Dazed and Confused

Trauma Opioid Prescriptions at Discharge After Provider Education

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Background

- Recent studies show a dramatic increase in opioid prescriptions in response to control the "Fifth Vital Sign"[1]
- Well known opioid side effects include nausea, vomiting, confusion, constipation, addiction, overdose, and delayed recovery.[1,2]
- Research shows that patients are prescribe an excess of opioids post-operatively.[3,4]
- Published and anecdotal evidence shows patients do not properly dispose of their opioids.[5]
- It is also well known that there is wide variation between provider's prescription patterns of opioids at discharge [6]
- Educational interventions within surgical departments have decreased pills prescribed without increasing refill rates.
  - This includes a presentation at an academic center's grand rounds which resulted in a 53% reduction in opioid pills prescribed.[7]
- Little is known regarding provider attitudes and prescribing practices within our practice.

Aim Statement

- We first endeavored to evaluate the prescription patterns within our community based hospital trauma team.
- We then sought to decrease the number of MMEs (Morphine milligram equivalents) entering the Colorado Springs Community through the Penrose trauma group via education and discussion.

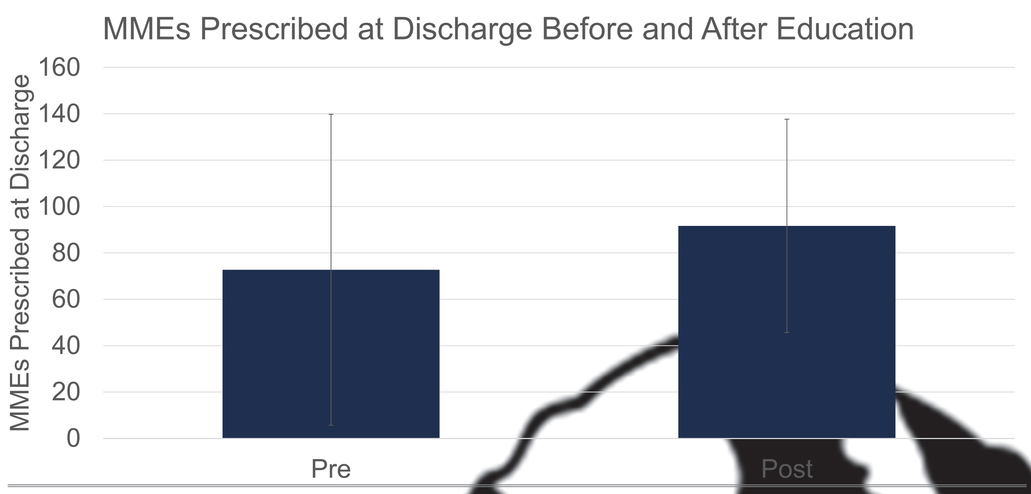
Intervention

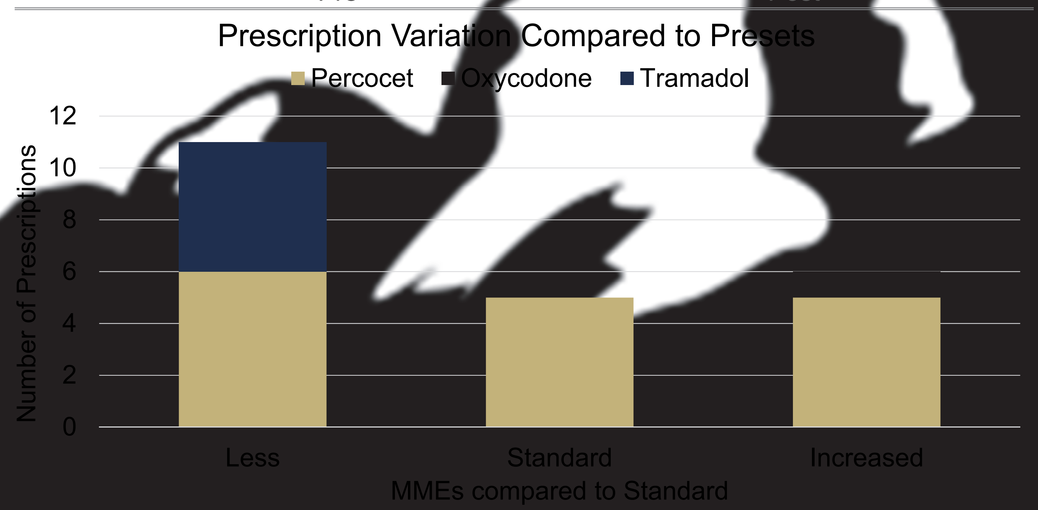
- An IRB waiver was obtained from CHIRB.
- A retrospective chart review was performed from hip fracture patients from Oct 1 – Dec 1, 2019.
  - Patient demographic data, injury, surgical intervention and discharge prescription patterns were extracted pre and post the intervention.
- Research published within the last two years was summarized and presented to at the trauma meeting on November 1, 2018 and covered:
  - The wide acute care inter-physician prescribing variation.[8]
  - What interventions have been efficacious in the United States.[9]
  - Which specialties have proven the most resistant to change.[10]
- Physicians, physician assistants, and nurses in addition to hospital representatives were in attendance.

Results

Demographics	Pre-Presentation (N=12)	Post-Presentation (N=17)	p-value	r-value
Age, years, mean (SD)	80.8 (10.2)	78.35 (10.3)	.07	-.41
Gender				
Female	6 (50.0)	12 (70.5)	.44†	-
Male	6 (50.0)	5 (29.4)		
Pain Profile, mean (SD)				
Admission	7.6 (2.2)	6.2 (2.5)	.32	.029
Post-Operative	5.9 (2.0)	4.2 (2.1)	.07	.376
Discharge	2.9 (1.3)	2.1 (1.6)	.38	.247
Injury Severity Score, mean (SD)	9.3 (.5)	11 (7)	.13	0
Opioid Prescription Status				
Yes	1 (8.3)	1 (5.9)	1.00†	-
No	11	16 (94.1)		
EtOH Use Status				
Yes	1 (8.3)	6 (35.3)	.19†	-
No	11 (91.7)	11 (64.8)		
Illicit Drug Use				
Yes	1 (8.3)	2 (16.6)	1.00†	-
No	11 (91.7)	15 (83.4)		
Length of Stay	5.2 (2.4)	6.1 (5.2)	.79	-.258
Number of Medications on Admission, mean (SD)	7.7 (4.3)	6.5 (3.0)	.06 .05	.409 .344
Number of Pain Medications on Admission, mean (SD)	.8 (.9)	.3 (.6)		
Procedures				
Ortho Hip	6 (50.0)	8 (47.1)	1.00†	-
Femur ORIF	6 (50.0)	9 (52.9)		

Abbreviations: SD, standard deviation. *Values are frequency and column percent unless otherwise specified. T values are from student t-test or †Fisher's exact test. R values are Pearson's Correlational Coefficients





Discussion

Why did MME's increase after our intervention?

There are several possible explanations:

- There was a change in prescription patterns, but the study was underpowered to detect it.
- The communication of the recent research engaged too small of a percentage of the trauma group.
  - One provider at a follow up presentation expressed indignance towards the opioid control movement.
- The providers have pre-existing personal criteria for post-operative analgesia that remained unaddressed.

Why do prescribers choose to alter the preset discharge settings?

This is unclear, both in published literature and amongst the group present. From the discussion generated, it seems that each physician has their own comfortable patterns that "keep patients from calling for refills" after discharge. This is a very common objection raised by providers when discussing interventions to change opioid prescribing patterns, based on both the anecdotal evidence generated by this project, and the literature.

Going Forward

Future investigation should focus on evaluating individual provider practices and concerns. This could facilitate establishment of standard group practices and targeted interventions. Additional data should be collected to allow for meaningful subgroup analysis including objective evaluation of individual provider habits. Combined, these queries could fuel more impactful intra-group discussion.

Citations

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