



DDW  
May 18-21, 2019  
San Diego, CA, USA

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## Introduction and Objective

### Introduction

- Inflammatory bowel disease (IBD) is a complex gastro-intestinal disorder, a term used to encompass Crohn's Disease (CD) and Ulcerative Colitis (UC)<sup>1</sup>
- It is often characterized by abdominal and other pain negatively impacting a patient's quality of life<sup>1</sup>
  - One method of managing pain is with certain medications<sup>2</sup>
- Opioid-based medications may be prescribed for treating IBD-related flares, but patients may develop 'new persistent opioid use' leading to potential complications such as narcotic bowel syndrome or an opiate dependency<sup>3</sup>

### Objective

- The objective of the present study was to examine opioid usage within an IBD cohort stratified by type of visit and patient-reported pain scores

## Methods

### Study description

- De-identified patient records from the Cerner Health Facts® EHR database between January 2011 and December 2016 were extracted
- Each patient visit (age ≥ 18 years) with a principal ICD-9/10 diagnosis of IBD was included in the analysis
- Visit-based data for medications were examined for this cohort – 'Opioid analgesics' were identified as per the VA drug classification system (2016)<sup>4</sup>
- Pain scores (Numeric Pain Scale 0-10) during a visit were classified as: 0 to <4 = "Mild"; 4 to <7 = "Moderate"; 7 to 10 = "Severe"; "None" if no scores
- The highest pain score per visit was used to assign a pain group (Mild / Moderate / Severe) for every visit
- Hospital length of stay (LOS) from admission to discharge was calculated for non-deceased inpatients (with LOS ≤ 30 days)

## Results

- The study included 539,783 IBD visits (59.45% female, 40.55% male), with a mean (SD) age of 44.65 (18.50) years
- Of the total visits, 13.99% (N= 75,492) were inpatient stays

Tables 1-3. Demographics across patient visits

Gender	Inpatient	Non-inpatient	Total	Age (in years)	Number of visits	Total
Male	38.21%	40.93%	40.55%	18 to <36	207,970	38.53%
Female	61.79%	59.07%	59.45%	36-65	246,440	45.66%
Total	13.99%	86.01%	100.00%	>65	85,373	15.82%

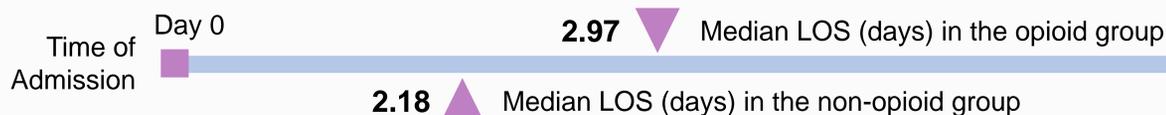
Race	Number of visits	Total
Caucasian	403,723	74.79%
African American	77,870	14.43%
Other*	58,190	10.78%

\*Includes 'not specified'

Table 4. Pain score classification

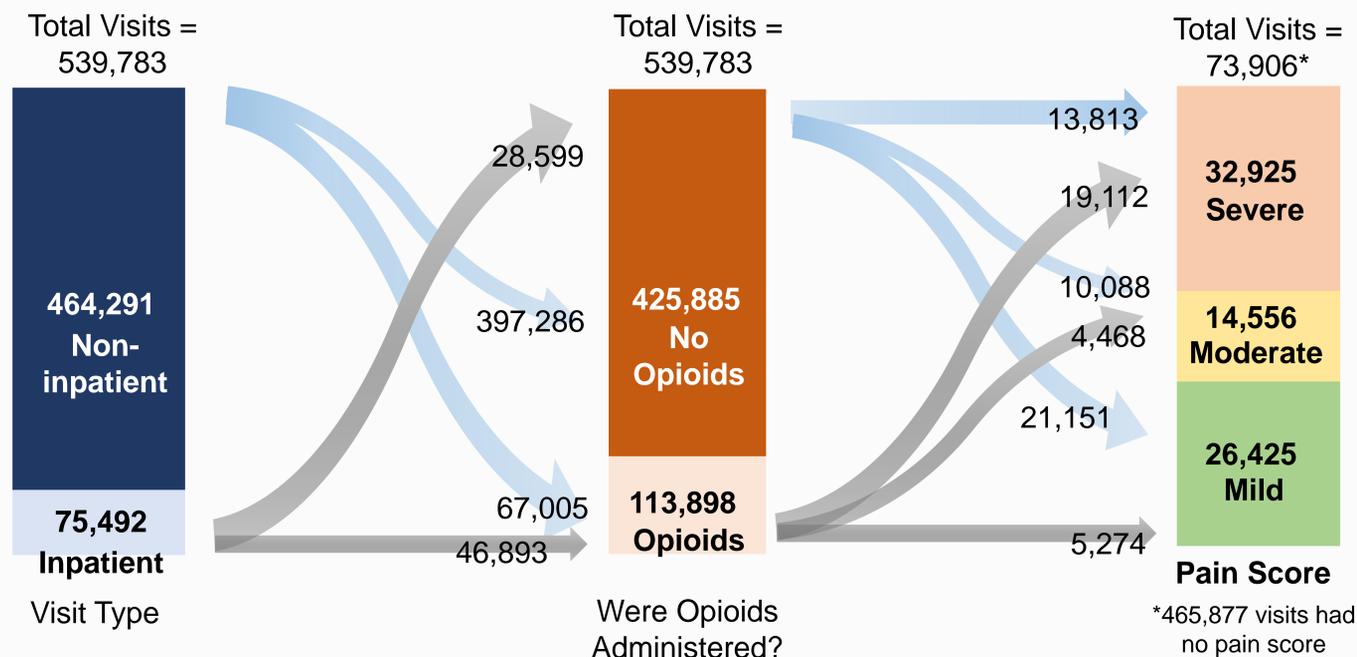
Increasing pain ↓	Classification	Pain Score
	Mild	0 to <4
	Moderate	4 to <7
	Severe	7 to 10

Figure 1. Median hospital LOS in the IBD cohort stratified by opioid prescription (N = 74,628 visits)



- Opioid analgesics were prescribed in 21.10% (N = 113,898) of the total visits and in 62.12% (N = 46,893) of all inpatient stays
- Opioid analgesics were prescribed in 58.05% (N = 19,112) of visits with a severe pain score (N = 32,925)

Figure 2. IBD cohort stratification by visit type, opioid prescription and patient-reported pain scores (N = 539,783 visits)



## Conclusions

- This large database analysis examines patient-reported pain scores and opioid usage for IBD-related visits and provides initial insights into potentially relevant medication prescribing practices in inpatient and outpatient settings
- It highlights high opioid-use in a subset of IBD patient visits perhaps impacting patient outcomes
- Given the current opioid epidemic, there may be opportunities for improved prescribing

## References

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