Table S5: Usage of Analgesic Technique Across Surgical Procedures Divided by Perioperative Period:

	Total	Any-Non Opioid Analgesic	More than One Non-Opioid Analgesic	Regional Anesthesia	Acetaminophen	COX-2 Inhibitors	Non-Specific NSAIDs	Gabapentinoids	Ketamine	Any Opioid
Day of Surgery										
Below-Knee Amputation	32375	17067(52.7)	4695(14.5)	770(2.4)	10349(32.0)	223(0.7)	2574(8.0)	7206(22.3)	1322(4.1)	31217(96.4)
Colectomy	171942	51159(29.8)	6320(3.7)	9091(5.3)	14208(8.3)	752(0.4)	27717(16.1)	3258(1.9)	3161(1.8)	166241(96.7)
Lobectomy	23696	14282(60.3)	4620(19.5)	5970(25.2)	3153(13.3)	259(1.1)	8683(36.6)	1055(4.5)	561(2.4)	22834(96.4)
Total Knee Arthroplasty	571436	437140(76.5)	255309(44.7)	79232(13.9)	204363(35.8)	172614(30.2)	242476(42.4)	112264(19.7)	22426(3.9)	555209(97.2)
Day after Surgery until Discharge										
Below-Knee Amputation	32375	24754(76.5)	9901(30.6)	122(0.4)	20372(62.9)	358(1.1)	3591(11.1)	11399(35.2)	415(1.3)	31217(96.4)
Colectomy	171942	113159(65.8)	32306(18.8)	1936(1.1)	92415(53.8)	1119(0.7)	44975(26.2)	6483(3.8)	1048(0.6)	166241(96.7)
Lobectomy	23696	19306(81.5)	9095(38.8)	990(4.2)	14748(62.2)	390(1.7)	11700(49.4)	1776(7.5)	82(0.4)	22834(96.4)
Total Knee Arthroplasty	571436	479270(83.9)	259631(45.4)	3168(0.6)	377230(66.0)	168625(29.5)	173551(30.4)	96335(16.9)	1294(0.2)	555209(97.2)

Values displayed as n, (%)
NSAIDs – non-steroidal anti-inflammatory drugs
COX-2 – cyclooxygenase-2

Table S6: Estimated Hospital Level Usage Rate of One or More Non-Opioid Analgesics Based on Mixed-Effects Models Divided by Perioperative Period

			Multimodal Therapy Usage Rate (%)		
Models	**β_0 (SE)[a]**	**σ^2(SE) [b]**	**Average Hospital[c]**	**2.5 Percentile [d]**	**97.5 Percentile**
Day of Surgery					
Unadjusted	0.47 (0.076)	1.83 (0.15)	61.42	10.11	95.75
Fully Adjusted*	0.68 (0.079)	1.93 (0.16)	66.38	11.47	96.79
Day After Surgery Till Discharge					
Unadjusted	1.46 (0.071)	1.57 (0.13)	81.21	27.11	98.05
Fully Adjusted*	1.62 (0.070)	1.52 (0.13)	83.52	31.22	98.26

[a] β_0 is the marginal (averaged across hospitals) odds of using multimodal therapy for a patient with the mean propensity score

[b]Estimate of the between-hospital variation. The random intercept b_j for each hospital is assumed to be normally distributed with mean 0 and variance σ^2. σ^2 represents the hospital-specific deviation from β_0. With increasing levels of adjustment, there is less unexplained variation and σ_b^2 is expected to decrease.

[c]Prescribing proportion for the "average" patient, defined as a patient with a mean propensity score. The average differs slightly between models since different factors are being adjusted for in the various models; it is estimated as $\exp(\beta_0)/[1 + \exp(\beta_0)]$.

[d]Range determined from observed predicted values

* Adjusted for surgery type, demographics, year of hospitalization, medical comorbidities, pain related conditions, psychiatric comorbidities, medication usage and hospital characteristics

Table S7: Estimated Hospital Level Usage Rate of Two or More Non-Opioid Analgesics Based on Mixed-Effects Models Divided by Perioperative Period

			Multimodal Therapy Usage Rate (%)		
Models	**β_0 (SE)[a]**	**σ^2(SE) [b]**	**Average Hospital[c]**	**2.5 Percentile [d]**	**97.5 Percentile**
Day of Surgery					
Unadjusted	-1.14 (0.081)	2.03 (0.17)	24.22	1.92	83.92
Fully Adjusted*	-1.20 (0.081)	2.05 (0.18)	23.19	1.80	83.29
Day After Surgery Till Discharge					
Unadjusted	-0.69 (0.063)	1.25 (0.11)	33.35	5.29	81.75
Fully Adjusted*	-0.65 (0.063)	1.25 (0.11)	34.29	5.52	82.35

[a] β_0 is the marginal (averaged across hospitals) odds of using multimodal therapy for a patient with the mean propensity score

[b]Estimate of the between-hospital variation. The random intercept b_j for each hospital is assumed to be normally distributed with mean 0 and variance σ^2. σ^2 represents the hospital-specific deviation from β_0. With increasing levels of adjustment, there is less unexplained variation and σ_b^2 is expected to decrease.

[c]Prescribing proportion for the "average" patient, defined as a patient with a mean propensity score. The average differs slightly between models since different factors are being adjusted for in the various models; it is estimated as $\exp(\beta_0)/[1 + \exp(\beta_0)]$.

[d]Range determined from observed predicted values

* Adjusted for surgery type, demographics, year of hospitalization, medical comorbidities, pain related conditions, psychiatric comorbidities, medication usage and hospital characteristics