

Introduction

Approximately 20% of the US adult population experiences chronic pain.¹ In one study, 59% of hospitalized patients reported pain, with 10% reporting inadequately controlled pain.² Yet, little research has been conducted on how physicians communicate with each other about pain, especially during end-of-shift handoffs. Research question: how do resident and attending physicians discuss pain in end-of shift handoffs?

Methods

Two types of handoffs were analyzed:

- 1) Transcribed verbal end-of-shift handoffs between medical residents
- 2) Written handoffs between attending hospitalists, pulled from the electronic medical record

- Sample: patients admitted to UCDH inpatient wards. Verbal handoffs were recorded from 2-3 resident teams twice daily, written handoffs were pulled from the electronic health record, for two weeks.
- Patient demographics and self-reported pain scores (on a scale of 0-10) were also collected in conjunction with each transcript.
- Handoffs and handoff transcripts were closely read to identify the contexts in which pain was discussed, leading to the following definition:

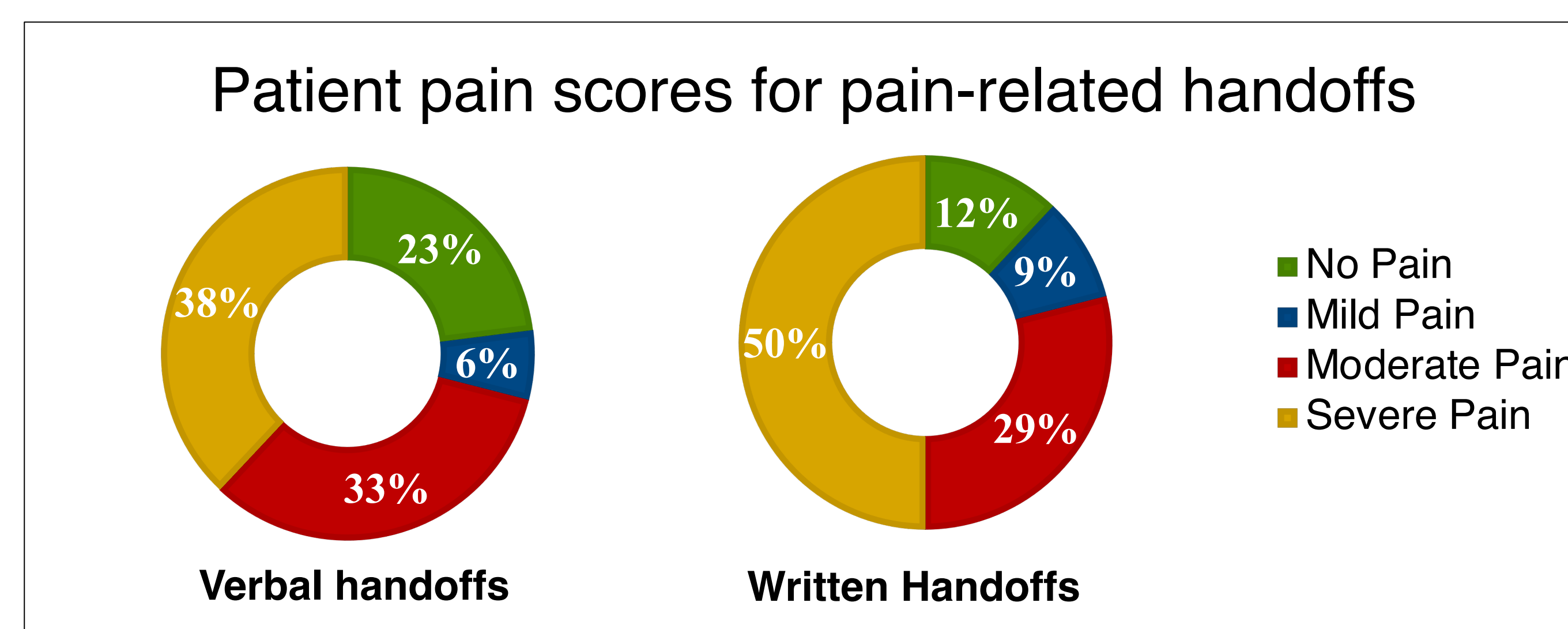
Pain-related handoff: includes any mention of a patient's physical pain (or lack thereof). Includes discussion of of opioid and non-opioid pain medications.

- This study focused on pain-related handoffs, which were sorted into 3 categories (see results).

Results

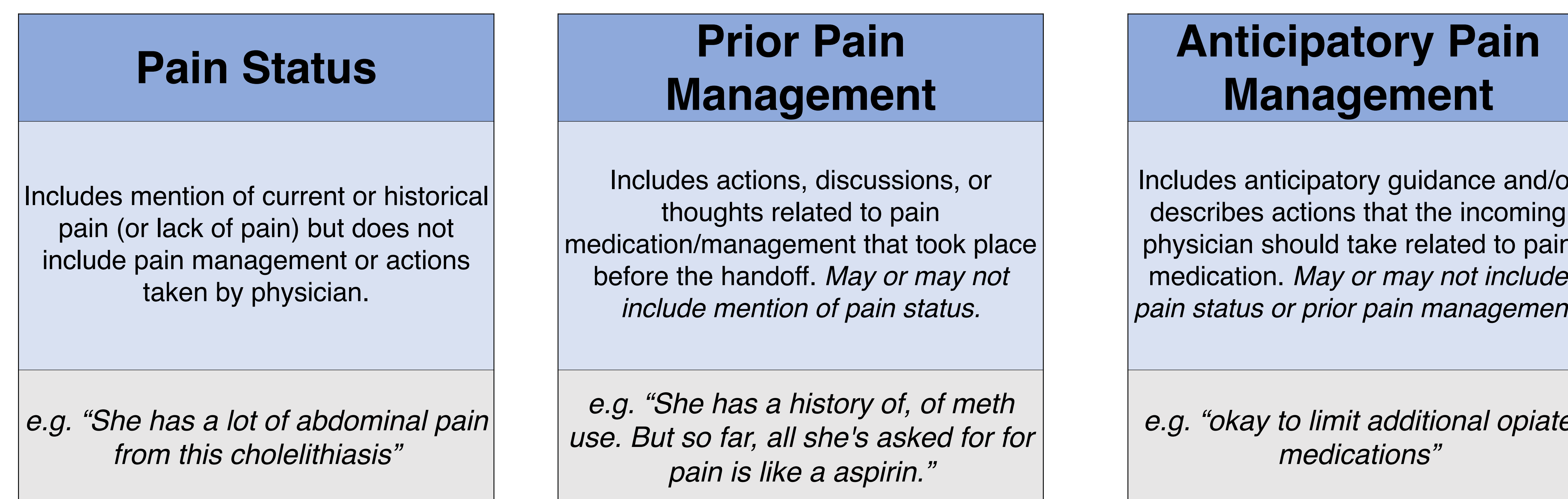
	Total # Handoffs	# Patients	# Pain-related handoffs (%)	Mean patient pain score 0-10
Verbal handoffs	299	165	69 (23)	5.4
Written handoffs	1150	165	159 (14)	6.4

[Table 1] Handoff characteristics

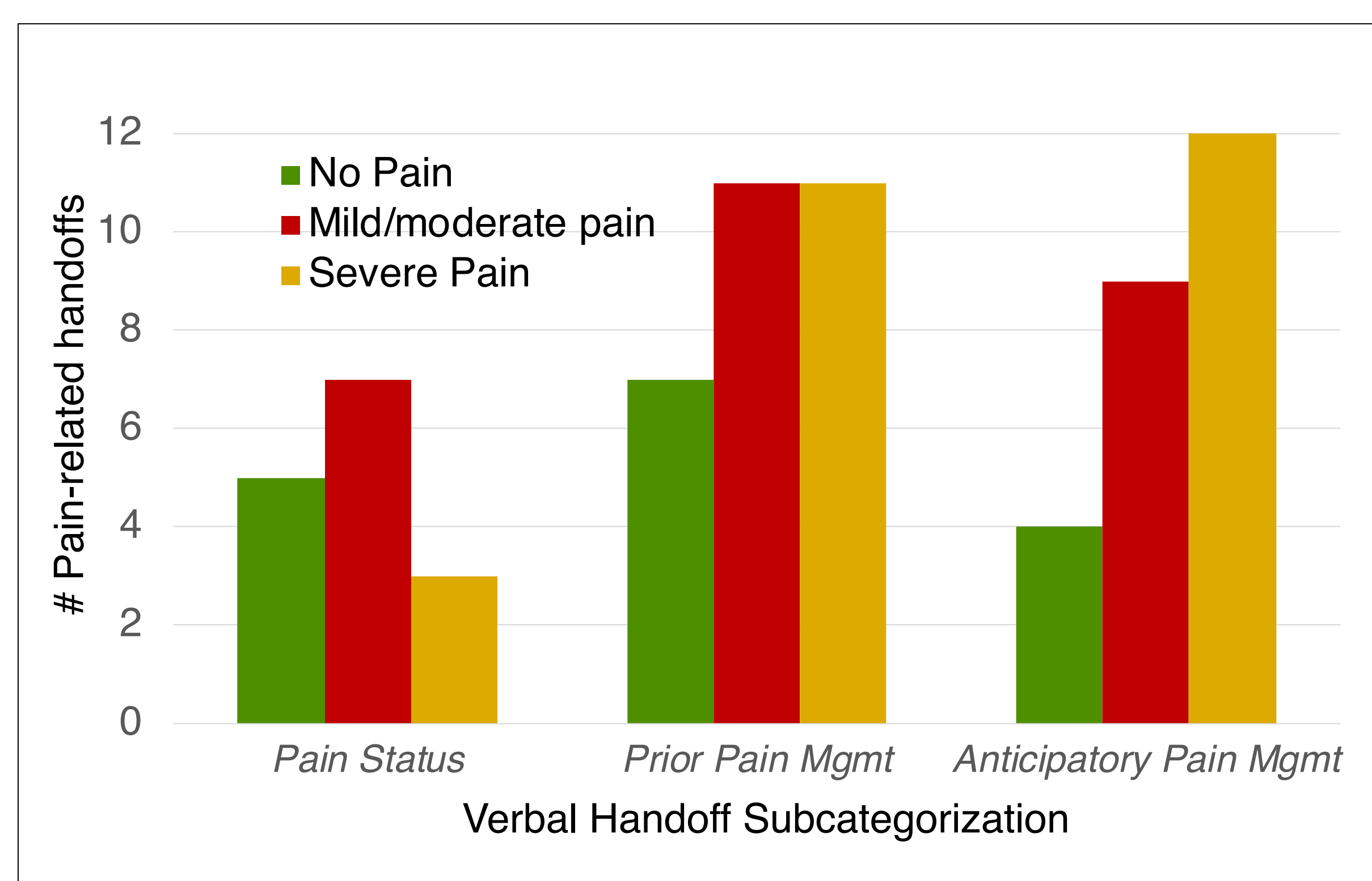


[Figure 1] Pain-related handoff pain scores. No pain is a pain score of 0, mild pain is 1-3, moderate pain is 4-7, and severe pain is 8-10 on a 10 point scale

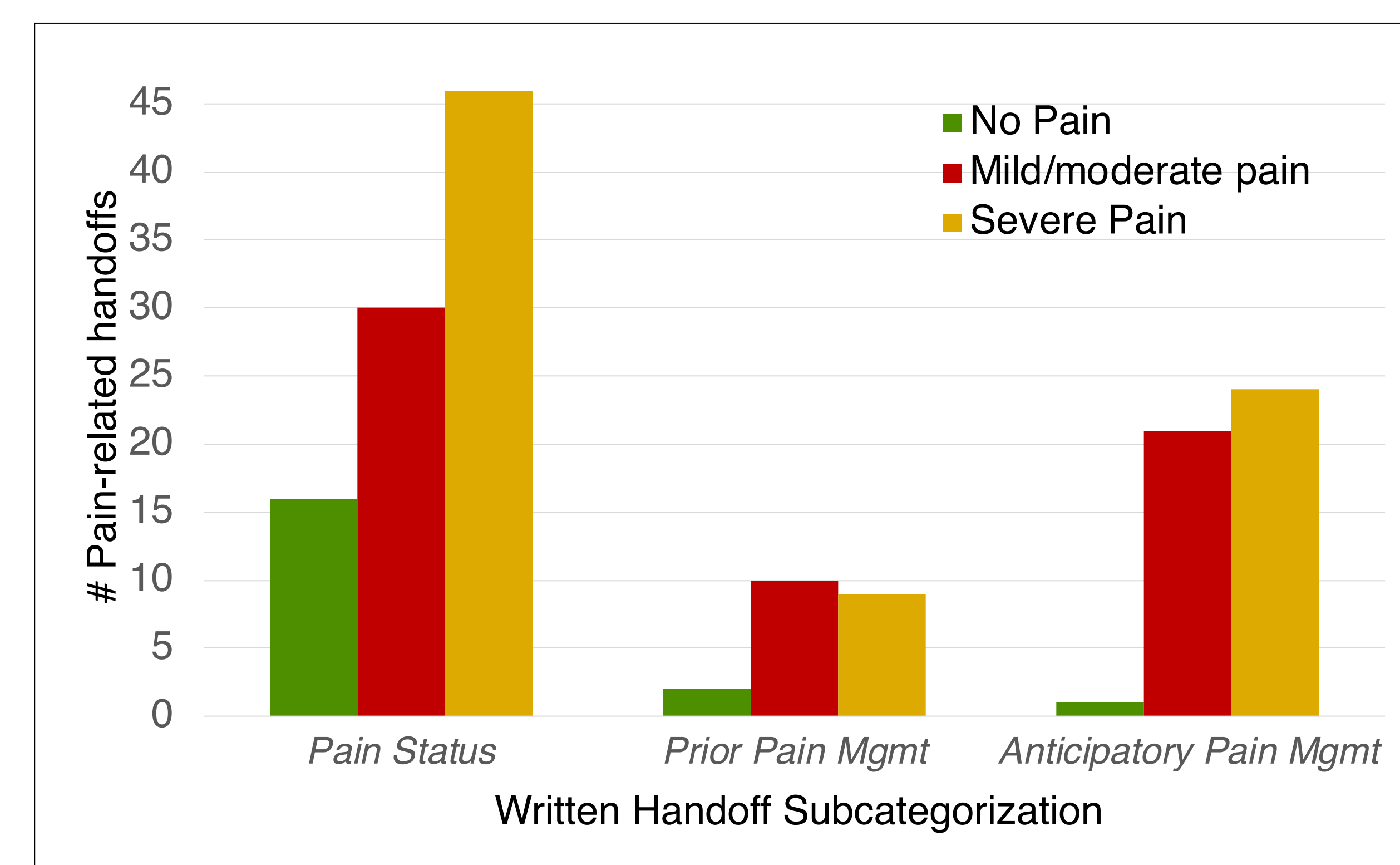
Subcategorization of pain-related handoffs



[Figure 2] Subcategorization of pain-related handoffs. Pain-related verbal and written handoffs were categorized into three mutually exclusive subcategories.



[Figure 3] Comparison of pain-related verbal handoff subcategorizations based on patient pain score



[Figure 4] Comparison of pain-related written handoff subcategorizations based on patient pain score

Discussion

- Pain is discussed in less than a quarter of handoffs, despite more than half of patients experiencing some level of pain.
- Prior and anticipatory pain management discussions are more common in residents' verbal handoffs for patients with pain (Figure 3).
- Attendings' written discussions of pain focus primarily on pain status regardless of patient pain scores (Figure 4).
- Differences in written and verbal handoff data could be attributed to differences in physician level of experience and/or medium/length of communication.

Conclusions/Future Study

- Physicians do not discuss pain in a majority of handoffs, even when patients experience severe pain
- Discussions of pain differ between verbal and written handoffs, and potentially differ depending on patient pain score
- Future work will focus on qualitative analysis of individual handoffs to identify further context of pain-related discussion

Acknowledgements

This project was funded by the UC Davis Division of General Internal Medicine and the UC Davis Medical Student Research Fellowship.

1. Dahlhamer J, Lucas J, Zelaya C, et al. Prevalence of Chronic Pain and High-Impact Chronic Pain Among Adults - United States, 2016. *MMWR Morb Mortal Wkly Rep.* 2018;67:1001-6.
2. Whelan CT, Jin L, Meltzer D. Pain and Satisfaction With Pain Control in Hospitalized Medical Patients: No Such Thing as Low Risk. *Archives of Internal Medicine.* 2004;164:175-80.