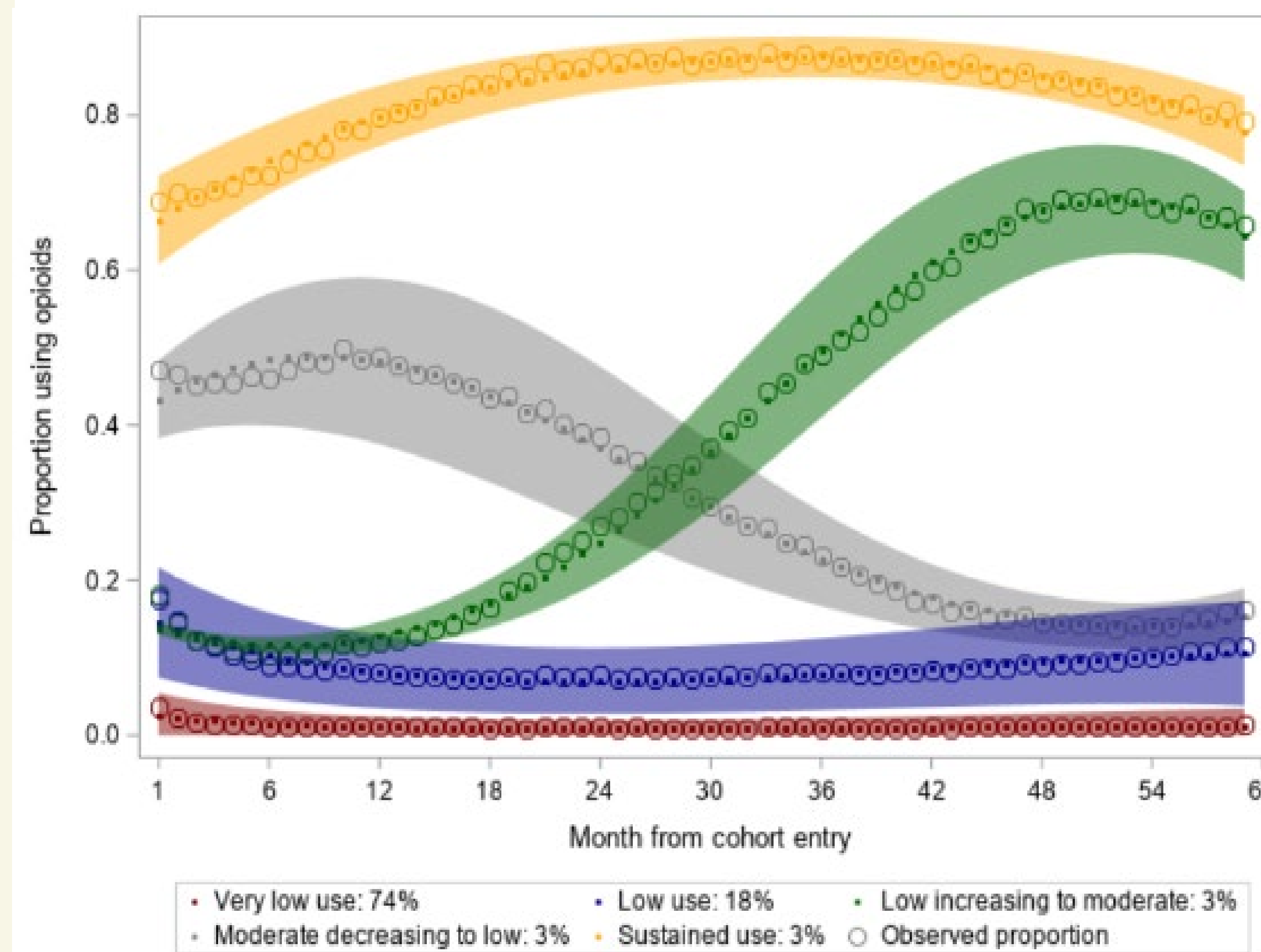
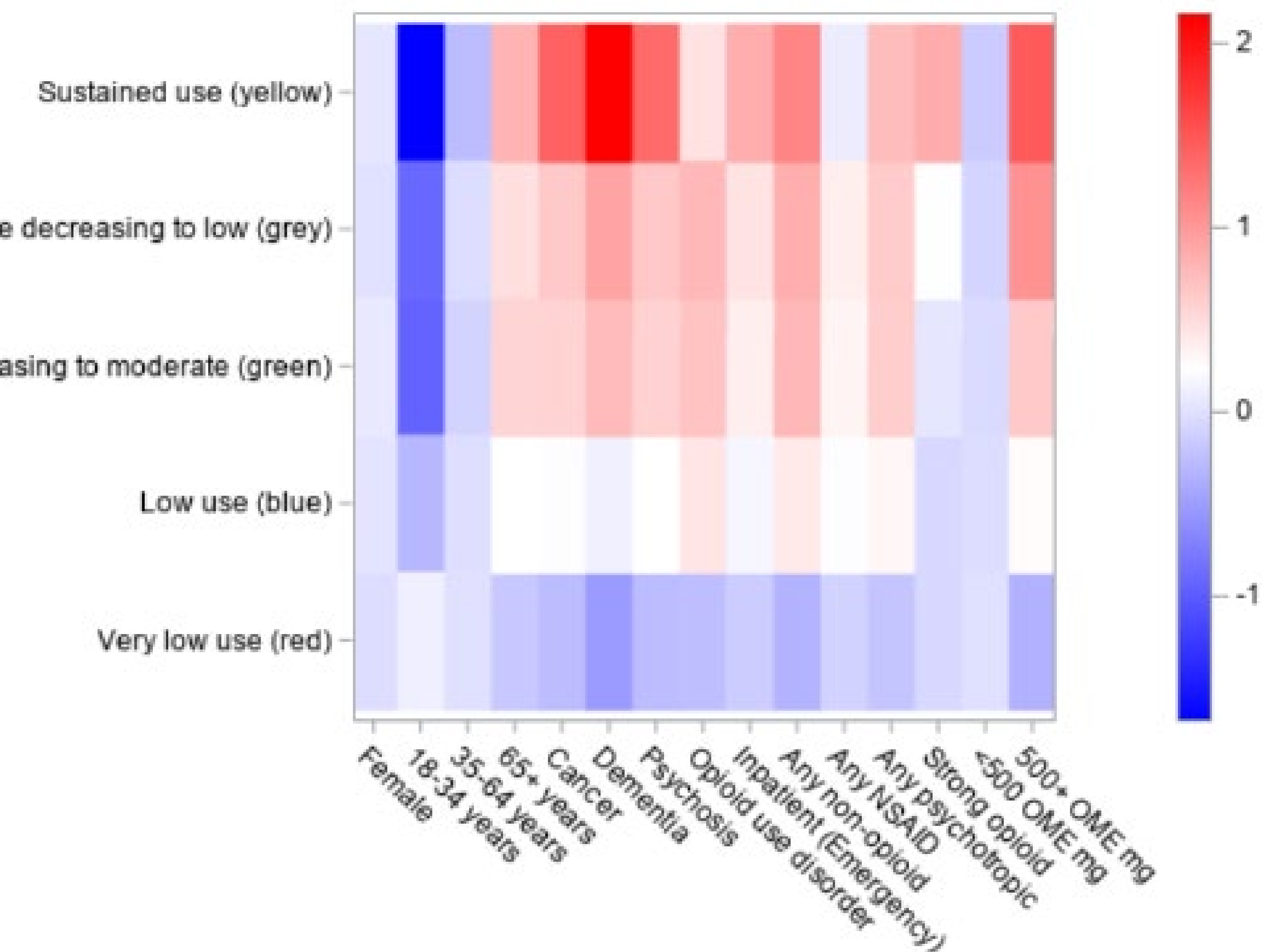


Figure 2. Heat map of relative prevalence of baseline characteristics by group



Results (continued)

Table 1: Baseline cohort characteristics by group

Baseline characteristics	Very low use n = 2,621,472	Low use n = 575,488	Low increasing to moderate n = 90,667	Moderate decreasing to low n = 90,828	Sustained use n = 96,035
Female	1,360,894 (51.9%)	316,234 (55%)	51,704 (57%)	48,787 (53.7%)	53,611 (55.8%)
18-34 years	783,525 (29.9%)	112,956 (19.6%)	9,500 (10.5%)	9,867 (10.9%)	4,767 (5%)
35-64 years	1,261,677 (48.1%)	271,143 (47.1%)	39,520 (43.6%)	42,538 (46.8%)	35,150 (36.6%)
65+ years	576,270 (22.0%)	191,338 (33.3%)	41,647 (45.9%)	38,423 (42.3%)	56,118 (58.4%)
Cancer	107,001 (5.9%)	38,458 (6.7%)	8,538 (9.4%)	9,195 (10.1%)	21,364 (22.2%)
Inpatient (Emergency)	335,939 (12.8%)	100,950 (17.5%)	19,315 (21.3%)	20,973 (23.1%)	33,373 (34.8%)
Strong opioid	525,633 (20.1%)	115,592 (20.1%)	20,246 (22.3%)	24,319 (26.8%)	48,218 (50.2%)
Dementia	12,669 (0.5%)	5,296 (0.9%)	1,579 (1.7%)	1,854 (2.0%)	6,740 (7.0%)
Psychosis	50,473 (1.9%)	18,353 (3.2%)	4,056 (4.5%)	4,363 (4.8%)	9,313 (9.7%)
Opioid use disorder	8,011 (0.3%)	3,480 (0.6%)	707 (0.8%)	773 (0.9%)	594 (0.6%)
Non-opioid analgesic use	199,091 (7.6%)	90,979 (15.8%)	20,949 (23.1%)	22,349 (24.6%)	32,247 (33.6%)
NSAID use	438,791 (16.7%)	133,498 (23.2%)	23,158 (25.5%)	24,130 (26.6%)	19,564 (20.4%)
Psychotropic medicine use	430,540 (16.4%)	158,001 (27.5%)	33,857 (37.3%)	34,319 (37.8%)	40,715 (42.4%)
<500 OME mg	2,550,606 (97.3%)	546,524 (95.0%)	83,981 (92.6%)	80,785 (88.9%)	79,891 (83.2%)
≥500 OME mg	70,866 (2.7%)	28,964 (5.0%)	6,686 (7.4%)	10,043 (11.1%)	16,144 (16.8%)

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