**Appendix 3. Survival model showing accelerated delirium incidence for opioids administered in hospital**

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|  | **Unadjusted hazard ratio**  **(95% CI)** | **Model 1**  **Adjusted hazard ratio*a***  **(95% CI)** | **Model 2**  **Adjusted hazard ratio*b***  **(95% CI)** |
| **Fentanyl** | 5.86 (2.48 to 13.9) | 3.72 (1.35 to 10.2) | 3.73 (1.37 to 10.2) |
| **Hydromorphone** | 1.36 (0.92 to 2.00) | 1.54 (1.02 to 2.31) | 1.50 (1.00 to 2.25) |
| **Morphine** | 1.51 (0.86 to 2.67) | 1.68 (0.93 to 3.05) | 1.72 (0.95 to 3.12) |
| **Hydrocodone** | 1.62 (0.37 to 7.08) | 1.67 (0.36 to 7.70) | 1.54 (0.33 to 7.15) |
| **Oxycodone** | 0.59 (0.37 to 0.96) | 0.60 (0.36 to 1.00) | 0.61 (0.37 to 1.01) |
| **Tramadol** | 0.87 (0.21 to 3.70) | 0.65 (0.15 to 2.79) | 0.67 (0.15 to 2.88) |

*a*Models adjusted for age, gender, surgery type, Charlson comorbidity index, APACHE-II score, and cognition at baseline.

*b*Models adjusted for age, gender, surgery type, Charlson comorbidity index, APACHE-II score, cognition at baseline, and worst pain.

NOTE: Each row of the above table represents a separate regression model. Each model looks at a specific medication or medication class and does not control for any other medications or medication classes.