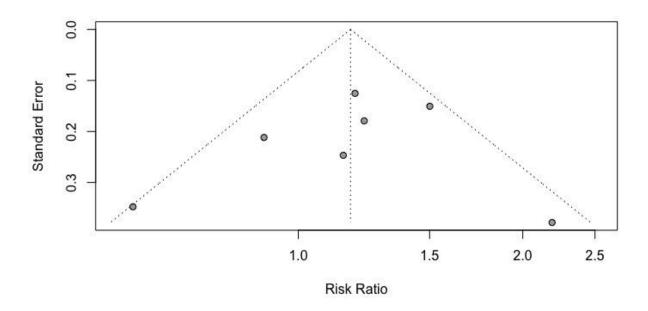
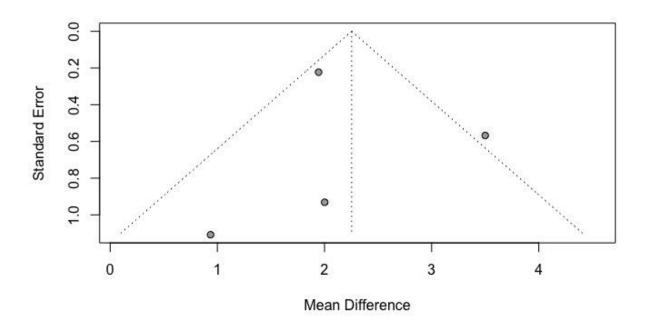
Supplemental Figures 1: Funnel Plots

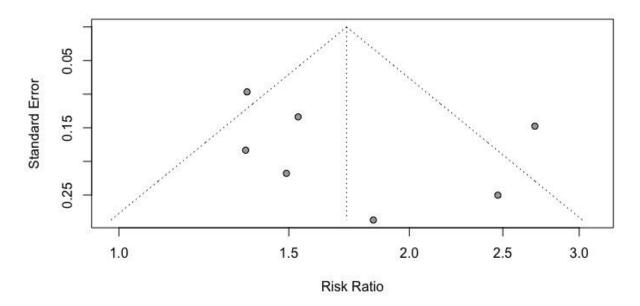
Supplemental Figure 1a. 30-day readmissions funnel plot



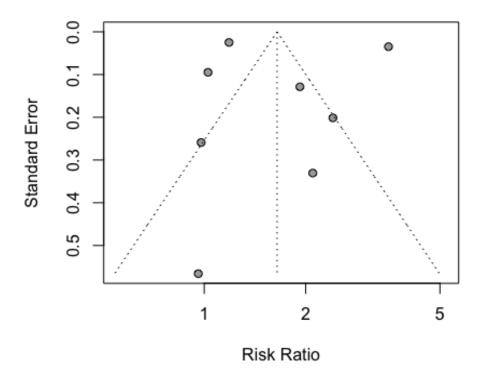
Supplemental Figure 1b. Length of stay funnel plot



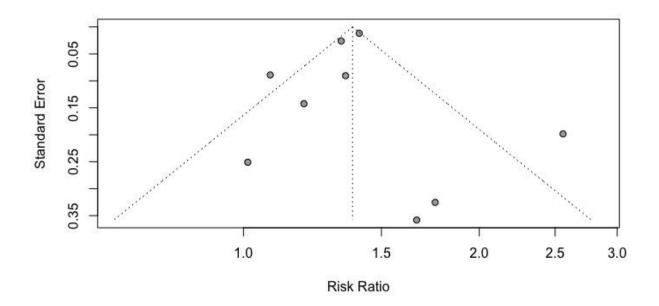
Supplemental Figure 1c. Prior IBD-related surgery funnel plot



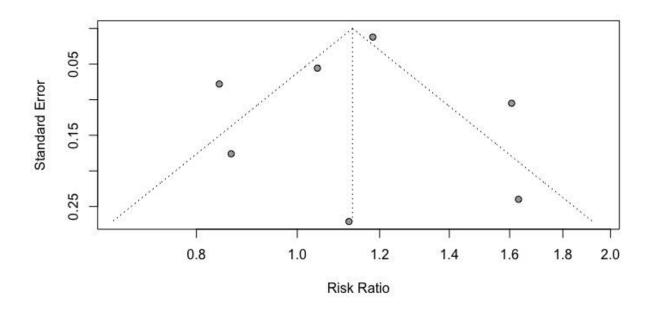
Supplemental Figure 1d. Current IBD-related surgery funnel plot



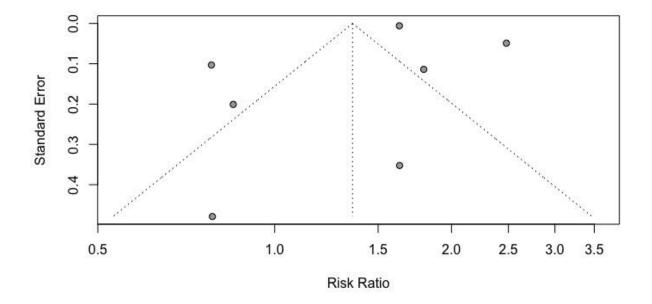
Supplemental Figure 1e. Biologics funnel plot



Supplemental Figure 1f. Immunomodulators funnel plot



Supplemental Figure 1g. Steroids funnel plot



Supplemental Figures 2: Forest Plots for 30-Day Readmissions and Sensitivity Analysis

Supplemental Figure 2a: Association between 30-day readmissions and opioid use

	Opioid	1	Non-O	pioid				
Author	Readmit	N	Readmit	N	Risk Ratio	RR	95% CI	Weight
Berry et al.	12	40	8	16		0.60	[0.30; 1.19]	9.6%
Christain et al.	153	751	79	462	+ 10	1.19	[0.93; 1.52]	19.1%
Dalal et al.	124	650	33	212	-	1.23	[0.86; 1.74]	16.5%
Hazrajtee et al.	73	416	24	123		0.90	[0.59; 1.36]	15.0%
Li et al.	49	267	146	1194	-	1.50	[1.12; 2.02]	17.9%
Mudireddy et al.	40	269	22	170	- 10	1.15	[0.71; 1.86]	13.4%
O'Brien et al.	15	51	9	67	-	2.19	[1.04; 4.60]	8.6%
Overall effect		2444		2244		1.17	[0.86; 1.61]	100.0%
Prediction interva	I						[0.51; 2.72]	
Heterogeneity: $I^2 = 4$	3% , $\tau^2 = 0.09$	00, p	= 0.10					
a portion and the control of the state of th					0.5 1 2			

Supplemental Figure 2b: Sensitivity analysis including opioid use disorder in the exposure of interest

	Opioi	d	Non	-Opioid				
Author	Readmit	N	Readmit	N	Risk Ratio	RR	95% CI	Weight
Berry et al.	12	40	8	16		0.60	[0.30; 1.19]	7.9%
Charilaou et al.	2160	6634	92386	481095	+	1.70	[1.64; 1.76]	18.1%
Christain et al.	153	751	79	462	 100	1.19	[0.93; 1.52]	15.5%
Dalal et al.	124	650	33	212	+*	1.23	[0.86; 1.74]	13.5%
Hazrajtee et al.	73	416	24	123	- 10	0.90	[0.59; 1.36]	12.3%
Li et al.	49	267	146	1194		1.50	[1.12; 2.02]	14.6%
Mudireddy et al.	40	269	22	170		1.15	[0.71; 1.86]	11.0%
O'Brien et al.	15	51	9	67	- 10	2.19	[1.04; 4.60]	7.1%
Overall effect		9078		483339		1.26	[0.94; 1.67]	100.0%
Prediction interva							[0.56; 2.80]	
Heterogeneity: $I^2 =$	$78\%, \tau^{-} = 0.0$	928, p	< 0.01		05 4 2			
					0.5 1 2			

Supplemental Figures 3: Forest Plots of Subgroup Analysis

Supplemental Figure 3ai. Association between 30-day readmissions and opioid use prior to admission

Author	Opioid Readmit		Non-O Readmit		Risk	Ratio	RR	95% CI	Weight
04 ***********									
Li et al.	33	156	146	1194		-	1.73	[1.23; 2.43]	81.3%
O'Brien et al.	15	51	9	67			2.19	[1.04; 4.60]	18.7%
Overall effect	2	207		1261			1 .81	[0.56; 5.80]	100.0%
Heterogeneity: I^2 =	$0\%, \tau^2 = 0.00$	38, p	= 0.57		1	1 6			
					0.5	1 2			

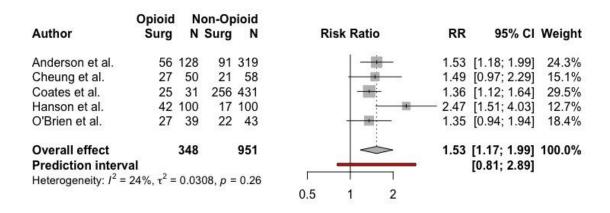
Supplemental Figure 3aii. Association between 30-day readmissions and opioid use during admission

	Opio	oid	Non-O	pioid						
Author	Readmit	N	Readmit	N	R	isk Ratio		RR	95% CI	Weight
Berry et al.	12	40	8	16 —	-			0.60	[0.30; 1.19]	12.0%
Dalal et al.	127	653	33	212		- 1		1.25	[0.88; 1.77]	26.7%
Hazrajtee et al.	73	416	24	123	_			0.90	[0.59; 1.36]	22.7%
Li et al.	16	111	146	1194	1	100	0.0	1.18	[0.73; 1.90]	19.4%
Mudireddy et al.	40	269	22	170	-	-	770	1.15	[0.71; 1.86]	19.1%
Overall effect		1489		1715				1.03	[0.75; 1.43]	100.0%
Prediction interv					_		_		[0.49; 2.18]	
Heterogeneity: $I^2 =$	10% , $\tau^2 = 0.04$	410, p	= 0.35							
		•			0.5	1	2			

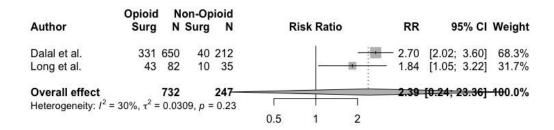
Supplemental Figure 3aiii. Association between 30-day readmissions and opioid use at discharge

	Opioid	i	Non-Op	ioid				
Author	Readmit	N	Readmit	N	Risk Ratio	RR	95% CI	Weight
Christain et al.	153	751	79	462	+=-	1.19	[0.93; 1.52]	56.2%
Hazrajtee et al.	62	294	35	245		1.48	[1.01; 2.15]	26.0%
Mudireddy et al.	28	166	34	273		1.35	[0.85; 2.15]	17.8%
Overall effect		1211		980		1.29	[0.97; 1.71]	100.0%
Prediction interva	l				-		[0.44; 3.76]	
Heterogeneity: $I^2 = 0$	$\%$, $\tau^2 = 0.002$	28, p =	= 0.63					
The state of the s		• • • • • • • • • • • • • • • • • • • •			0.5 1 2			

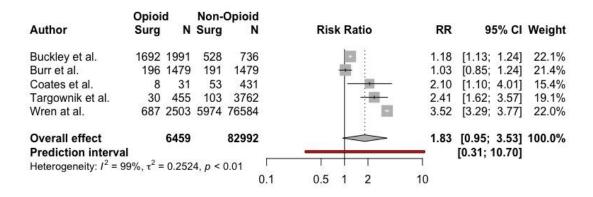
Supplemental Figure 3bi. Association between prior IBD-related surgery and outpatient opioid use



Supplemental Figure 3bii. Association between prior IBD-related surgery and inpatient opioid use



Supplemental Figure 3ci. Association between current IBD-related surgery and outpatient opioid use



Supplemental Figure 3cii. Association between current IBD-related surgery and inpatient opioid use

				Risk Ratio	RR	9	5% CI	Weight
294	650	52	221	I les	1 92	[1 <u>4</u> Q·	2 471	50.7%
13	44	27.53		+			200 3010-001	35.3%
9	82	4	35	-+-	0.96			
	776		435	*	1.37			100.0%
	0.09	92, p =	= 0.04	1 01 1 10	100	[0.01; 2	11.24]	
	Surg 294 13 9	Surg N 294 650 13 44 9 82 776	Surg N Surg 294 650 52 13 44 54 9 82 4 776	Surg N Surg N 294 650 52 221 13 44 54 179 9 82 4 35 776 435 val 69%, $\tau^2 = 0.0992$, $\rho = 0.04$	Surg N Surg N Risk Ratio 294 650 52 221 13 44 54 179 9 82 4 35 776 435	Surg N Surg N Risk Ratio RR 294 650 52 221 13 44 54 179 9 82 4 35 776 435 776 435 781 69%, τ² = 0.0992, ρ = 0.04	Surg N Surg N Risk Ratio RR 9 294 650 52 221 1.92 [1.49; 13 44 54 179 9 82 4 35 776 435 776 435 781 69%, τ² = 0.0992, ρ = 0.04	Surg N Surg N Risk Ratio RR 95% CI 294 650 52 221 13 44 54 179 9 82 4 35 776 435 781 69%, τ² = 0.0992, ρ = 0.04 Risk Ratio RR 95% CI 1.92 [1.49; 2.47] 0.98 [0.59; 1.63] 0.96 [0.32; 2.91] 1.37 [0.49; 3.87] [0.01; 211.24]