

Prescriber Opioid Patterns Following Cesarean Section Pre & Post Provider Training Intervention



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BACKGROUND

- According to CDC, opioid-related death toll in the US increased five-fold from 1999 to 2016.¹
- From 1999-2014 opioid prescription sales increased four-fold; Of 42,000-plus opioid related deaths in 2016, 40% attributed to a prescription opioid.¹
- To combat "Opioid Crisis," in NY, NYSDOH mandated by 7/1/17 all prescribers complete three-hour online course: Opioid Prescriber Training Program
- Many states have their own required course for narcotic prescribers; NY is the only one that includes residents
- Cesarean Section is the most common procedure for women. According to nationwide survey, 85% of women receive post-discharge opioid prescription.²
- At Montefiore Medical Center, there are 6,000 deliveries per year. CS rate 30%. Most patients receive a post-discharge opioid prescription
- There is an inadequate knowledge on obstetrician prescriber habits after the NYSDOH mandatory physician opioid course.

PURPOSE

Primary Objective: Determine how narcotic prescribing patterns after cesarean changed after the NYS-DOH mandated opioid training course

Secondary Objective: Identify trends in opioid prescription patterns related to amount of inpatient opioid use as well as patient/surgical/hospital specific factors; Analyze opioid prescription habits by provider level

STUDY DESIGN

Retrospective Cohort study:

- Included 1,494 women hospitalized for cesarean from July 1, 2016 to December 31, 2016, and then from January 1, 2018 to August 31, 2018
- Excluded women 6 months before and after the deadline for the NYSDOH opioid training (July 1, 2017)

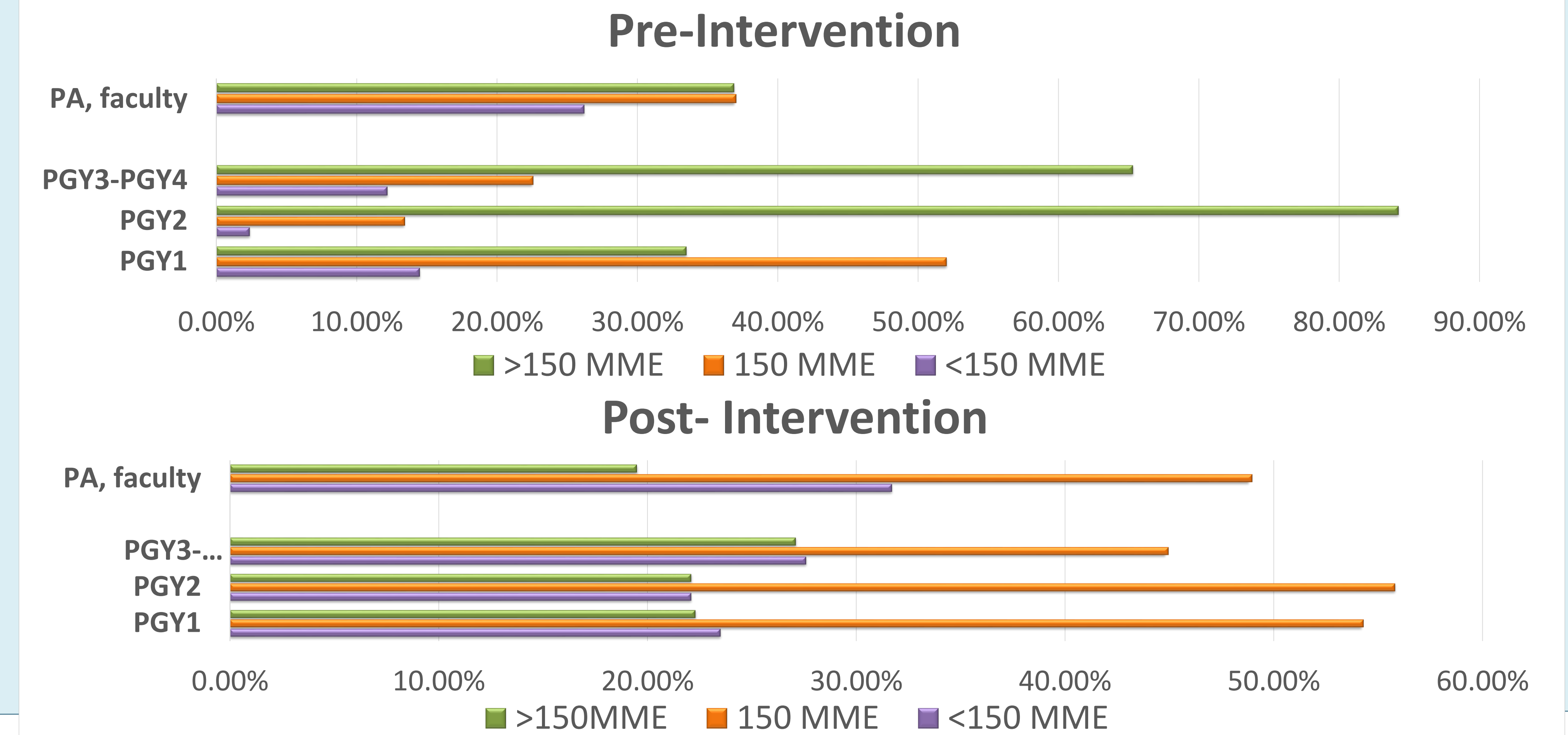
All narcotics mathematically converted into total morphine milligram equivalents (MME)

RESULTS

DEMOGRAPHICS

Characteristics		Pre-intervention n(%)	Post-intervention n(%)	Overall n(%)	P-value
Age (years)	Missing	100 (13.5)	97 (12.8)	197 (13.2)	0.39
	≤25	166 (22.5)	149 (19.7)	315 (21.1)	
	26-30	168 (22.7)	170 (22.5)	338 (22.6)	
	31-35	169 (22.9)	193 (25.6)	362 (24.2)	
	36-40	96 (13)	103 (13.6)	199 (13.3)	
	>40	40 (5.4)	43 (5.7)	83 (5.5)	
Race	Asian	53 (7.2)	57 (7.5)	110 (7.4)	0.01
	White	82 (11.1)	46 (6.1)	128 (8.6)	
	Black	203 (27.5)	221 (29.3)	424 (28.4)	
	Unknown	311 (42.1)	348 (46.1)	659 (44.1)	
	Other	90 (12.2)	83 (11)	173 (11.6)	
Ethnicity	Latinx	371 (50.2)	370 (49)	741 (49.6)	0.11
	Not Latinx	308 (41.7)	342 (45.3)	650 (43.5)	
	Unknown	60 (8.1)	43 (5.7)	103 (6.9)	
Gravida	1	157 (21.2)	189 (25)	346 (23.2)	0.01
	2	189 (25.6)	162 (21.5)	351 (23.5)	
	3	155 (21)	158 (20.9)	313 (21)	
	4	119 (16.1)	91 (12.1)	210 (14.1)	
	>4	119 (16.1)	155 (20.5)	274 (18.3)	
Parity	0	266 (36)	287 (38)	553 (37)	0.29
	1	249 (33.7)	226 (29.9)	475 (31.8)	
	2	152 (20.6)	147 (19.5)	299 (20)	
	3	50 (6.8)	59 (7.8)	109 (7.3)	
	>3	22 (3)	36 (4.8)	58 (3.9)	
Prior CS	0	382 (51.7)	384 (50.9)	766 (51.3)	0.83
	1	223 (30.2)	226 (29.9)	449 (30.1)	
	2	106 (14.3)	109 (14.4)	215 (14.4)	
	>2	28 (3.8)	36 (4.8)	64 (4.3)	
BMI (unit kg/m ²)	Unknown	154 (20.8)	106 (14)	260 (17.4)	0.01
	<18.5	2 (0.3)	1 (0.1)	3 (0.2)	
	18.5-24.9	39 (5.3)	29 (3.8)	68 (4.6)	
	25-29.9	142 (19.2)	167 (22.1)	309 (20.7)	
	30-34.9	174 (23.5)	185 (24.5)	359 (24)	
	35-39.9	114 (15.4)	139 (18.4)	253 (16.9)	
	>40	114 (15.4)	128 (17)	242 (16.2)	

Level of prescriber vs prescribing patterns pre and post intervention



P-value pre-intervention <0.0001; post-intervention =0.86

Key Findings

- The median amount of narcotic prescribed was 150 MME pre & post intervention.
- There was an overall decline in the number of prescriptions >150 MME post-intervention.
- The greatest impact in prescribing changes was noted in residents
- Neither inpatient opioid use, patient demographic, surgical nor hospital factors affected opioid prescriber patterns.

Conclusions

- Mandating opioid training courses can change and influence prescribing patterns
- It is important to include opioid education in the resident curriculum

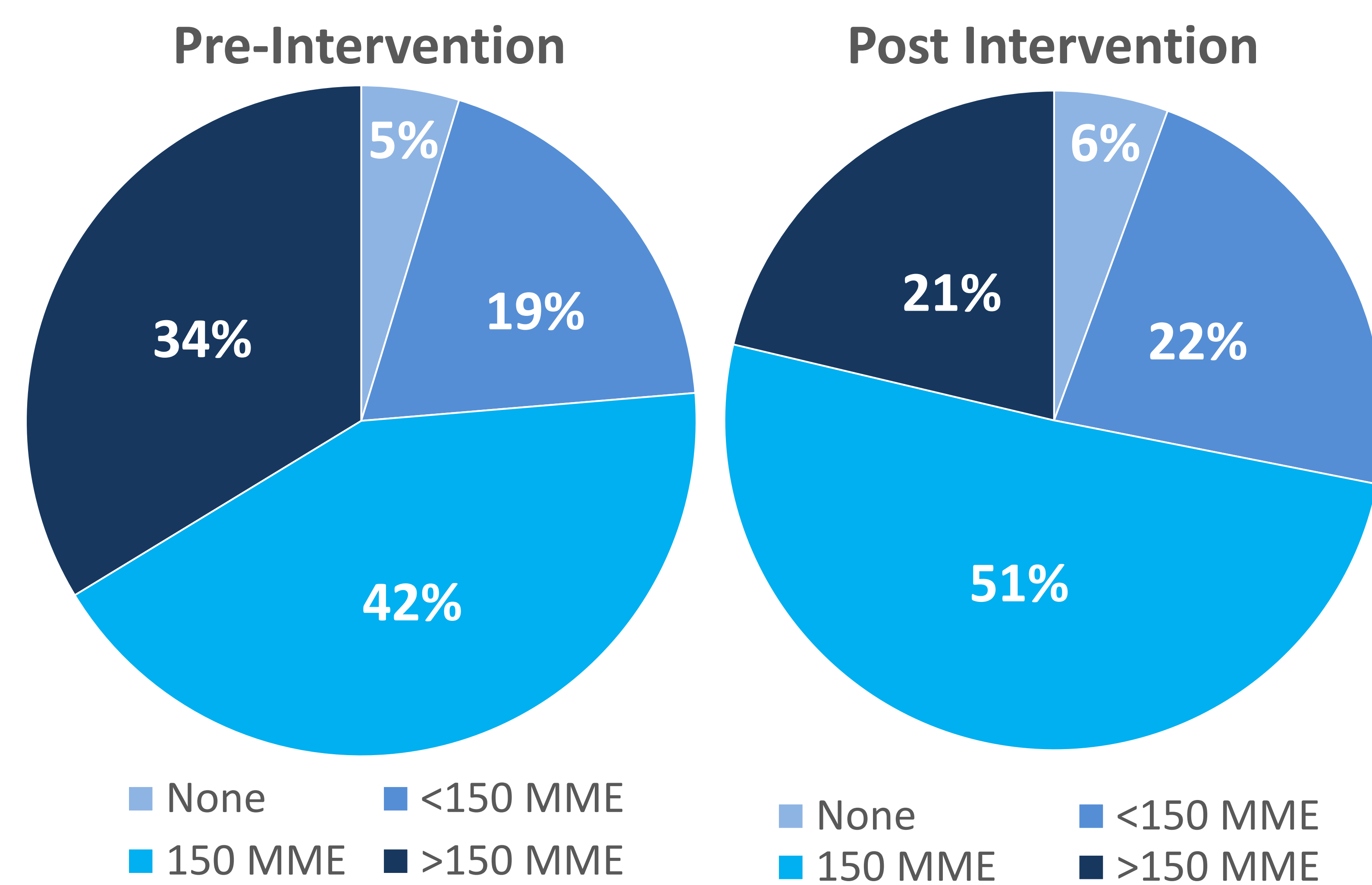
Further Directions

- A prospective study looking at the percentage of patients that filled their opioid prescriptions & actual patient opioid consumption upon discharge

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Total amount of narcotic prescribed pre and post intervention



P-value <0.0001