



Introduction and Objectives

Methods

Introduction

- Irritable Bowel Syndrome (IBS) is a gastro-intestinal disorder characterized by visceral hypersensitivity and pain, negatively impacting a patient's quality of life^{1,2}
 - Medications are used to appropriately manage IBS-related pain²
- Opioid-based medications may be prescribed but can cause potential complications such as narcotic bowel syndrome or an opioid dependency²

Objective

- The goal of this study was to examine opioid usage within an IBS cohort stratified by type of visit and patient-reported pain scores

Study description

- De-identified patient records from the Cerner Health Facts® EHR database³ between January 2011 and December 2016 were extracted
- Each patient visit (age ≥ 18 years) with a principal inpatient or outpatient ICD-9/10 diagnosis of IBS between 2011 and 2016 were 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)⁴
- 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

Results

- The study included 51,499 IBS visits (78% female, 22% male), with a mean (SD) age of 48.84 (18.32) years
- Of the total visits, 5% (N=2,565) were inpatient stays while the rest were outpatient

Table 1-3. Demographics across patient visits

Gender	Inpatient	Outpatient	Total	Age (in years)	Inpatient	Outpatient	Total	Race	Inpatient	Outpatient	Total
Male	20.08%	22.35%	22.24%	18 to <36	26%	28.49%	28.36%	Caucasian	80.66%	82.12%	82.05%
Female	79.92%	77.65%	77.76%	36-65	49.79%	50.77%	50.72%	African American	11.77%	7.19%	7.42%
Total	4.98%	95.02%	100%	65+	24.21%	20.75%	20.92%	Hispanic	1.29%	1.2%	1.2%
				Mean age (SD)	50.37 (18.65)	48.76 (18.30)	48.84 (18.32)	Asian/Pacific Islander	0.7%	0.94%	0.92%
								Other*/unmapped	5.58%	8.55%	8.41%

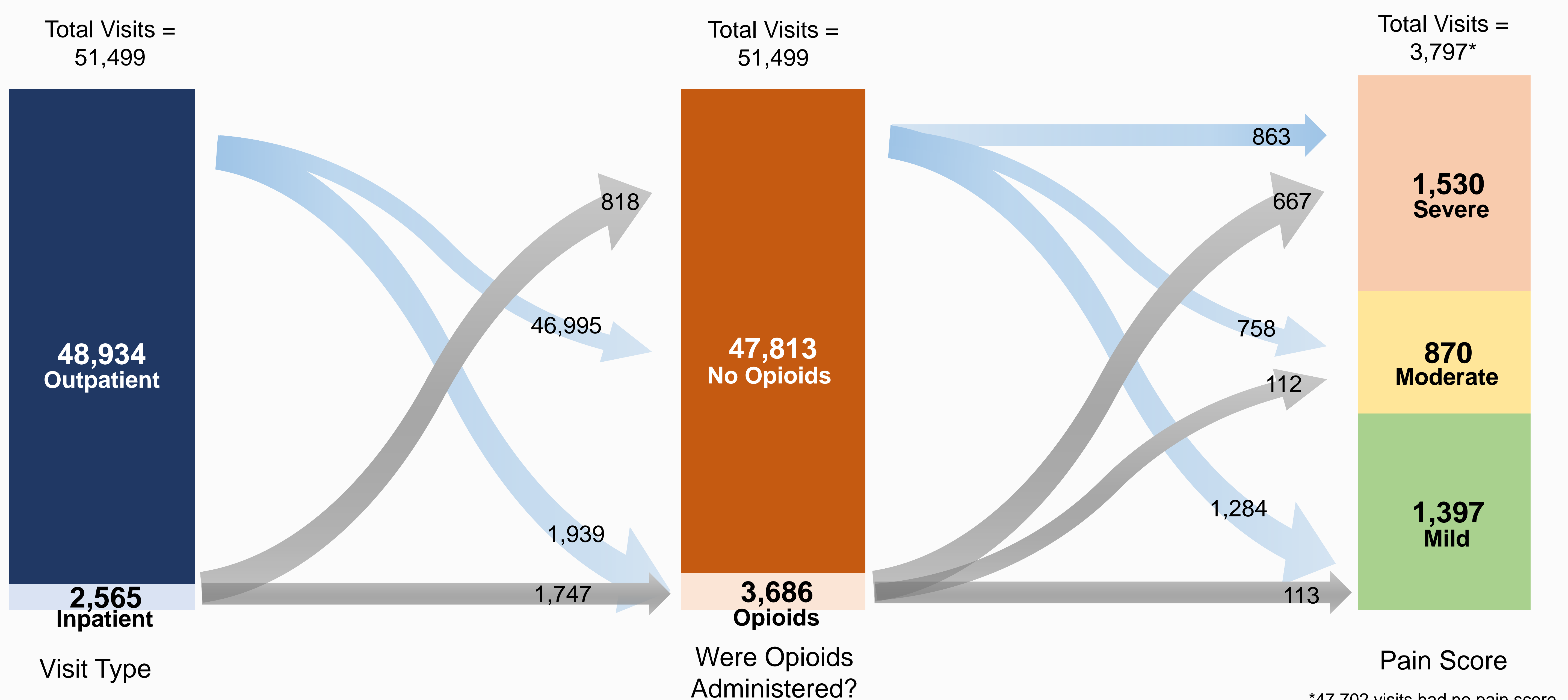
Table 4. Pain score classification

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

*includes Biracial, Native American, Middle Eastern Indian

- Opioid analgesics were prescribed in 7.2% (N=3,686) of the total visits and in 68% (N=1,747) of all inpatient stays
- Opioid analgesics were prescribed in 43.6% (N=667) of visits with a severe pain score (N=1,530)

Figure 1. IBS cohort stratification by visit type, opioid administration and patient-reported pain scores (N = 51,499 visits)



Conclusions

- This large database analysis examines patient-reported pain scores and opioid usage for IBS visits
- These results provide initial insights into potentially relevant practices for prescribing medications in multiple settings of patient care, inpatient and outpatient
- Our research highlights high opioid-use in a subset of IBS patient visits
- Given the current opioid epidemic, there may be opportunities for improved prescribing

References

- Drossman, D. A. (2016) 'Functional Gastrointestinal Disorders: History, Pathophysiology, Clinical Features, and Rome IV', Gastroenterology.
- Chen, L., Ilham, S. J. and Feng, B. (2017) 'Pharmacological Approach for Managing Pain in Irritable Bowel Syndrome: A Review Article', Anesthesiology and Pain Medicine
- Cerner Health Facts 2017 EHR database (Kansas City, MO, USA)
- VA Pharmacy Benefits Management Services - National Formulary (2016)