

Appendix Table. Factors Associated with Long-Acting Opioid Prescription (Compared to Short-Acting Only) Within 7 Days of Hospital Discharge in the overall cohort [47,945 hospitalizations; 942 long-acting opioid prescriptions] and a sensitivity analysis excluding beneficiaries with previous high-dose long-term opioid use in the year before hospitalization [47,912 hospitalizations; 935 long-acting opioid prescriptions]

	Overall Cohort	Sensitivity Analysis excluding previous high-dose long-term opioid use
Characteristic	Adjusted Odds Ratio [95% CI]¹	Adjusted Odds Ratio [95% CI]¹
Sociodemographics		
Age		
65–69	Reference	Reference
70–74	0.80 [0.69 – 0.94]	0.81 [0.69 – 0.94]
75–79	0.60 [0.49 – 0.73]	0.60 [0.50 – 0.73]
80–84	0.46 [0.35 – 0.60]	0.46 [0.35 – 0.60]
85–89	0.64 [0.48 – 0.86]	0.64 [0.48 – 0.87]
Sex		
Male	Reference	Reference
Female	0.91 [0.79 – 1.04]	0.90 [0.79 – 1.04]
Race		
White	Reference	Reference
Black	0.91 [0.65 – 1.28]	0.91 [0.65 – 1.28]
Other	0.82 [0.58 – 1.14]	0.79 [0.57 – 1.11]
Medicaid Dual Eligible	0.86 [0.66 – 1.11]	0.89 [0.69 – 1.14]
Chronic Conditions		
Elixhauser Comorbidity Index (per unit)	1.02 [0.99 – 1.05]	1.02 [0.99 – 1.05]
Selected Medicare Chronic Conditions		
Osteoporosis	1.28 [1.01 – 1.63]	1.29 [1.02 – 1.63]
Hip/pelvic fracture	0.61 [0.38 – 0.99]	0.62 [0.38 – 1.00]
Mobility impairment	0.81 [0.44 – 1.49]	0.84 [0.46 – 1.54]
Migraine and chronic headache	0.91 [0.58 – 1.43]	0.88 [0.55 – 1.41]
Bipolar disorder	0.78 [0.41 – 1.48]	0.76 [0.39 – 1.50]
Anxiety disorders	1.32 [1.10 – 1.58]	1.33 [1.11 – 1.59]
Substance Use		
Previous high-dose long-term opioid use ²	11.5 [4.29 – 30.85]	(excluded)
Opioid use disorder	2.20 [1.50 – 3.22]	2.29 [1.57 – 3.33]
Non-opioid drug use disorders	0.91 [0.44 – 1.88]	0.93 [0.44 – 1.95]
Index Hospitalization Characteristics		
Length of stay more than 7 days (vs ≤7)	1.82 [1.36 – 2.43]	1.78 [1.32 – 2.39]
Intensive care unit stay	0.83 [0.64 – 1.07]	0.82 [0.63 – 1.07]
Principal discharge diagnosis³		

Infectious disease	1.24 [0.65 – 2.36]	1.12 [0.58 – 2.15]
Circulatory system	0.78 [0.44 – 1.39]	0.78 [0.44 – 1.38]
Respiratory system	1.08 [0.61 – 1.91]	1.06 [0.60 – 1.86]
Digestive system	0.58 [0.28 – 1.18]	0.54 [0.26 – 1.10]
Genitourinary system	0.23 [0.09 – 0.60]	0.18 [0.06 – 0.52]
Musculoskeletal system and connective tissue	2.70 [1.77 – 4.11]	2.54 [1.68 – 3.86]
Injury and poisoning	1.99 [1.33 – 2.99]	1.90 [1.26 – 2.84]
Principal discharge procedure ³		
Nervous system	0.25 [0.12 – 0.52]	0.26 [0.12 – 0.54]
Cardiovascular system	0.31 [0.17 – 0.55]	0.30 [0.17 – 0.53]
Digestive system	0.54 [0.29 – 1.00]	0.59 [0.31 – 1.10]
Musculoskeletal system	1.16 [0.86 – 1.57]	1.19 [0.88 – 1.62]
Miscellaneous diagnostic and therapeutic procedures	1.13 [0.73 – 1.77]	1.15 [0.74 – 1.80]
Other medication claims within 7 days of discharge		
Benzodiazepines	1.47 [1.12 – 1.93]	1.47 [1.11 – 1.93]
Muscle relaxants	0.76 [0.52 – 1.11]	0.75 [0.51 – 1.10]
Antidepressants	0.74 [0.50 – 1.10]	0.79 [0.54 – 1.16]
¹ Based on a multivariable generalized estimating equation model with logit link and exchangeable correlation structure, including all variables simultaneously		
² A 90-day period with a prescribed morphine milligram equivalents of at least 120 within the preceding year, but >90 days prior to hospitalization		
³ Based on the Agency for Healthcare Research and Quality Clinical Classification System ¹⁴		